

cctv

# 2007 product guide



CCTV PRODUCT GUIDE 2007



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computar®

GANZ



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### **CBC supports Great Ormond Street Hospital Children's Charity**

CBC (EUROPE) Ltd. are pleased to announce their support to GOSHCC. We are also pleased to inform our customers that we have teamed up with GOSHCC and will contribute a certain percentage of our sales turnover to this important cause. In addition to this, we also plan to donate our Computar and Ganz branded CCTV equipment to GOSHCC for their security requirements.

### **About the Hospital**

Great Ormond Street Hospital is the leading centre in the UK for specialist paediatric care and research. Every year, the hospital's specialised doctors and nurses care for 90,000 children from around the country. Most of these children are suffering from rare, complex and often life-threatening conditions. It is the largest UK centre for heart and brain operations in children, and sees one child in ten diagnosed with cancer. The hospital and its research arm, the Institute of Child Health (ICH), have pioneered techniques for open-heart surgery and bone marrow transplants, and developed new drugs for epilepsy, juvenile arthritis and HIV/AIDS.

The hospital grew from humble beginnings. It opened its doors on February 14th 1852 with just 10 beds. Today it has 350 beds and offers the widest range of paediatric specialities under one roof in the UK. Most patients see at least two specialists, some as many as five.

### **How is GOSH different from other hospitals?**

GOSH is not a casualty centre or general hospital; it is a national centre to which patients are referred from other hospitals and doctors from all over the UK and abroad. In other words, it can focus entirely on children with complex or difficult problems.

Research, surgery and procedures developed at GOSH benefit the whole country as the hospital is committed to sharing its knowledge and expertise across the medical profession.

### **The family**

At Great Ormond Street we believe the family is very important. As well as encouraging parents to be involved in their child's care, we offer an extensive range of services to address a family's emotional, spiritual and social needs. The Family Resource Centre is a service especially for parents, providing information as well as support groups. There is also an activity centre for patients, their brothers and sisters, and accommodation for mum or dad to stay overnight with their child.

### **What do we fundraise for?**

While the NHS funds the day-to-day running of the hospital, Great Ormond Street Hospital Children's Charity aims to raise £20 million each year to keep the Hospital at the cutting edge of paediatric care in a number of ways. It contributes to a major long-term project, now underway, to rebuild and refurbish the Hospital and the ICH - the research arm of the hospital. Money raised by our fundraising department also goes towards:

- Funding the most up-to-date equipment
- Supporting research and development into new and better treatments
- Providing accommodation and other support services for families and staff.

Great Ormond Street Hospital Children's Charity  
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Registered Charity No. 235825 © 1989 GOSHCC



## CBC (EUROPE) Ltd.

Manufacturers of **computer** and **GANZ** CCTV products

### Why choose Computer lenses and Ganz CCTV products?

- **Performance that often exceeds specifications.**

Fact, over specified products once installed, frequently do not give the expected performance and lead to End User disappointment and complaints.

- **Exceptional reliability backed up by 3 years warranty.**

Fact, site downtime is a major headache for any company. Service calls are inconvenient and expensive. Consistent breakdowns can ultimately result in loss of reputation and business.

- **Wide choice, a product to suit most applications.**

Fact, buyers can spend hours dealing with many suppliers looking for many products. The result frequently ends up in a logistical, accounting and supporting nightmare. Often, the buyer might be penalised by higher prices due to an overall spread of spending instead of concentrating upon a single supplier.

- **Consistency, innovation, and compatibility**

Fact, thousands of pounds can be wasted on engineering if products are either not compatible or consistent from one release to another. This is especially important in site upgrades, or where multiple installations over a period of time are necessary.

### What do you get when dealing with CBC (EUROPE) Ltd?

- **Friendly, professional Sales and technical support.**
- **Exceptional stock and delivery.**
- **A supplier that will always go the extra mile to accommodate our customer needs.**

With over 40 years of CCTV manufacturing experience, CBC (Europe) Ltd is one of the most highly regarded names in the industry. We take pride in always providing products that represent excellent value for money and services that are second to none. However, we do not rest on our laurels and continually seek to improve everything we do. Our fine reputation is based upon protecting your reputation. If you are looking at CBC (Europe) Ltd for the first time, then we warmly welcome the opportunity to be of service to you.

The 2007 catalogue is easier to read when compared to previous releases, has more application guidance and is packed full of new products. We feel that you will be pleased with its new look and contents.

Best wishes,

Geoff Bowers  
CCTV Division Manager



All Computer and Ganz products are CE certified



# New Products

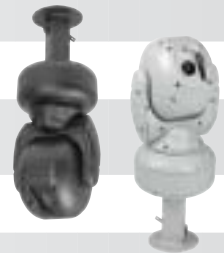
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# VARIFOVAL LENSES

## 1/2" & 1/3" Varifocal Lenses



Varifocal lenses offer the maximum flexibility for the CCTV installer as they can be adjusted to match the exact scene required by the end user. Once obtained, the view can be fixed by means of the lens locking screws. Computar offer one of the largest ranges of varifocal lenses from a 1.8mm (almost fish eye) to 50mm for close up views. Whatever the application Computar has a varifocal to match your needs.

### IR Corrected Varifocal

Commonly known as Day/Night lenses. All of the features of a traditional varifocal lens are available but with the added benefits of IR correction. These lenses are manufactured with a special E.D. glass and lens coating. This combination allows the lens to deliver perfect focus under normal lighting and also under IR illumination.

In general, Computar's range of varifocal lenses either in standard or IR versions offers the installer an extremely wide choice of lenses to match the ever changing installation applications.

## Benefits of Varifocal Lenses

- **Glass optics for a high resolution image**
- **Suitable for all Colour and Monochrome cameras**
- **Aspherical Range**
- **IR Corrected Range**
- **Spot filter on all auto Iris versions**
- **Slip ring for easy installation**
- **Wide F range for perfect pictures from low light to extreme sunshine**

FOCAL LENGTH	RANGE	MANUAL (M)	DIRECT DRIVE (DD)	VIDEO DRIVE (VD)
1.8-3.6mm		T2Z1816CS	TG2Z1816FCS	TG2Z1816AFCS
2.3-6mm		T3Z2312CS	TG3Z2312FCS	
2.9-8.2mm		T3Z2910CS	TG3Z2910FCS	
2.9-8.2mm		T3Z2910CS-IR	TG3Z2910FCS-IR	
2.8-12mm		T4Z2813CS	TG4Z2813FCS	TG4Z2813AFCS
2.8-12mm		T4Z2813CS-IR	TG4Z2813FCS-IR	
3.5-8.0mm		T2Z3514CS-2	TG2Z3514FCS-2	TG2Z3514AFCS-2
3.5-10.5mm		T3Z3510CS	TG3Z3510FCS	TG3Z3510AFCS
3.5-10.5mm		T3Z3510CS-IR	TG3Z3510FCS-IR	TG3Z3510AFCS-IR
4.5-10mm		H2Z4516CS	HG2Z4516FCS	HG2Z4516AFCS
4.5-12.5mm		H3Z4512CS-IR	HG3Z4512FCS-IR	HG3Z4512AFCS-IR
5-50mm		T10Z0513CS	TG10Z0513FCS	TG10Z0513AFCS
8.5-40mm		T5Z8513CS-IR	TG5Z8513FCS-IR	TG5Z8513AFCS-IR
10.0-30mm		H3Z1014CS	HG3Z1014FCS	HG3Z1014AFCS



1.8mm      3.5mm      8mm      12mm      30mm      50mm

All DD lenses are supplied with 9cm short leads as standard. A long lead (31cm) is available, part code /31.

F STOP	ANGLE OF VIEW (HORIZONTAL)	TYPE	FORMAT	DIMENSIONS (ØxHxW)mm	WEIGHT*
1.6 - 360	144.2-79.4°	STANDARD	1/3"	37.4x42.6x51	78g
1.2-360	114.8-48.2°	ASPHERICAL	1/3"	38.5x48x48.8	78g
1.0-360	98.3-35.2°	ASPHERICAL	1/3"	33.5x46.6x44.3	47g
1.0-360	98.3-35.2°	IR	1/3"	33.5x46.6x44.3	47g
1.3 - 360	98.2-23.8°	ASPHERICAL	1/3"	37.5x48x56	69g
1.3-360	98.2-23.8°	IR	1/3"	37.5x48x56	72g
1.4 - 360	77.5-35.4°	STANDARD	1/3"	33.5x42.6x43.5	53g
1.0 - 360	81.7-27.2°	ASPHERICAL	1/3"	38.5x48x48.8	70g
1.0 - 360	81.6-27.2°	IR	1/3"	38.5x48x48.8	70g
1.6-360	81.8-38.2°	STANDARD	1/2"	33.5x42.6x43.5	55g
1.2 - 360	81.6-30.0°	IR	1/2"	47.5x48x48.8	73g
1.3 - 360	51.8-5.6°	ASPHERICAL	1/3"	41.7x57.5x57.7	125g
1.3 - 360	33.5-7.1°	IR	1/3"	41.7x57.5x62.9	126g
1.4 - 360	35.8-12.5°	STANDARD	1/2"	41.7x57.5x57.7	140g

Standard



Good F Stop for perfect pictures in extreme sunlight

Computar lens

Day/Night (IR)



No focal shift under IR illumination

Computar lens

\*Weight and dimensions of the lenses above are based on the heaviest lens in the series. Please refer to the Computar Lens catalogue for actual weight information.



## FIXED FOCAL LENGTH LENSES

Fixed focal length lenses offer the CCTV installer fixed images of a scene. These lenses are an ideal solution when the views are known such as a Fire Exit door or an entrance foyer. All Computar fixed focal lenses have a manual adjustment of the focus for crisp clear images and locking screws to hold position.



FOCAL LENGTH (mm)	FIXED IRIS	MANUAL(M)	DIRECT DRIVE (DD)	VIDEO DRIVE (VD)	F STOP
2.3		T2314FICS-3	TG2314FCS-3	TG2314AFCS-3	1.4-360
2.6		T2616FICS-3	TG2616FCS-3	TG2616AFCS-3	1.6-360
4.0		T0412FICS-3	TG0412FCS-3		1.2-360
8.0		T0812FICS-3	TG0812FCS-3		1.2-360
12.0		H1214FICS	HG1214FCS-3	HG1214AFCS-3	1.4-360

## MEGA PIXEL & FACTORY AUTOMATION

### High Resolution Lenses



The Megapixel lenses (high definition) are designed to capture the full resolution of megapixel cameras, providing a high contrast and a sharp picture. The Wide-aperture (F1.4) design of the Megapixel lenses help to achieve clear images under low light levels. These lenses also provide good image recognition accuracy that is achieved by the reduction of distortion and improvement of illumination uniformity over the CCD sensor. Another important feature is the robust enclosure that is resistant to vibrations and shocks making it ideal for use in Video imaging equipment and machine vision applications.

FOCAL LENGTH (mm)	MANUAL	DIRECT DRIVE	F STOP	ANGLE OF VIEW (H)	TYPE
5	H0514-MP		1.4-16C	65.5°	High Definition
8	M0814-MP		1.4-16C	56.3°	High Definition
12	M1214-MP		1.4-16C	40.4°	High Definition
16	M1614-MP		1.4-16C	30.8°	High Definition
25	M2514-MP		1.4-16C	20.0°	High Definition
50	M5018-MP		1.8-16C	10.5°	High Definition
4-8	H2Z0414-MP	HG2Z0414FC-MP	1.4-16C	90.4-47.0°	High Definition

## Benefits of Fixed Focal Length Lenses

- Glass optics for a high resolution image
- Suitable for all Colour and Monochrome cameras
- Spot filter on all auto Iris versions
- Slip ring for easy installation
- Wide F range for perfect pictures from low light to extreme sunshine
- Simple to install and set up

ANGLE OF VIEW(H)	TYPE	FORMAT	MOUNT	DIMENSIONS(ØxHxW)mm	WEIGHT
113.3°	STANDARD	1/3"	CS	32x39.8x35.4	48g
98.7°	STANDARD	1/3"	CS	32x39.8x34.7	50g
63.9°	STANDARD	1/2"	CS	32x39.8x33	42g
34.7°	STANDARD	1/3"	CS	32x39.8x33	43
30.4°	STANDARD	1/2"	CS	32x39.8x33	35g



## Benefits of Mega Pixel & Factory Automation Lenses

- High resolution and contrast
- Glass optics for a high resolution image
- Locking screws on Focus and Iris rings
- Robust enclosure
- Larger aperture

FORMAT	MOUNT	DIMENSIONS (ØxH)mm	WEIGHT
1/2"		ø44.5x45.5	107g
2/3"	C	ø36.5x79.5	70g
2/3"	C	ø33.5x28.2	65g
2/3"	C	ø33.5x28.2	65g
2/3"	C	ø33.5x36	75g
2/3"	C	ø33.5x38.1	90g
1/2"		ø38.5x48x48.8	75g



\*Weight of the lenses above are based on the heaviest lens in the series. Please refer to the Computar Lens catalogue for actual weight information.



# ZOOM LENSES

Including Manual and Motorised Zoom Lenses



Zoom lenses give you the ability to view and get close ups of objects to highlight details or identification even when the object is some distance away. These are ideal for covert applications where your camera cannot be installed close to your target.

### Manual Zoom lenses

Computar's manual zoom lenses allow the CCTV installer to manually adjust the focal length, iris and focus. Ideal to view areas where you require high quality images with the flexibility of local adjustment. Applications include inspection, machine vision and covert.

### Motorised Zoom Lenses

Computar's Zoom lenses are predominantly used in conjunction with pan & tilt units (movable cameras) when the system is controlled remotely by an operator who can automatically adjust the picture to the desired view. These lenses are ideal when covering large areas, but still require the ability to alter the view for identification of images like city centres, Industrial sites, Car Parks and areas of low light.

## Benefits of Zoom Lenses

- Glass optics for a high resolution image
- Suitable for all Colour and Monochrome cameras
- Up to 300mm zoom lens available
- IR Corrected Range
- Spot filter on all auto Iris versions
- Slip ring for easy installation
- Wide F range for perfect pictures from low light to extreme sunshine



Standard view

6:1

10:1

21:1

30:1

ZOOM RATIO	FOCAL LENGTH (MM)	MANUAL FOCUS & IRIS (MI)	DIRECT DRIVE(DD)	PRE-SET VERSION (DD)	VIDEO DRIVE(VD)	PRE SET VERSION (VD)
6 x Zoom	5.7-34.2	T6Z5710-MCS				
6 x Zoom	8-48	H6Z0812				
6 x Zoom	5.7-34.2		T6Z5710AIDC-CS		T6Z5710AIVD-CS	
6 x Zoom	8-48		H6Z0812AIDC		H6Z0812AIVD	
6 x Zoom	5.7-34.2		T6Z5710DC-CS	T6Z5710PDC-CS	T6Z5710AMS-CS	T6Z5710AMSP-CS
6 x Zoom	8-48				H6Z0812AMS	H6Z0812AMSP
10 x Zoom	5.7-57		T10Z5712DC-CS	T10Z5712PDC-CS	T10Z5712AMS-CS	T10Z5712AMPS-CS
10 x Zoom	8-80				H10Z0812AMS	H10Z0812AMSP
10 x Zoom	12-120		H10Z1218DC	H10Z1218PDC	H10Z1218AMS	H10Z1218AMSP
16 x Zoom	7.5-120		H16Z7516DC	H16Z7516PDC	H16Z7516AMS	H16Z7516AMSP
21 x Zoom	5.8-121.8		T21Z5816DC-CS	T21Z5816PDC-CS	T21Z5816AMS-CS	T21Z5816AMSP-CS
30 x Zoom	10-300				H30Z1015AMS	H30Z1015AMSP
34 x Zoom	5.5-187		T34Z5518DC-CS	T34Z5518PDC-CS	T34Z5518AMS-CS	T34Z5518AMSP-CS
16 x Zoom	7.5-120	IRIS OVERRIDE AVAILABLE			H16Z7516AMSR	H16Z7516AMSPR
34 x Zoom	5.5-187	IRIS OVERRIDE AVAILABLE			T34Z5518AMSR-CS	T34Z5518AMSPR-CS
30x Zoom	10-300	IRIS OVERRIDE AVAILABLE			H30Z1015AMSR	H30Z1015AMSPR
16 x Zoom	7.5-120	IR CORRECTED			H16Z7516AMS-IR	H16Z7516AMSP-IR
16 X Zoom	7.5-120	IR CORRECTED & IRIS OVERRIDE			H16Z7516AMSR-IR	H16Z7516AMSPR-IR

F STOP	ANGLE OF VIEW (H)	ZOOM TYPE	FORMAT	DIMENSIONS (Ø x W x L)MM	WEIGHT*
1.0-16C	45.9-8.1°	Manual	1/3" CS	ø55.2x82.5	290g
1.2-16C	44.6-8°	Manual	1/2" C	ø51.75x97	305g
1.0-360	45.9-8.1°	Manual	1/3" CS	53x64x82.5	295g
1.2-560	44.6-8°	Manual	1/2" C	52.6x64x97	300g
1.0-360	45.9-8.1°	Motorised	1/3" CS	68.5x76.3x82.5	490g
1.2-560	44.6-8°	Motorised	1/2" C	66x73.5x97	460g
1.2-560	44.9-4.8°	Motorised	1/3" CS	68.5x76.3x88	510g
1.2-560	44-4.7°	Motorised	1/2" C	70x81x123.5	710g
1.8-560	29.4-3.1°	Motorised	1/2" C	70x81x123.5	710g
1.6-560	46.6-3.2°	Motorised	1/2" C	82x97.4x149	1090g
1.6-560	44.8-2.3°	Motorised	1/3" CS	70x81x126.5	740g
1.5-560	35.5-1.25°	Motorised	1/2" C	125x144.5x246.5	3220g
1.8-560	46.6-1.5°	Motorised	1/3" CS	82x97.4x160	1190g
1.6-560	46.6-3.2°	Motorised	1/2" C	82x97.4x149	1070g
1.8-560	46.6-1.5°	Motorised	1/3" CS	82x97.4x160	1180g
1.5-560	35.5-1.25°	Motorised	1/2" C	125x144.5x246.5	3225g
1.6-560	46.6-3.2°	Motorised	1/2" C	82x97.4x161.5	1180g
1.6-560	46.6-3.2°	Motorised	1/2" C	82x97.4x161.5	1215g



\*Weight and dimensions of the lenses above are based on the heaviest lens in the series. Please refer to the Computar Lens catalogue for actual weight information.

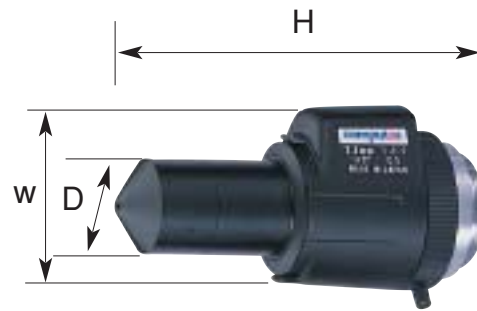




# PINHOLE & SPECIALIST LENSES

## Telecentric & Macro Lenses

Pinhole lenses for security and industrial applications. The lenses are designed for the highest quality images where the viewing area is no more than a pinhole. The lenses can be used on both colour and monochrome cameras



FOCAL LENGTH (mm)	PRODUCT CODE	F STOP	AOV (HORIZONTAL)	TYPE	FORMAT	DIMENSIONS DxWxH(mm)	WEIGHT
2.6	T2625CS-P	2.5-32C	83.2°	PINHOLE STRAIGHT	1/3" CS	ø34.5x73.5	80g
2.6	TG2625FCS-P	2.5-360	83.2°	PINHOLE STRAIGHT	1/3" CS	34.5x39.8x73.5	82g
2.6	TG2625AFCS-P	2.5-360	83.2°	PINHOLE STRAIGHT	1/3" CS	34.5x39.8x73.5	85g
55	TEC-M55	2.8-32C	9.2°	TELECENTRIC	2/3" C	ø53x92.9	320g
0.084-0.84*	MLH-10X	5.6-32C	18-3.6°	MACRO		ø48x98.5	233g

\*Maximum magnification. T2625FCS-P Direct Drive Auto Iris lens. T2625AFCS-P Video Drive Auto Iris lens.

# LENS ACCESSORIES

## & Installation Aids

PRODUCT CODE	DESCRIPTION	
FSK	Filter Set Up Kit	Filter kit to help with the set up of cameras
VM 300	View Finder	View Finder to help with lens selection on site. You see what the lens will see.
VM100	Extension Tube Kit	40, 20, 10, 5, 1, 0.5mm
VM 400	C/CS Mount Converter	
DL00	Dummy Lens	
EX1.5C	C Mount 1.5x Extender	
EX2C	C Mount 2x Extender	
EX1.5CS	CS Mount 1.5x Extender	
EX2Cs	CS-Mount 2x Extender	



# LENS DISTANCE SELECTOR

## Varifocals

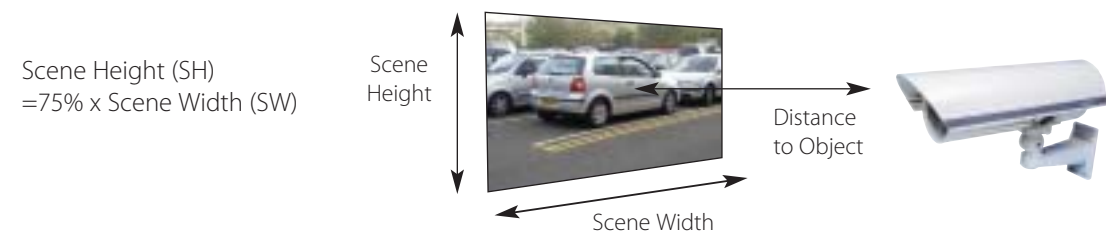
Object Distance (m)	Scene Width (m)																		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
15	-	36.0	24.0	18.0	14.4	12.0	10.3	9.0	8.0	7.2	6.5	6.0	5.5	5.1	4.8	4.5	4.2	4.0	3.8
14	-	33.6	22.4	16.8	13.4	11.2	9.6	8.4	7.5	6.7	6.1	5.6	5.2	4.8	4.5	4.2	4.0	3.7	3.5
13	-	31.2	20.8	15.6	12.5	10.4	8.9	7.8	6.9	6.2	5.7	5.2	4.8	4.5	4.2	3.9	3.7	3.5	3.3
12	-	28.8	19.2	14.4	11.5	9.6	8.2	7.2	6.4	5.8	5.2	4.8	4.4	4.1	3.8	3.6	3.4	3.2	3.0
11	52.8	26.4	17.6	13.2	10.6	8.8	7.5	6.6	5.9	5.3	4.8	4.4	4.1	3.8	3.5	3.3	3.1	2.9	-
10	48.0	24.0	16.0	12.0	9.6	8.0	6.9	6.0	5.3	4.8	4.4	4.0	3.7	3.4	3.2	3.0	2.8	-	-
9	43.2	21.6	14.4	10.8	8.6	7.2	6.2	5.4	4.8	4.3	3.9	3.6	3.3	3.1	2.9	-	-	-	-
8	38.4	19.2	12.8	9.6	7.7	6.4	5.5	4.8	4.3	3.8	3.5	3.2	3.0	-	-	-	-	-	-
7	33.6	16.8	11.2	8.4	6.7	5.6	4.8	4.2	3.7	3.4	3.1	2.8	-	-	-	-	-	-	-
6	28.8	14.4	9.6	7.2	5.8	4.8	4.1	3.6	3.2	2.9	-	-	-	-	-	-	-	-	-
5	24.0	12.0	8.0	6.0	4.8	4.0	3.4	3.0	-	-	-	-	-	-	-	-	-	-	-
4	19.2	9.6	6.4	4.8	3.8	3.2	-	-	-	-	-	-	-	-	-	-	-	-	-
3	14.4	7.2	4.8	3.6	2.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	9.6	4.8	3.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1	4.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

## Zooms

Object Distance (m)	Scene Width (m)																		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
500	-	-	-	-	-	-	-	300	267	240	218	200	185	171	160	150	141	133	126
400	-	-	-	-	-	-	274	240	213	192	175	160	148	137	128	120	113	107	101
300	-	-	-	-	288	240	206	180	160	144	131	120	111	103	96	90	85	80	76
200	-	-	-	240	192	160	137	120	107	96	87	80	74	69	64	60	56	53	51
150	-	-	240	180	144	120	103	90	80	72	65	60	55	51	48	45	42	40	38
120	-	288	192	144	115	96	82	72	64	58	52	48	44	41	38	36	34	32	30
100	-	240	160	120	96	80	69	60	53	48	44	40	37	34	32	30	28	27	25
70	-	168	112	84	67	56	48	42	37	34	31	28	26	24	22	21	20	19	18
50	240	120	80	60	48	40	34	30	27	24	22	20	18	17	16	15	14	13	13
30	144	72	48	36	29	24	21	18	16	14	13	12	11	10	10	9	8	8	8
10	48	24	16	12	10	8	7	6	-	-	-	-	-	-	-	-	-	-	-

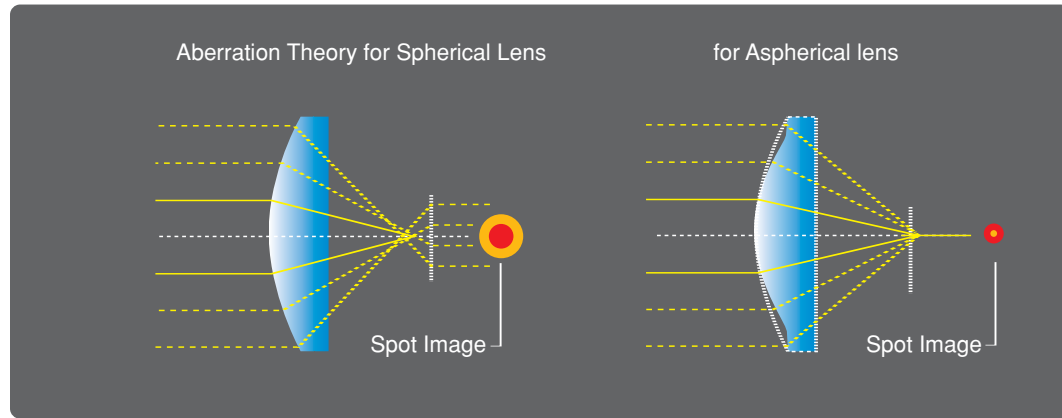
## Selecting A Lens

- 1.) Determine the scene width (actual size of area & view required)
  - 2.) Calculate the distance between the scene and the camera
  - 3.) Read off the focal length of lens required from the chart
- Example Scene Width (SW) = 7m  
Object Distance = 7m  
Focal length of Lens required = 4.8mm



# LENS INFORMATION

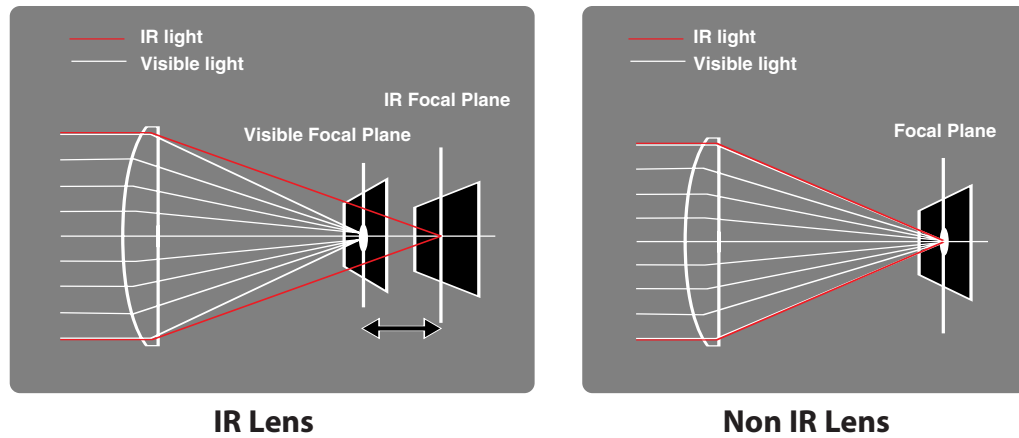
## Aspherical Lenses



By definition, spherical lenses have a constant radius of curvature and are commonly used in the majority of CCTV lenses. Unfortunately all spherical surfaces exhibit "spherical aberration" which is the inability of the element to focus the light rays passing through the center and the edge of the element to a single point in the image plane. This problem is solved by using an aspheric surface, which does focus the rays passing through the two zones of the aspheric surface to the same point on the image plane.

Manufacturing techniques required to produce an aspheric surface are more expensive than conventional spherical fabrication, however the use of aspheric elements in a lens greatly improves the image quality.

## Infra Red Lenses



CCTV cameras, when used at night, are subjected to considerably more near infrared energy than that of the visible spectrum. This shift in spectrum sensitivity creates a "Focus Shift" (i.e. most lenses cannot focus the IR at the same image locations as the visible spectrum.)

Computer has corrected this image shift by using ED glass. ED glass has special refractive properties that allow the optical designer to correct the longer IR wavelength so that two spectral regions are focused at the same image plane. ED glass produces an image that is not subject to Focus Shift -Day or Night.

# LENS INFORMATION



※Monitoring Images with Day&Night cameras

## Comparison of Monitoring Images



**MONITOR**  
The target size of a target for monitoring is generally 5% of the monitor screen. Ideal for monitoring human or vehicle traffic flows.



**DETECT**  
To obtain best results for electronic detection purposes the picture size of the target should be no less than 10% of screen size.



**RECOGNISE**  
For recognition the picture size on the monitor should be no less than 50% of the screen. This value can be used to recognise a target such as known person.



**IDENTIFY**  
It is recommended that the target size should be 120% of the screen size. This means for example, the face and body of a grown human to the knees but not the full height inclusive of legs!



# ZC-D5000 DOME SERIES

Super High Resolution Colour & Col/Mono Domes with Integrated Varifocal Lens



540  
TVL

**Perfect** Partners



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The ZC-D5000 Dome camera has a high performance CCD image sensor combined with the new DSP chip delivering a super high resolution of 540TVL. The dome range is available as colour or as Day & Night. The domes come with low voltage input, allowing either 12Vdc or 24 Vac. The dome camera is complete with a 2.8-12.0mm auto iris high speed varifocal lens (ZC-D5212PHA), or 2.8-12mm IR auto iris varifocal lens (ZC-DN5212PHA), providing optimum performance in demanding lighting conditions.

Further setup can be achieved by selecting the switches on the camera body. These include backlight compensation, AGC on/off, auto white balance/auto white tracing (colour only). The camera has a 3 axis gimble for adjusting the camera position, allowing the camera to be ceiling mounted or wall mounted.

Ordering Codes:

ZC-D5212PHA High Resolution Colour Dome  
ZC-DN5212PHA High Resolution Colour/Mono Dome

MODEL	ZC-D5212PHA	ZC-DN5212PHA
TV System	Pal	
Focal Length	2.8-12mm	
Max aperture Ratio	1:1.3	
Angle of View (Wide to Tele)	D: 121.8° ~ 29.6° H: 98.2.2° ~ 23.8° V: 73.6° ~ 17.8° (Col) D: 133° ~ 29.7° H: 102.2° ~ 23.7° V: 74.2° ~ 17.8° (Day/Night)	
Image Sensor	1/3" IT CCD	
Effective Elements	752 (H) x 582 (V)	
Scanning Frequency	15.625kHz / 50.0Hz	
Iris	F1.3 - 360	
Resolution (Horizontal)	540 TVL	
Minimum Illumination 50 IRE	Colour Model: 1.41 lux (D D/N: OFF), 0.94 lux (D D/N: ON) Colour/Mono Model: 0.12 lux (Night mode, B/W)	
With IR Illuminance	0.00 lux (Night mode, B/W)	
S/N Ratio	> 50dB (AGC gain : minimum)	
Gamma Characteristics	0.45	
Sync System	INT./L.L.	
Electric Shutter	1/50 sec. Fixed (Flickerless:OFF) 1/120 sec. Fixed (Flickerless: ON)	
White Balance	ATW	
Power Supply	12 V dc/ 24 V ac	
Power Consumption DC 12V	3.0W	
AC 24V	4.2W, 250mA	
Ambient Temperature	Operation : -10°C ~+50°C / Storage : -20°C ~+60°C	
Ambient Humidity	Operation: 85% RH max. / Storage : 95% RH max.	
External Dimensions	144(D)mm x 110 (H)mm	
Weight (approximate)	490g	
Adjustment Volume	DC iris level, Line phase	

## KEY FEATURES:

- 1/3" IT CCD
- Super High Resolution
- Integrated varifocal lens
- Impressive colour reproduction
- Digital Signal Processing
- Day/Night version available
- Line lock with phase adjustment
- Backlight compensation
- Automatic gain control
- Easy adjustment with the unique 3 axis gimble

# ZC-D3000 DOME SERIES

High Resolution Colour, Colour/Mono and Mono Domes with integrated Varifocal Lens

The ZC-D3000 range is available as colour, mono or as a combination (Day & Night). All units come with low voltage input, allowing either 12Vdc or 24Vac.

The dome camera is complete with a 2.8-10.0mm or 4.0-7.5mm (Day/Night) auto iris high speed varifocal lens, providing optimum performance in demanding lighting conditions. Further setup can be achieved by selecting the switches on the camera body.

**Ordering Codes:**

- ZC-D3210PHA High Resolution, Colour Dome
- ZC-D3210CHA High Resolution, Mono Dome
- ZC-DN3048PHA High Resolution, Colour/Mono Dome



**Perfect Partners**



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MODEL	ZC-D3210PHA	ZC-D3210CHA	ZC-DN3048PHA
TV System	Pal	CCIR	Pal
Focal Length	2.8-10mm	2.8-10mm	4.0-7.5mm
Max aperture Ratio	1:1.2	1:1.2	1:1.6
Angle of View	D: 105.8° ~ 27.0° H: 78.2° ~ 21.6° V: 55.8° ~ 16.2° (Co/B&W) D: 67.3° ~ 36.4° H: 52.6° ~ 29.0° V: 38.8° ~ 21.7° (Day/Night)		
Image Sensor	1/4" IT CCD		
Effective Elements	752 (H) x 582 (V)		
Scanning Frequency	15.625kHz / 50.0Hz		
Iris	F1.2 - 360	F1.2 - 360	F1.6 - 360
Resolution (Horizontal)	480 TVL	580 TVL	480 TVL
Minimum Illumination 100 IRE	0.75 lux	0.24 lux	0.28 lux (Col) 0.09 lux (Mono)
S/N Ratio	> 50dB (AGC gain : minimum)		
Gamma Characteristics	0.45		
Sync System	INT./L.L.		
Electric Shutter	1/50 sec. Fixed (Flickerless:OFF) 1/120 sec. Fixed (Flickerless: ON)		
White Balance	ATW	-	ATW
Power Supply	12 V dc/ 24 V ac		
Power Consumption DC 12V	2.0W	1.5W	2.0W
AC 24V	2.5W	2.0W	2.5W
Ambient Temperature	Operation : -10°C ~+50°C / Storage : -20°C ~+60°C		
Ambient Humidity	Operation: 85% RH max. / Storage : 95% RH max.		
External Dimensions	128(D)mm x 101 (H)mm		
Weight (approximate)	400g		
Adjustment Volume	DC iris level, Line phase		

**KEY FEATURES:**

- 1/4" IT CCD
- High Resolution
- Integrated varifocal lens
- Line lock with phase adjustment
- Backlight compensation
- Automatic gain control
- Easy adjustment with the unique 3 axis gimble





# ZC-DT3000 DOME SERIES

## High Resolution Vandal Resistant Domes



Perfect Partners



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The ZC-DT3000 range is available as colour or as a combination (Day & Night). All units come with low voltage input, allowing either 12Vdc or 24 Vac. The dome camera is complete with a 2.8-10.0mm or 4.0-7.5mm (Day/Night) auto iris high speed varifocal lens, providing optimum performance in demanding lighting conditions.

The ZC-DT3000 Vandal Resistant Dome series provide perfect solution for surveillance projects where the cameras are prone to abuse. The dome is made of toughened polymer exterior, the alloy body is weatherproof with an IP67 rating and is suitable for both indoor and outdoor applications.

### Ordering Codes:

ZC-DT3210PHA High Resolution Vandal Colour Dome

ZC-DT3210CHA High Resolution Vandal Mono Dome

ZC-DNT3048PHA High Resolution Vandal Col/Mono Dome

MODEL	ZC-DT3210PHA	ZC-DT3210CHA	ZC-DNT3048PHA
TV System	Pal	CCIR	Pal
Focal Length	2.8-10mm	2.8-10mm	4.0-7.5mm
Max aperture Ratio	1:1.2	1:1.2	1:1.6
Angle of View	D: 105.8° ~ 27.0° H: 78.2° ~ 21.6° V: 55.8° ~ 16.2° (Col/B&W) D: 67.3° ~ 36.4° H: 52.6° ~ 29.0° V: 38.8° ~ 21.7° (Day/Night)		
Image Sensor	1/4" IT CCD		
Effective Elements	752 (H) x 582 (V)		
Scanning Frequency	15.625kHz / 50.0Hz		
Iris	F1.2 - 360	F1.2 - 360	F1.6 - 360
Resolution (Horizontal)	480 TVL	580 TVL	480 TVL
Minimum Illumination 100 IRE	0.75 lux	0.24 lux	0.28 lux (Col) 0.09 lux (Mono)
S/N Ratio	> 50dB (AGC gain : minimum)		
Gamma Characteristics	0.45		
Sync System	INT./L.L.		
Electric Shutter	1/50 sec. Fixed (Flickerless:OFF) 1/120 sec. Fixed (Flickerless: ON)		
White Balance	ATW	-	ATW
Power Supply	12 V dc/ 24 V ac		
Power Consumption DC 12V	2.0W	1.5W	2.0W
AC 24V	2.5W	2.0W	2.5W
Ambient Temperature	Operation : -10°C ~+50°C / Storage : -20°C ~+60°C		
Ambient Humidity	Operation: 85% RH max. / Storage : 95% RH max.		
External Dimensions	128(D)mm x 101 (H)mm		
Weight (approximate)	1054g		
Adjustment Volume	DC iris level, Line phase		

### KEY FEATURES:

- 1/4" IT CCD
- High Resolution
- Integrated varifocal lens
- Line lock with phase adjustment
- Backlight compensation
- Automatic gain control
- Easy adjustment with the unique 3 axis gimble
- Toughened, glass reinforced plastic dome with alloy body (vandal range)
- Weatherproof IP67 alloy body (vandal range)

# ZC-D6039PHA

## High Resolution Colour Dome with Integrated Varifocal Lens

ZC-D6039PHA is available as a colour dome camera that comes with a low voltage input, allowing either 12 Vdc or 24 Vac.

The dome camera is complete with 3.0-9.0mm auto iris varifocal lens driven to provide optimum performance in demanding lighting conditions.

Further setup can be achieved by selecting the dip switches on the camera body. These include backlight compensation, AGC on/off, auto white balance/auto white tracing. Also incorporated is a flickerless mode which minimises interference associated with fluorescent lighting.

The assembly has a 3 axis gimble for adjusting the camera position, allowing it to be ceiling mounted or wall mounted.

### Ordering Codes:

ZC-D6039PHA High Resolution colour dome



Indoor

### Perfect Partners



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MODEL	ZC-D6039PHA
TV System	Pal
Focal Length	3.0-9.0mm
Max aperture Ratio	1:1.6
Angle of View	D: 116.2°~39.7° H: 90.0°~31.8° V: 66.2°~23.9°
Image Sensor	1/3" IT CCD
Effective Elements	752 (H) x 582 (V)
Scanning Frequency	15.625kHz / 50.0Hz
Iris	F1.2 - 360 (DC auto iris)
Resolution (Horizontal)	480 TVL
Minimum Illumination 100 IRE	0.75 lux
S/N Ratio	> 50dB (AGC gain : minimum)
Gamma Characteristics	0.45
Sync System	INT./L.L.
White Balance	ATW
Power Supply	12 V dc/ 24 V ac
Power Consumption DC 12V	3.1W
AC 24V	3.4 W
Ambient Temperature	Operation : -10°C ~+45°C / Storage : -20°C ~+60°C
AGC	22dB
External Dimensions	128 (D) mm x 103 (H) mm
Weight (approximate)	400g
Adjustment Volume	DC iris level, Line phase

### KEY FEATURES:

- 1/3" IT CCD
- Compact and light weight
- Integrated auto-iris varifocal lens 3.0-9.0mm
- Proprietary pan/tilt rotation mechanism
- Distortion-free dome cover with black inner liner
- 12VDC/24VAC dual voltage power input
- BNC and power connectors included



# CDV EXT/INT VANDAL DOME SERIES

High Resolution Colour/Mono (D/N) & Mono Vandal Resistant Domes with Integrated Varifocal Lens



Ceiling Mount



Perfect Partners



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The CDV Vandal Resistant Dome range provide a perfect solution for surveillance projects where the cameras are prone to abuse. The dome is made of a polymer exterior and polycarbonate bubble with an IP65 rating. It is suitable for both indoor and outdoor applications. The domes are available as either Day/Night or Mono. All units come with low voltage input, allowing either 12Vdc or 24 Vac.

The Day/Night and Mono dome camera is complete with 3.8-9.5mm auto iris high speed varifocal lens providing optimum performance in demanding lighting conditions.

Further setup can be achieved by selecting the switches on the camera body (only on CDVH-39). These include backlight compensation, AGC on/off, auto white balance/auto white tracing. Wall mount and Ceiling mount options available.

#### Ordering Codes:

CDVNH-39CM Colour/Mono High Resolution, Vandal Resistant, Ceiling mount

CDVNH-39WM Colour/Mono High Resolution, Vandal Resistant, Wall mount

CDVH-39CM Mono High Resolution, Ceiling mount

CDVH-39WM Mono High Resolution, Wall mount

Black available on special request

MODEL	CDVNH-39	CDVH-39
TV System	Pal	CCIR
Focal Length	3.8-9.5mm	
Image Sensor	1/3" IT CCD	
Angle of View	D: 88.2.0° ~ 28.2° H: 69.0° ~ 22.6° V: 50.8° ~ 17.0°	
Effective Elements	768(H) x 494(V)	
Scanning Frequency (H/V)	15.734KHz / 59.9Hz	
Iris	F1.0 - 360 (DC auto iris)	
Resolution (Horizontal)	480 TVL (Col)	570 TVL (B&W)
Minimum Illumination	0.6 lux (Col) / 0.3 lux (B&W)	0.3 lux
S/N Ratio	> 48dB (AGC off)	
Gamma Characteristics	0.45	
Sync System	INT. / L.L.	
White Balance	ATW	-
Video Output	1.0Vpp, 75ohm unbalanced	
ATW Range	2700K to 9100K	
Water Resistance	IP 65	
AGC	Auto	
Power Supply	12 V dc/ 24 V ac	
Power Consumption	3.0W (Max)	
Ambient Temperature	Operation: -5°C ~ +40°C / Storage: -10°C ~ +50°C	
Bubble Thickness	2mm Polycarbonate	
External Dimensions	136(D)mm x 92 (H)mm	
Weight (approximate)	1070g	

#### KEY FEATURES:

- 1/3" IT CCD
- Ceiling and Wall mount options
- Line lock with phase adjustment
- Backlight compensation
- Automatic gain control
- Unique 3 axis gimble
- Impact and scratch resistant polycarbonate bubble
- Weatherproof (IP65)
- Dual power operation: 12VDC/24VAC

# MD SERIES

## Standard Resolution Colour Mini Domes with integrated Fixed lens

The MD colour series mini domes are the smallest of the Ganz compact cameras being fitted with 1/3" CCD.

The cameras are provided with the automatic electronic shutter system allowing the cameras to compensate for changing lighting conditions.

Additionally the mini dome has an automatic white balance circuit allowing it to operate correctly in changing colour conditions.

### Ordering Codes:

MDC-36-III Standard Resolution Colour Mini Dome  
MDC-60-III Standard Resolution Colour Mini Dome



Internal



Illustration

### Perfect Partners



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MODEL	MDC-36/60
TV System	Pal
Focal Length	3.6mm/6.0mm
Image Sensor	1/3" IT CCD
Effective Elements	500(H) x 582(V)
Scanning Frequency (H/V)	15.750KHz / 60Hz
Iris	F2.0
Resolution (Horizontal)	350 TVL
Minimum Illumination	0.5 lux
S/N Ratio	> 48dB (AGC off)
Gamma Characteristics	0.45
Sync System	INT. / L.L.
White Balance	ATW
Video Output	1.0Vpp, 75ohm unbalanced
Electronic Shutter	1/50 to 1/100,000 sec.
AGC	Yes
Power Supply	12 V dc
Power Consumption	4.0W
Ambient Temperature	Operation: -5°C ~+40°C / Storage: -10°C ~ +50°C
External Dimensions (mm)	62(D) x 54(H)
Weight (approximate)	144.5g

### KEY FEATURES:

- 1/3" IT CCD
- Line lock with phase adjustment
- Backlight compensation
- Automatic electronic shutter
- Automatic gain control





## MEC-T37P

### Standard Resolution Colour Mini Camera



Dimensions: 36(W) x 36(H) x 15.9(D)mm

The standard resolution mini camera comes with a built in 3.6mm fixed lens and is ideal for covert applications where there is a budget restraint.

The camera has automatic gain control, backlight compensation, automatic white balance, and automatic electronic shutter.

**MEC-T37P 1/3" Colour Camera, 350 TVL**

## MM AND CM SERIES

### Standard and High Resolution PCB Cameras



Dimensions: 32(w) x 32(h)mm

MM212	1/4" B&W 380 TVL 0.1 Lux
MMH212	1/4" B&W 580 TVL 0.2 Lux
CM212	1/4" Colour 330 TVL 1.0 Lux
MH212	1/4" Colour 480 TVL 2.0 Lux
DMH212-V48A	1/4" Colour/Mono 480TVL, 0.09 Lux 4.0mm-7.5mm

Various lens options of the MM & CM board camera ranges are available:

CS CS mount (no lens), L20 with 2.0mm lens, L25 with 2.5mm lens, L38 with 3.8mm lens, L60 with 6.0mm lens, L80 with 8.0mm lens, P29 with 2.9mm Pinhole lens, V26A with 2.0-6.0mm V/lens, V36A with 3.0-6.0mm V/lens, V310A with 2.8-10mm V/lens

## MTC-36P

### Standard Resolution Colour Tube Camera



Dimensions: 26(D) x 87(H) mm

The Tube camera is compact and discreet and useful for a variety of applications.

The camera has automatic gain control, backlight compensation, automatic white balance, and automatic electronic shutter.

**MTC-36P 1/3" Colour Tube Camera, 350 TVL**

# ZC-L1210PHA

## High Resolution Spot Cam with Integrated Varifocal Lens

A discreet, stylish housing combined with a new 2.8-10mm extended range varifocal makes this camera/lens combination the perfect general purpose internal camera with exceptional performance.

This Camera is compact and stylish with 4.8 inch overall length suitable for most standard surveillance applications. This camera is also suitable for sites where the appearance of the camera is critical to the interior design.

The optional ZCA-LB101 mount eases installation options on ceilings and walls by concealing the power and video wiring. Another optional bracket is the ZP-B15.

Optional mounting brackets and twisted pair transmitter.

### Ordering Codes:

ZC-L1210PHA High Resolution Colour Camera



(bracket not included)

### Perfect Partners



\*ZCA-LB101 Page 46

\*ZP-B15 Page 46

\*(to be ordered separately)

MODEL	ZC-L1210PHA
TV System	Pal
Focal Length	2.8-10mm
Max aperture Ratio	1:1.2
Angle of View	D: 105.8° ~ 27.0° H: 78.2° ~ 21.6° V: 55.8° ~ 16.2°
Image Sensor	1/4" IT CCD
Effective Elements	752 (H) x 582 (V)
Scanning Frequency	15.625kHz / 50.0Hz
Iris	F1.2 - 360 (DC auto iris)
Resolution (Horizontal)	480 TVL
Minimum Illumination 100 IRE	0.75 lux
S/N Ratio	> 50dB (AGC gain : minimum)
Gamma Characteristics	0.45
Sync System	INT./L.L.
White Balance	ATW
Power Supply	12 V dc/ 24 Vac
Power Consumption DC 12V	2.0W
AC 24V	2.5W
Ambient Temperature	Operation : -10°C ~+50°C / Storage : -20°C ~+60°C
Ambient Humidity	Operation: 85% RH max. / Storage : 95% RH max.
External Dimensions	55 (W) mm x 61 (H) mm x 122 (D)mm
Weight (approximate)	200g
Adjustment Volume	DC iris level, Line phase

### KEY FEATURES:

- 1/4" IT CCD
- Integrated 2.8-10mm varifocal lens
- Optional mounting brackets
- Twisted-pair video transmission option
- Low voltage



# MTC-EX SERIES

## Colour/Mono IR Cameras



Ext/Int with  
Varifocal  
Lens



Ext/Int with Fixed  
Lens

Perfect Partners



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The high resolution MTC-EX39V Colour/Mono IR Camera is complete with a 3.8-9.5mm auto iris high speed varifocal lens. The MTC-EX4 Colour/Mono is a standard resolution IR Camera complete with a 4mm fixed lens.

In each camera, the lens and infrared LED's provide optimum performance in demanding lighting conditions making the Cameras suitable for around the clock surveillance.

One of the main features of the cameras is that they have automatic IR trigger ON under low illumination and IR trigger OFF under low illumination and normal lighting. This allows effective IR illumination coverage over 10 metres when it gets dark.

The Cameras are water resistant, with an IP65 rating (MTC-EX39V) and IP66 rating (MTC-EX4), making them suitable for outdoor use

### Ordering Codes:

MTC-EX39V High Resolution, Colour/Mono IR Camera, Varifocal lens

MTC-EX4 Standard Resolution, Colour/Mono IR Camera, Fixed lens

MODEL	MTC-EX39V	MTC-EX4
TV System	Pal	
Focal Length	3.8-9.5mm	4.0mm
Image Sensor	1/3" IT CCD	1/4" IT CCD
Angle of View	D: 88.2° ~ 28.2° H: 69.0° ~ 22.6° V: 50.8° ~ 17.0°	D: 71° H: 59.8° V: 29.6°
Effective Elements	768(H) x 494(V)	512(H) x 582(V)
Scanning Frequency (H/V)	15.625KHz / 50Hz	
Iris	F1.0 - 360	F2.0-360
Resolution (Horizontal)	480 TVL	350 TVL
Minimum Illumination	0.6 lux (Col) / 0.3 lux (B&W)	1.0 lux
	0 Lux (10 metre IR ON)	
S/N Ratio	> 48dB (AGC off)	
Gamma Characteristics	0.45	
Sync System	INT. / L.L.	
White Balance	ATW	
Video Output	1.0Vpp, 75ohm unbalanced	
ATW Range	2700°K to 9100°K	2500°K to 9700°K
Water Resistance	IP 65	IP 57
AGC	Yes	
Power Supply	12 V dc	
Power Consumption	5W Max with IR Led	4.5W Max with IR Led
Ambient Temperature	Operation: -10°C ~+50°C / Storage: -20°C ~ +60°C	
IR Led	18 units Infrared LED	12 units Infrared LED
IR Spectrum	850nm	
Effective Range	Up to 10 Metres	
External Dimensions	75(W) x 70(H) x 140(D) mm	63(W) x 58 (H) x 103.2 (D)mm
Weight (approximate)	460g	345g

### KEY FEATURES:

- 1/3" and 1/4" IT CCD
- Compact and light weight
- Indoor and outdoor use
- Infrared Led
- Automatic Day & Night function
- 10 metres effective range
- Automatic IR trigger-on under low illumination
- Automatic IR off under normal illumination
- Water resistant (IP 57/65)

# ZC-NH SERIES

## High Resolution and High Resolution Colour/Mono (D/N) Cameras

The super high resolution ZC-NH405P has unique 10-Bit Digital Signal Processing (DSP) technology, for superb pictures. The ZC-NH403P is a Colour/Mono camera, also employing DSP technology.

Both camera models have day and night function that provides high quality colour pictures in normal lighting conditions (Day mode) and a high sensitivity Black & White picture in low light conditions (Night mode) by switching IR cut filters mechanically.

Both cameras offer high picture quality and high resolution through a 1/3" high-sensitivity CCD sensor, although the ZC-NH405P has a better colour reproduction and sensitivity since its super high resolution. The OSD menu has various settings including RS485 interface, Area sensing BLC, Backfocus adjustment, Camera titling and Privacy zone masking.

### Ordering Codes:

ZC-NH405P Col / Mono Camera, Super High Resolution, 540TVL

ZC-NH403P Col / Mono Camera, High Resolution



### Perfect Partners



IR Lens  
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LCD Monitor  
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MODEL	ZC-NH405P	ZC-NH403P
TV System	Pal	
Lens Mount	CS mount	
Image Sensor	1/3" IT CCD	
Effective Elements	752(H) x 582(V)	
Video Output	1.0V (p-p) / 75	
Resolution (Horizontal)	540 TVL	480 TVL
Minimum Illumination (F1.2/30IRE)	0.2 lux: Colour Mode 0.01 lux : B/W Mode	0.3 lux: Colour Mode 0.03 lux: B/W Mode
S/N Ratio	More than 50dB (AGC OFF)	
Gamma Characteristics	0.45	
Sync. System	INT. / Line-lock	
Scanning Frequency	15.625kHz (H) / 50.0Hz (V)	
E.Shutter	Auto 1/50-1/100000 Manual 1/50,1/120,1/250,1/500,1/1000,1/2000,1/5000,1/10000	
BLC	On (Six sensing area selectable) / Off	
White Balance	ATW / Manual	
Operating Temperature & Humidity	-10 to +50 Degrees C, 80% RH Max. (No Condensation)	
Storage Temperature & Humidity	-20 to +60 Degrees C, 80% RH Max. (No Condensation)	
Power supply	12V dc / 24V ac Auto Switching	
Power Consumption	4.5W	
Weight (approximate)	450g	
External Dimensions	76(W) x 61(H) x 123(D) mm	
Communication	RS485 two way communication	
OSD	Camera ID (000_999 address), Menu setting	
D&N Switching	Fuzzy Logic, IR Switch	

### KEY FEATURES:

- 1/3" IT CCD
- Stylish design
- High sensitivity with minimum illumination
- Super High Resolution model available (ZC-NH405P)
- Excellent picture quality in both day and night mode
- Unique 10-bit DSP (ZC-NH405P)
- On Screen Display (OSD)
- White balance
- Auto iris level adjustment by OSD menu
- Low voltage power input (12V DC/24V AC)





# ZC-NH258P

## Super High Resolution Colour/Mono Camera



540  
TVL



Standard

Good F Stop for perfect pictures in extreme sunlight



Day/Night (IR)

No focal shift under IR Illumination

ZC-NH258P is a super high resolution Day/Night compact and simple camera to install. The high performance CCD image sensor combined with the new Digital Signal Processing chip delivers a super high resolution of 540 TVL and gives great colour pictures during the day and sharp black & white pictures at night.

The camera is suitable for almost all applications where there is poor lighting. The Day/Night switching mode is ultra reactive to light conditions, providing high quality colour pictures in normal lighting conditions (Day mode) and high sensitivity black & white pictures in low light conditions. When the light fades, the camera switches automatically to night mode by removing the colour filter. This switchover can also be performed by use of remote photocell connected to the rear camera terminals.

Other extensive features are also available on the camera, like the auto iris amplifier, internal or line lock synchronisation, complete with phase adjustment, automatic gain control, auto electronic shutter, auto white balance correction and backlight compensation.

This is a simple to install, no-fuss camera which is easy to set up and gives excellent results.

### Ordering Codes:

ZC-NH258P Super High Resolution, Col/Mono Camera

MODEL	ZC-NH258P
TV System	PAL
Lens Mount	CS mount
Image Sensor	1/3" IT CCD
Effective Elements	752(H) x 582(V)
Video Output	1.0V (p-p) / 75
Resolution (Horizontal)	540 TVL
Minimum Illumination 50IRE (F1.2)	1.2 lux (Colour), 0.08 lux ( Mono)
30IRE (F1.2)	0.62 lux (Colour), 0.04 lux ( Mono)
With IR Illuminance	0.00 lux
S/N Ratio	More than 50dB (AGC OFF)
Gamma Characteristics	0.45
Sync. System	INT. / Line-lock
Scanning Frequency	15.625kHz (H) / 50.0Hz (V)
Iris Control	DC: DC iris AES (sec): Linear shutter (1/50 to 1/20000) Video: Vcc = DC 12V, 50mA max, Sig = 0.7 V(p-p) High impedance
White Balance	Manual
Operating Temperature & Humidity	-10 to +50 Degrees C, 85% RH Max. (No Condensation)
Storage Temperature & Humidity	-20 to +60 Degrees C, 95% RH Max. (No Condensation)
Power Supply	12V dc / 24V ac Auto Switching
Power Consumption	4.5W or less
Weight (approximate)	270g
External Dimensions	60(W) x 54(H) x 103.3(D) mm
Switches	Iris Control: DC/AES/VIDEO
BLC:	ON/OFF
Adjustments	DC iris level adjustment

### KEY FEATURES:

- 1/3" IT CCD
- Stylish design
- High sensitivity with minimum illumination
- Excellent picture quality in both day and night mode
- Fast change over from Day/Night mode (less than 1.5 sec)
- Backlight compensation
- Accurate colour reproduction
- Low voltage power input

# ZC-YHW702P

## High Resolution Colour/Mono (D/N) Wide Dynamic Camera

The ZC-YHW702P camera combines wide dynamic function, true day/night and long term integration to provide a camera that can be configured to meet the most demanding of applications.

The camera comes in a low voltage format accepting AC or DC power sources automatically, and can be used with all Computer lenses (fixed, manual, DC & video drive iris).

The ZC-YHW702P has a wide range of features that can be accessed through the on-screen display menus. These features include configurable WDR function to compensate for changing backlight conditions, D/N change over level and change over mode for enhanced night and IR performance. Also, integration level and limit for enhanced minimum illumination and motion detection. Privacy masking allows up to 8 sections of the image to be covered where privacy issues may appear to name but a few.

### Ordering Codes

ZC-YHW702P Hi Resolution, Colour/Mono Wide Dynamic Camera



### Perfect Partners



LCD Monitor  
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IR Lens  
Page 4

PRODUCT	ZC-YHW702P
TV System	PAL
Lens mount	CS Mount
Image sensor	1/3" IT CCD
Sync.system	INT.L.L. (Manual switch)
Video outputs	510 TVL (Col), 520 TVL (Mono)
Minimum Illuminance (50 IRE)	0.8 lux at F1.2 (Colour), 0.1 lux at F1.2 (Mono)
0.02 lux	(Electronic sensitivity increased by 40 times)
WDR	Yes (60dB)
Integration	64 fields
D/N	True D/N, change over auto, menu or relay input
D/N change level	Normal, priority to colour, priority to motion
Motion detection	Yes , programmable
OSD function control	OSD camera set-up, WDR, Sens Up, Day/Night, Casino
E-Zoom,	BLC, AWB, Shutter Speed, AGC Sync.,
	Flickerless, Privacy Masking
Alarm input	Yes
Integration	OFF, 4, 6, 8, 10, 20, 40 Fields
BLC options	OFF/ON/ Wide dynamic range
Iris	Auto Electronic Shutter/ DC/ Video
	White balance ATW/AWB/Manual
Privacy masking	Up to 8 masking areas, programmable
RS-485 Communication	Yes
Voltage input	12Vdc / 24Vac
Power consumption	390 mA (12 Vdc), 270mA (24 Vac)
Operating conditions	-10 to +50 degrees C under 90% non condensing
External Dimensions	60(W) x 66(H) x 123(D) mm
Weight (approximate)	330g

### KEY FEATURES:

- Wide dynamic range
- Day/Night function
- Long term integration
- On screen set up
- Scene select function
- Privacy masking
- Camera title display
- Motion detection
- Aperture Correction (horizontal & vertical)
- Manual selectable shutter speed
- Back light compensation
- Automatic white balance



# ZC-Y12 SERIES

## Super High Resolution Cameras



### Perfect Partners



LCD Monitor  
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Aspherical  
Varifocal Lens  
Page 4

ZC-Y12 series are new super high resolution, compact colour cameras suitable for almost all applications where there is a strong emphasis on outstanding picture quality with detail.

The high performance CCD image sensor combined with the new Digital Signal Processing chip that delivers a super high resolution of 540 TVL.

Extensive features are standard on the ZC-Y12 range of cameras such as advanced digital signal processing, auto iris amplifier, internal or line lock synchronisation, complete with phase adjustment, automatic gain control, auto electronic shutter, auto white balance correction and backlight compensation.

This camera is also available with a built in UTP transmitter option (ZC-Y12PH5) ideal for those demanding installations where greater distances need to be covered during cabling.

The cameras are available in mains or low voltage versions. The low voltage model allows both AC & DC connection providing greater versatility and is also automatically switchable

#### Ordering Information

ZC-Y12PH3	Super High Resolution Camera, Colour, 230V
ZC-Y12PH4	Super High Resolution Camera, Colour, 12-24V
ZC-Y12PH5	Super High Resolution Camera, Colour, with integrated UTP transmitter

MODEL	ZC-Y12PH3	ZC-Y12PH4	ZC-Y12PH5
TV System	Pal		
Lens Mount	CS mount		
Image Sensor	1/3" IT CCD		
Effective Elements	752(H) x 582(V)		
Video Output	1.0V (p-p) / 75		
Resolution (Horizontal)	540 TVL		
Minimum Illumination (F1.2/50IRE)	1.2 lux (D D/N off), 0.8 lux (D D/N on)		
(F1.2/30IRE)	0.62 lux (D D/N off), 0.4 lux (D D/N on)		
S/N Ratio	More than 50dB (AGC OFF)		
Gamma Characteristics	0.45		
Sync. System	INT. / Line-lock		
Iris Control	DC: DC iris		
	AES (sec): Linear shutter (1/50 to 1/20000)		
	Video: Vcc = DC 12V, 50mA max, Sig = 0.7 V(p-p) High impedance		
Scanning Frequency	15.625kHz (H) / 50.0Hz (V)		
White Balance	ATW		
Operating Temperature & Humidity	-10 to +50 Degrees C, 85% RH Max. (No Condensation)		
Storage Temperature & Humidity	-20 to +60 Degrees C, 95% RH Max. (No Condensation)		
Power Supply	12V dc / 24V ac Auto Switching		
Power Consumption	4.5 W or less		
Weight (approximate)	270g		
External Dimensions	60(W) x 54(H) x 103.3(D) mm		
Switches	Iris Control: DC/AES/VIDEO BLC: BLC/OFF D D/N: On/Off Video output: BNC/UTP (only ZC-Y11PH5 model)		
Adjustments	DC iris level adjustment (adjustable POT in only DC iris mode)		

#### KEY FEATURES:

- 1/3" IT CCD
- Super high resolution ( 540 TVL)
- Outstanding picture quality
- Electric iris function
- Advanced digital signal processing
- Built in "Auto iris amplifier"
- Easy focus adjustment
- Integrated UTP transmitter option available (ZC-Y12PH5)
- Back light compensation
- Automatically switchable 12 V dc /24V ac

All cameras use a 1/3" CCD providing high sensitivity and performance in the most demanding of conditions. The ZC-Y11 series is available in mains or low voltage versions.

All cameras can be used with a wide range of lenses, including fixed iris, manual iris, video iris and DC iris lenses.

Extensive features are standard on the ZC-Y11 range of cameras such as internal or line lock synchronisation, complete with phase adjustment, automatic gain control, auto electronic shutter, auto white balance correction and backlight compensation.

### Ordering Codes

ZC-Y11P4 Colour, Standard Resolution, 230V

ZC-Y11P3 Colour, Standard Resolution, 12-24V



### Perfect Partners



Monitor  
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Varifocal Lens  
Page 4

MODEL	ZC-Y11P3	ZC-Y11P4
TV system	PAL	
Lens mount	CS mount	
Image Sensor	1/3" IT CCD	
Effective elements	500(H)x582(V) pixels	
Image output	1.0Vp-p/75Ohm	
Resolution	330 TVL	
Min. illumination	<0.27 lux (F1.2/50IRE)	
S/N ratio	>50dB	
Gamma Characteristics	0.45	
Sync. system	INT./L.L. (manual switch)	
Iris control	Video/DC/AES	
Power Consumption	<4.5W	<3.5W
Power supply	230 Vac	12Vdc/24Vac
Operating conditions	-10 to +50°C, 80% relative humidity	
Storage conditions	-20 to +60°C, 90% relative humidity	
Dimensions	60(W) x 54(H) x 95(D)mm	
Weight (Approximate)	600g	300g

### KEY FEATURES:

- 1/3" IT CCD
- Line lock with phase adjustment
- Auto white balance
- Backlight compensation
- Automatic gain control
- Mains voltage and low voltage



# ZC-F11 SERIES

## Standard and High Resolution Range of Mono Cameras



All of the cameras use a 1/3" CCD providing high sensitivity and performance in the most demanding of conditions. The ZC-F11 series is available in mains or low voltage versions.

All cameras can be used with a wide range of lenses, including fixed iris, manual iris, video iris and DC iris lenses.

Extensive features are standard on the ZC-F11 range of cameras such as internal or line lock synchronisation, complete with phase adjustment, automatic gain control, auto electronic shutter, auto white balance correction and backlight compensation.

### Ordering Codes

ZC-F11C4	Mono Standard Resolution, 12-24V
ZC-F11CH4	Mono High Resolution, 12-24V
ZC-F11C3	Mono Standard Resolution, 230V
ZC-F11CH3	Mono High Resolution, 230V

### Perfect Partners



Mono Monitor  
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Varifocal Lens  
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MODEL	ZC-F11C3	ZC-F11C4	ZC-F11CH3	ZC-F11CH4
TV system	CCIR			
Lens mount	CS mount			
Image Sensor	1/3" IT CCD			
Effective elements	500(H)x582(V) pixels		752(H)x582(v) pixels	
Image output	1.0Vp-p/750hm			
Resolution	380 TVL		570 TVL	
Min. illumination	<0.09 lux (F1.2/50IRE)		<0.18 lux (F1.2/50IRE)	
S/N ratio	>50dB			
Gamma Characteristics	0.45			
Sync. system	INT./L.L. (manual switch)			
Iris control	Video/DC/AES			
Power Consumption	<4W	<3W	<4W	<3W
Power supply	230 Vac	12Vdc/24 Vac	230 Vac	12Vdc/24Vac
Operating conditions	-10 to +50°C, 80% relative humidity			
Storage conditions	-20 to +60°C, 90% relative humidity			
Dimensions	60(W) x 54(H) x 95(D)mm			
Weight (Approximate)	600g	300g	600g	300g

### KEY FEATURES:

- 1/3" IT CCD
- High resolution and standard resolution
- Line lock with phase adjustment
- Auto white balance
- Backlight compensation
- Automatic gain control
- Mains voltage and low voltage



# YC SERIES

## Standard & High Resolution Range of Colour Cameras

The YC CS mount cameras can accept all types of lenses whether they are manual for internal applications using AES (auto electronic shutter), or for external use (when fitted inside a housing) using auto iris lenses, either DC or video iris, providing the connection for these from the same plug.

Within the range there are both mains voltage and low voltage options, also within the voltage varieties are standard and high resolution options.

When on site there are features such as automatic gain control, back light compensation and phase synchronisation which allows the set up of the camera to be customised to suit the on site environment.

### Ordering Codes

- YCH-25P      Colour High Resolution, 12-24V
- YCH-30P      Colour High Resolution, 230V



### Perfect Partners



MPEG4 DVR  
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MODEL	YCH-30P	YCH-25P
TV System	PAL	PAL
Lens mount	CS Mount	CS Mount
Scanning System	2:1 interlace	2:1 interlace
Image sensor	1/3" IT CCD	1/3" IT CCD
Effective elements	752(H) x 582 (V) pixels	752(H) x 582 (V) pixels
Video outputs	1.0Vp-p/ 75 Ohms	1.0Vp-p/ 75 Ohms
Resolution ( horizontal)	480 TVL	480 TVL
Min.Illuminance	0.72 lux (F0.8/50IRE)	0.72 lux (F0.8/50IRE)
S/N ratio	More than 48db	More than 48db
y characteristic	0.45	0.45
Sync.system	INT.L.L. (Manual switch)	
Iris control	Video/DD/EI	
White Balance	Auto tracking white balance	
Power supply	230 Vac	12Vdc/ 24Vac
Power consumption	3.5W	4.0W
Operating conditions	-10°C to +50°C relative humidity 80% max	
Storage conditions	-20°C to +50°C relative humidity 80% max	
External dimensions	55(W) x 40(H) x 112.4(D)mm	
Weight	410g	280g
Input & Output	Video output : BNC	
Switches	Iris control, Video / AES / DC, Sync System : INT./L.L., BLC :ON/OFF	

### KEY FEATURES:

- 1/3" IT CCD
- High resolution and standard resolution
- Line lock with phase adjustment
- Auto white balance
- Backlight compensation
- Automatic gain control
- Mains voltage and low voltage



# FC SERIES

## Standard & High Resolution Range of Mono Cameras



The FC CS mount cameras can accept all types of lenses whether they are manual for internal applications using AES (auto electronic shutter), or for external use (when fitted inside a housing) using auto iris lenses, either DC or video iris, providing the connection for these from the same plug.

Within the range there are both mains voltage and low voltage options, also within the voltage varieties are standard and high resolution options.

When on site there are features such as automatic gain control, back light compensation and phase synchronisation which allows the set up of the camera to be customised to suit the on site environment.

### Ordering Codes:

FC-25C	Mono Standard Resolution, 12-24V
FCH-25C	Mono High Resolution, 230V
FC-30C	Mono Standard Resolution, 12-24V
FCH-30C	Mono High Resolution, 230V

### Perfect Partners



Mono Monitor  
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Varifocal Lens  
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MODEL	FC-30C	FC-25C	FCH-30C	FCH-25C
TV System	CCIR			
Lens mount	CS Mount			
Scanning System	2:1 interlace			
Image sensor	1/3" IT CCD			
Effective elements	500 (H) x 582 (V) pixels		752(H) x 582 (V) pixels	
Video outputs	1.0Vp-p/ 75 Ohms			
Resolution ( horizontal)	380 TVL		570 TVL	
Min.Illuminance	< 0.04 lux (F0.8/50IRE)		< 0.08 lux (F0.8/50IRE)	
S/N ratio	More than 48db			
y characteristic	0.45			
Sync.system	INT.L.L. (Manual switch)			
Iris control	Video/DD/EI			
White Balance	Auto tracking white balance			
Power supply	230 Vac	12Vdc/ 24Vac	230 Vac	12Vdc/ 24Vac
Power consumption	3.5W	3.0W	3.5W	3.0W
Operating conditions	-10°C to +50°C relative humidity 80% max			
Storage conditions	-20°C to +50°C relative humidity 80% max			
External dimensions	55(W) x 40(H) x 112.4(D)mm			
Weight	410g	280g	410g	280g
Input & Output	Video output : BNC			
Switches	Iris control, Video / AES / DC, Sync System : INT./L.L., BLC :ON/OFF			

### KEY FEATURES:

- 1/3" IT CCD
- High resolution and standard resolution
- Line lock with phase adjustment
- Auto white balance
- Backlight compensation
- Automatic gain control
- Mains voltage and low voltage

# CPSU & CVPSU

## Power Supplies

The CPSU Range of power supplies are specifically designed for the CCTV Market. These are linear power supply units are fully regulated. The range include 12V DC 500mAmp, 12Vdc 1Amp, and 24Vac 1Amp.

The power supplies come with a 3 pin moulded UK style plug top, two mount lugs for easy fitting and a low voltage flying lead for connection to your equipment.

<b>Ordering Code</b>	
CPSU/12/0.5A/II	12Vdc 500mAmp maximum load
CPSU/12/1.0A/II	12Vdc 1Amp maximum load
CPSU/24/1.0A/II	24Vac 1Amp maximum load

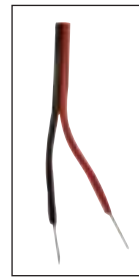


55(w)x48(h)x83(d)mm

The CVPSU power supply is a switch mode unit and due to the compact design it can be installed in most locations.

The power supply comes with a 3 pin moulded UK style plug top, four mounting lugs for easy fitting and a low voltage flying lead for connection to your equipment. The flying leads are coded Red for positive and Black for negative for easy voltage matching

<b>Ordering Code</b>	
CVPSU12	12Vdc 1Amp maximum load



46(w)x25(h)x94(d)mm



These boxed power supplies are the perfect choice for installations where you are powering your low voltage cameras from one central point.

For ease of installation the units have either 4 or 8 individually fused outputs and LED fault indication.

<b>Ordering Code</b>	
CT4004	24Vac 4Amp maximum load 4 individual outputs
CT4008	24Vac 4Amp maximum load 8 individual outputs



# GH PRE BUILT SERIES

Housing, Camera and Lens combined



These kits have been specially designed with the installer in mind. We have carefully selected a range of cameras and lenses and built them into an external IP67 camera housing. This makes a much simpler and quicker installation thus saving you time and money.

Supplying the cameras and lenses pre built gives you the peace of mind that all the equipment is fully compatible with each other to avoid any nasty surprises.

When the equipment is supplied the camera and lens combination have been adjusted and set so there is no awkward fitting required by the installation engineer.

The kits are supplied with two cable leads approximately 2meters in length. One lead is connected to your input voltage supply and the other is your video.

#### Ordering codes:

GHYCH30P3Z	High Resolution colour camera kit with 2.9~8.2mm Aspherical vari-focal lens
GHNH2583Z	High Resolution Colour/mono camera kit with 2.9~8.2mm Aspherical IR Corrected vari-focal lens.
GHNH2585Z	High Resolution Colour/mono camera kit with 8.5~40mm Aspherical IR Corrected vari-focal lens

Low voltage codes please suffix above code with either 12 for 12Vdc or 24 for 24Vac ie GHNH2583Z/LV24

MODEL	TYPE	CAMERA	LENS	INPUT VOLTAGE
GH-YCH30P3Z-230	Hi Resolution Colour	YCH30P	TG3Z2910FCS	230Vac
GH-NH2583Z-230	Hi Res colour/mono camera	ZC NH258P	TG3Z2910FCS IR	230Vac
GH-NH2585Z-230	Hi Res colour/mono camera	ZC NH258P	TG5Z8513FCS IR	230Vac
GH-NH2583Z-LV12	Hi Res colour/mono camera	ZC NH258P	TG3Z2910FCS IR	12Vdc
GH-NH2585Z-LV12	Hi Res colour/mono camera	ZC NH258P	TG5Z8513FCS IR	12Vdc
GH-NH2583Z-LV24	Hi Res colour/mono camera	ZC NH258P	TG3Z2910FCS IR	24Vac
GH-NH2585Z-LV24	Hi Res colour/mono camera	ZC NH258P	TG5Z8513FCS IR	24Vac

#### KEY FEATURES:

- Hassle free
- Simple to Install
- IP67 Housing
- Fully compatible
- Minimal setup

# GF RANGE

## Pre Built Kits



These kits have been specially designed with the installer in mind. We have carefully selected a range of cameras and lenses and built them into an external IP67 camera housing. This makes a much simpler and quicker installation thus saving you time and money.

Supplying the cameras and lenses pre built gives you the peace of mind that all the equipment is fully compatible with each other to avoid any nasty surprises.

When the equipment is supplied the camera and lens combination have been adjusted and set so there is no awkward fitting required by the installation engineer.

The kits are supplied with two cable leads approximately 2meters in length. One lead is connected to your input voltage supply and the other is your video.

### Ordering codes

- GFYCH30P3Z Hi Res Colour Camera Kit with 2.9~8.2mm Aspherical Vari-Focal lens
- GFYWH702P3Z Hi Res Wide Dynamic Camera Kit with 2.9~8.2mm Aspherical vari-focal lens
- GFNH403P5Z Hi Res Colour/Mono Camera Kit with 8.5~40mm Aspherical IR Corrected Vari-Focal lens

Low voltage codes please suffix above code with either 12 for 12Vdc or 24 for 24Vac ie GFNH403P5Z-LV24

All kits will be supplied with a 230Vac input unless alternative voltage is requested at time of order

MODEL	TYPE	CAMERA	LENS	INPUT VOLTAGE
GFYCH30P3Z-230	Hi Resolution Colour	YCH30P	TG3Z2910FCS	230Vac
GFYWH702P3Z-230	Hi Res wide dynamic camera	ZC YWH702P	TG3Z2910FCS	230Vac
GFNH403P5Z-230	Hi Res colour/mono camera	ZC NH403P	TG5Z8513FCS IR	230Vac
GFNH403P5Z-LV24	Hi Res colour/mono camera	ZC NH403P	TG5Z8513FCS IR	24Vac
GFNH403P5Z-LV12	Hi Res colour/mono camera	ZC NH403P	TG5Z8513FCS IR	12Vdc

### KEY FEATURES:

- Hassle Free
- Simple to Install
- IP65 Housing
- Fully compatible
- Minimal setup





# NIGHT VISION CAMERA KITS

## Night Vision Mono Kit



The Night Vision Mono Camera Kit incorporates a Ganz monochrome camera, a Computar vari-focal lens, and vari-focal Illumination Infra-Red, all in an environmental housing with integrated bracket and cable management. The kit provides 24-hour surveillance and will cover distances up to 20m+ in total darkness. 0 LUX.

Supplied with PSU.

### Ordering Information:

**GH-NVM-2Z**      Night Vision Mono Kit High Res Mono  
 Camera, Lens, Housing, IR Illumination  
 230Vac input

## Night Vision Colour/Mono Camera Kit



The Night Vision Colour/Mono camera kit incorporates a Ganz day/night mode camera, a Computar vari-focal lens, and vari-focal Illumination Infra-Red all in an environmental housing with integrated bracket and cable management. The kit provides 24-hour surveillance and will produce high resolution colour images during the day and high resolution mono images in total darkness and will cover distances up to 20m+ in total darkness. 0 LUX. Supplied with PSU.

### Ordering Information:

**GH-NVDN-3Z**      Night Vision Colour/Mono Kit High Res  
 Day/Night Camera, IR Lens, Housing, IR  
 Illumination 230Vac input

# ROADSTAR RST SERIES

## Roadstar ANPR Cameras

The Ganz Roadstar camera captures the images of car number plates from moving vehicles both day and night conditions. When the headlights are switched on, the dark IR lights located beneath the housing illuminates the registration plate without blinding the driver. Due to the nature of the application images appear in black and white.

A specially made filter and camera are expertly set up during the assembly process. The Roadstar camera system comprises of camera, filters, lens, brackets and an IR illuminator. The assembly, wiring and testing is performed prior to packing and customer shipment. The ANPR camera overcomes all problems associated with number plate capture - speed, reflectivity, sunlight, car headlights and depth of field - regardless of ambient lighting conditions.

Because the installation of the assembly is simple, it can be wall or pole mounted in car parks, hotels, petrol stations, highways, etc.

The integrated number plate capture camera is designed for high performance, long life and low maintenance.

NOTE: During night-time operation ROADSTAR will only provide images of number plate – there will be no further video information. During the day, ROADSTAR may provide some additional background scene information.

### Ordering codes:

- RST-10 10m ANPR Camera
- RST-20 20m ANPR Camera
- RST-30 30m ANPR Camera
- RST-40 40m ANPR Camera



### Perfect Partners



Roadstar Software  
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MODEL	RST-10	RST-20	RST-30	RST-40
Capture distance	10M	20M	30M	40M
Resolution	570 TVL			
Wavelength	850NM			
Environmental	IP66			
Construction & finish	Diecast aluminium in black RAL9005			
LED Life	Average 10 years			
Fixing	Wall bracket (included)			
Voltage input (PSU included)	230Vac			
Power consumption	150W			
Weight	3.57Kg			

### KEY FEATURES:

- Pre-assembled and expertly set up
- Easy to install
- Captures images of vehicle travelling in excess of 120MPH (193KPH)
- 10M, 20M, 30M and 40M distances
- High resolution
- 24Hr round the clock operation
- LED Dark IR illumination
- 3 Years warranty



Sales and information +44 (0) 208 732 3300



# C-ALLVIEW

## High Speed Rugged Pan / Tilt Camera



### Perfect Partners



Keyboard  
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IR lamps  
Page 55-57

### KEY FEATURES:

- Vandal resistant
- Flexible mounting options
- Flat toughened glass window
- Day/Night camera
- High-speed, pan-and-tilt system
- 18x optical zoom
- Protection class IP67
- Built-in wiper unit
- Presets and tours
- Privacy masking
- Multiple protocols

This new Day/Night high speed PTZ Camera is a continuous rotation "ruggedised" PTZ camera, sealed to IP67 and designed to be installed in harsh and challenging environments or areas where the camera unit may be liable to experience physical abuse.

The optically flat glass is distortion free giving brighter clearer images at higher zoom ranges thus allowing more flexible installation in adverse environments

The C-AllView PTZ camera has been cast from aluminium, hard anodised and powder coated to protect from scratching, oxidation or attack from solvents, making it vandal resistant and suitable for most environments. The replaceable front glass window is also toughened and has a wiper which is used to clear any dirt and water. It has been designed to take substantial impacts from thrown objects and is resistant to ballistic attacks.

### Ordering Codes:

- C-ADN1X18PT-W 1/4" Day/Night PTZ camera,18:1, Cream
- C-ADN1X18PT-B 1/4" Day/Night PTZ camera,18:1, Black
- C-ADN1X26PT/W 1/4" Day/Night PTZ Camera, 26:1, Cream
- C-ADN1X26PT/B 1/4" Day/Night PTZ Camera, 26:1, Black

### Accessories

- C-AWN Screen washer nozzle, manifold & mounting assembly
- C-AWA5L Washer unit 24Vac 5 litre capacity
- C-AWA25L Washer unit 24Vac 25 litre capacity
- C-AMPAC 8 way multi protocol alarm card (use only with AllView PSU)
- C-AS Sunshield Pendant cover and mounting assembly

### Mounting brackets

- C-APM-B Pole mount swan neck dome adaptor, c/w lanyard clip (Black)
- C-APM-W Pole mount swan neck dome adaptor, c/w lanyard clip (White)
- C-AWM-B Wall mount AllView brackets, c/w lanyard clip (Black)
- C-AWM-W Wall mount AllView brackets, c/w lanyard clip (White)
- C-ACMA-B Corner Adaptor to suit C-AWM (Black)
- C-ACMA-W Corner Adaptor to suit C-AWM (White)
- C-AHDWM Galvanised Heavy duty wall mount bracket, to suit AllView in upright position

# C-ALLVIEW

## High Speed Rugged Pan / Tilt Camera

The main advantage for the installer is: easy to install, simple to set up and provides excellent picture quality. Nine different protocols are loaded as standard giving even more flexibility to existing installations.

The wiper and optional wash facility on the C-AllView is ideal for all weather conditions. With the remote operation of the wash and optional wipe facility the operator can have clearer images from the comfort of the control room.



Pole or pendant mounting positions are a standard feature of the C-Allview and finish can be in matt black or matt cream.

The vertical axis mounting side arms can be tilted forward to enable an almost 90 degree downward view. This gives a complete 360 degree coverage.



Wash /wipe facility enables cleaning of the front glass easily without the need to make a costly maintenance visits ensuring minimum disruption.



Downward and upward views are possible making the C-Allview an highly versatile and adaptable solution.



Flat front glass is distortion free enabling crystal clear images.



A bracket can be placed between the pole or pendant mounting points on the C-Allview to accept the range of vari focal IR illuminators seen on pages 55. Whatever the model chosen a full 360 degrees is covered.



# C-ALLVIEW

## High Speed Rugged Pan / Tilt Camera

Model	C-ADN1X18PT	C-ADN1X26PT
Video System	PAL / NTSC	
Video Output	1.0 V (p-p) / 75	
Image Sensor	1/4" IT CCD	
Horizontal Resolution	480 TVL	
Minimum Illumination	0.7 lux colour, 0.01 lux mono	3 lux colour, 0.01 lux mono
Horizontal Viewing Angle	2.7 - 48 degrees	2.0 - 45 degrees
Effective Elements	752 (H) x 582 (V)	
Zoom	18 x optical, 12 x digital	26 x optical, 12 x digital
Lens	4.1 - 73.8mm	2.4 - 62.4mm
S/N Ratio	>50 dB	
Sync System	INT. /L.L.	
Gamma Characteristic	0.45	
White Balance	ATW, AWB	
Backlight Compensation	Yes	
Pan Rotation	Continuous	
Tilt Rotation	290°	
Pan & Tilt speed	> 180° per second	
Pan Coverage	360 degrees (continuous rotation)	
IP Rating	IP 67	
Mount Type	Normal and Inverted	
Preset Accuracy	14 bit resolution encodes (0.1 degrees)	
Preset Positions	32	
Preset Tours	16	
Mimic Tours	4 x 1 mimic tours	
Video gain and lift	16 steps	
Preset Titling	Yes	
Privacy zones	24, with separate algorithms to account for offset tilt of head unit or inverted operation (12 privacy zones if E-flip is enabled)	
Configuration Download/Upload	Yes	
Protocols	Pelco P, Pelco D, BBV coaxial, VTC, Sensormatic, Samsung SCC300, Kalatel, C-Dome, Overview RS485	
Controller Interface	RS-485 half duplex data communication Coaxial Telemetry Optional	
Alarm	Supports 64 alarms on RS485 bus, external to PTZ unit	
Real Time Clock	Yes	
IR Mode	Via External input IR Lamp Power Optional	
Mounting Options	Standard mount, 4" (101.6mm) PCD	
Housing Colour	Matt Black or Cream	
Power Supply	20-36 Vdc / 14-26 Vac	
Vandal Resistant	Yes	
Operating Temperature	-20°C ~ +50°C, Relative humidity 90%	
Operating Voltage	20-36 Vdc / 14-26 Vac	
Power Consumption Max	15W	
Dimensions	220(W) x 268.13(H) mm	
Weight	7 kg	





# C-DOME

## Indoor functional and static

The indoor C-Dome range is designed to be operated and installed easily and quickly. High specification levels disguise the fact that this product line is available to suit a variety of constraints.

There are two alternatives to choose from; either fully functional (PTZ in 22x or 18x optical zoom) or fixed (static with VF lens).

The functional dome is feature packed providing many benefits such as its simplicity of construction (only 17 parts) that makes it reliable and stable. Also, by use of high grade stepper motors (400,000 steps) silky fine control at full zoom with incredible preset accuracy is possible without any slip or movement. The two mimic tours (copying and recording the dome tour following the movement of the operator) not only have the same repeatable accuracy but are easily configured as well.

Should an existing system installation need to be upgraded or extended, the multi-protocol adaptability of these domes allow them to be driven by other manufacturers control equipment. The fixed domes share the same housings and fittings as the functional domes but offer alternative cameras.



### Perfect Partners



Keyboards  
Page 72



Matrix  
Page 71

### Alternative Options

Wall Mount



Pendant Mount



Mirror Finish



FUNCTION & ACCESSORIES		ORDERING CODES	
<b>Zoom Ratio</b>	<b>Pendant Skirt</b>	<b>False Ceiling</b>	
18:1 Colour	C-D1i18P	C-D1i18PC	
22:1 Colour	C-D1i22P	C-D1i22PC	
<b>Fixed VF Ratio</b>			
2.8 - 12mm	C-D1iF3-12P	C-D1iF3-12PC	
10 - 30mm	C-D1iF10-30P	C-D1iF10-30PC	
4 - 8mm	C-D1iF4-8P	C-D1iF4-8PC	
<b>Accessories</b>			
Pendant bracket	C-D1i-PM	Not applicable	
Wall bracket	C-D1i-WB	Not applicable	
Corner bracket	C-D1i-CB	Not applicable	
Lower dome clear	C-D1i-CC		
Lower dome mirror	C-D1i-MC		
Pendant pole length 300/600/1200mm	C-D1300 / C-D1600 / C-D11200		

### KEY FEATURES:

- Quick and easy installation
- 18x and 22x optical zoom
- Continuous rotation and auto flip
- Extremely fine control even under full zoom
- 36 high accuracy preset positions
- 2x mimic tours
- Multi protocols
- RS485/Coax telemetry control
- Fixed option
- NTSC models available

All domes are supplied with smoked finish as standard.

For a complete listing of accessories and specifications refer to pages 41 and 42.



Sales and information +44 (0) 208 732 3300



# C-DOME

## Outdoor functional domes



### Alternative Options

Swan mount

Heritage mount



Vandal Resistant



The outdoor C-Dome range of domes are designed to give premium performance and reliability. High specification levels mean that this product line is available to suit a wide variety of demanding applications.

There are a number of models to choose from ranging in appearance and electronic functionality to environmental conditions.

Besides the capabilities of the indoor range, the outdoor domes have a number of extra features. For example, the optical zoom ratios are available as 18x colour or 18x and 26x day/night and all have a switchable digital zoom facility. The number of presets and mimic tours are 360 and 4 respectively.

The on screen display (OSD) function allows full access to all dome functions enabling third party control in the case of a retro fit requirement. Additionally, control of lift and gain and servicing like resets can be performed remotely using this function.

Dynamic privacy zones (32 per dome) can be shaped and sized according to the view restriction and increase or decrease according to the zoom setting.

FUNCTION & ACCESSORIES	ORDERING CODES			
Zoom Ratio	Wall Mount	Swan Neck	Heritage	Vandal Resistant
18:1 Colour	C-D1X18P	C-D1X18PS	C-D1X18PH	C-D1X18PT
18:1 Day/Night	C-DN1X18P	C-DN1X18PS	C-DN1X18PH	C-DN1X18PT
26:1 Day/Night	C-DN1X26P	C-DN1X26PS	C-DN1X26PH	C-DN1X26PT
<b>Accessories</b>				
Power supply	Included	Included	Included	Included
Corner adaptor	C-DN1X-CM			
Pole adaptor	C-DN1X-PM			
Soffit adaptor	C-1DN1X-SM	Not applicable	Not applicable	Not applicable
Clear dome finish	C-DN1X-CC			
External alarm	C-DN1X-ALARM-EU (in w/proof box with PSU)			
PCB alarm	C-DN1X-ALARM			

All domes are supplied with smoked finish as standard.  
For a complete listing of accessories and specifications refer to page 42.

### KEY FEATURES:

- On screen display (OSD) permits remote access to full dome control, even by third party control equipment
- 32 dynamic privacy zones
- 18x colour, 18x & 26x day/night options with switchable 12x digital
- Continuous rotation and auto flip
- Extremely fine control even under full zoom
- 360 high accuracy preset positions and 4 mimic tours
- Picture freeze between presets
- Multi protocols
- RS485/Coax telemetry control
- Quick and easy installation and maintenance
- NTSC models available

# C-DOME

## Accessories

### Indoor dome accessories

- C-D1i-PM Pendant Bracket
- C-D1i-WB Wall bracket used for securing domes to a wall
- C-D1i-CB Corner bracket
- C-D1i-CC Indoor lower dome cover clear
- C-D1i-MC Mirror dome cover
- C1-ALARM-EU Internal matrix alarm including power supply
- C-D1300 Pendant pole of varying lengths of 300mm (C-D1300), 600mm (C-1600) and 1200mm (C-1200).

### Outdoor dome accessories

- C-DN1X-CM Corner adaptor for external wall bracket
- C-DN1X-PM Pole adaptor for external wall bracket
- C-DN1X-SM Soffit adaptor
- C-DN1X-CC Clear external dome
- C-DN1X-ALARM-EU Alarm PCB (mounted in external receiver box with power supply)



C-D1i-PM



C-D1i-WB



C-D1i-CB



C-D1i-CC



C-D1i-MC



C1-ALARM-EU



C-D1300



C-DN1X-CM



C-DN1X-PM



C-DN1X-SM



C-DN1X-CC



C-DN1X-ALARM-EU



# C-DOME

## Indoor & Outdoor functional domes

MODEL	C-D1i18 (INDOOR)	C-DN1X18 (OUTDOOR)	C-DN1X26 (OUTDOOR)
Video System	PAL (NTSC versions available)	PAL / CCIR (NTSC versions available)	PAL / CCIR (NTSC versions available)
Video Output	1.0 V (p-p) / 75 Image		
Sensor	1/4" ITCCD	1/4" ITCCD	1/4" ITCCD
Horizontal Resolution	480 TVL	480 TVL	480 TVL
Minimum Illumination	0.7 Lux (50 IRE)	0.7 Lux (Col), 0.01 Lux (Mono)	3.0 Lux (Col), 0.01 Lux (Mono)
Horizontal Viewing Angle	2.7°~ 48°	2.7°~ 48°	2.0°~ 45°
Effective Elements	752(H) x 582(V)	752(H) x 582(V)	752(H) x 582(V)
Lens (Focal Length)	4.1 - 73.8mm	4.1 - 73.8mm	2.4 - 62.4mm
Zoom	18x optical, 12x digital	18x optical, 12x digital	26x optical, 12x digital
S/N Ratio	>50 dB	>50 dB	>50 dB
X Wave Technology	Yes	Yes	No
Wide Dynamic Range	No	No	No
Sync System	INT. / L.L.	INT. / L.L.	INT. / L.L.
Gamma Characteristic	0.45	0.45	0.45
White Balance	ATW, AWB	ATW, AWB	ATW, AWB
Backlight Compensation	Yes	Yes	Yes
Focus / Iris	Auto / Manual	Auto / Manual	Auto / Manual
Presets	36	36	360
Tours	2 Preset Tours (max 36 presets per tour)	4 Preset Tours (max128 presets per tour)	4 Preset Tours (max128 presets per tour)
Learned Patrols	2 Mimic (Learn Tours)	4 Mimic (Learn Tours)	4 Mimic (Learn Tours)
Remote Reset	Yes	Yes	Yes
Auto Homing		Preset, Tour or Mimic	
Privacy Zones	None	32 with 8 present on screen simultaneously	
Preset Titrting	Yes	Yes	Yes
Sector Titrting	Yes	Yes	Yes
Telemetry	Coax / RS485 /UTP (auto select)		
Operating Temperature	Internal: -10 - 50°C, External: -20 - 50°C		
Variable PanSpeed	0.1 - 400°/ sec	0.1 - 400°/ sec	
Pan Coverage	360°Continuous rotation		
Variable Tilt Speed	0.1 - 200°/ sec	0.1 - 200°/ sec	
Tilt	90°		
Power Consumption	36 W (1.5A)	60W (2.5A)	
Power Supply	24 V ac		
Mounting Options	Wall,Ceiling,False Ceiling Wall, Wall-corner, Pole,Soffit		
External Dimensions	204(d)x214(h) mm	406(w) x 260(d) x 261(h) mm	
Weight (Approximate)	2.89 Kg	5.1Kg	

# ZC-PT SERIES

## Indoor Functional Domes

The ZC-PT Domes offer budget alternatives to the C-Dome range. With good performance, this range will suit many low cost applications.

There are three internal solutions; the 10x (Mini PTZ) 18x and 22x optical zoom and four external solutions all of which have 18x, 22x, 23x and 26x digital zoom.

Various brackets allow the domes to be ceiling flush mounted for indoor use, or pendant and wall mounted for indoor and outdoor use with suitable adaptors.

The domes have over 250 preset positions and in the case of the 18x and 26x model, privacy masking and built-in motion detection as well. Multi protocol and language capability make these domes highly versatile and will suit many varied applications.



Indoor



(Mini PTZ dome, 10:1)

### KEY FEATURES:

- Budget Range
- Many options available
- Over 250 preset positions
- Privacy masking on 23x and 26x models.
- Motion detection on the 26X
- Multi protocols
- Multi-language
- NTSC models available

### Indoor domes

ZC-PT210P, 10x optical, 10x digital zoom colour mini PTZ  
 ZC-PT218P, 18x optical, 10x digital zoom, colour  
 ZC-PT222P, 22x optical, 12x digital zoom, colour  
 ZC-PT223P, 23x optical, 12x digital zoom, WDR Day/Night  
 ZC-PT226P, 26x optical, 12x digital zoom, Day/Night

### Outdoor domes

ZC-PT218P-XT, 18x optical, 12x digital zoom colour  
 ZC-PT222P-XT, 22x optical, 12x digital zoom colour  
 ZC-PT223P-XT, 23x optical, 12x digital zoom WDR Day/Night  
 ZC-PT226P-XT, 26x optical, 12x digital zoom Day/Night

### Indoor dome mounting options

Wall mount (Mini PTZ)	Standard dome, ZCA-IPA (Indoor Pole Mount adaptor), ZCA-GT100 (Mini pendant bracket)
Hard ceiling surface mount	Standard dome, ZCA-HC200 (Hard Ceiling Mount)
False ceiling	Standard dome, ZCA-HC200 (Hard Ceiling Mount), ZCA-TB200 (T-bar Ceiling Mount)
Pendant mount	Standard dome, ZCA-IPA (Indoor Pole Mount adaptor) , ZCA-ST25 or ZCA-ST50 (25cm or 50cm tube)
Wall mount	Standard dome, ZCA-IPA (Indoor Pole Mount adaptor) , ZCA-GT200 (Gooseneck bracket)

### Outdoor dome mounting options

Wall mount	Standard dome, ZCA-GT200 (Gooseneck bracket)
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Please refer to page 44 for the complete dome assembly options





# ZC-PT SERIES

## Ordering Information


### Complete Dome assembly

	Internal			
 =  +  +  +  Mini PTZ Wall mount      ZC-PT210P      ZCA-IPA      ZCA-GT100      ZCZ220-1.5APSU				
 =  +  +  Hard Ceiling      ZC-PT2XXP      ZCA-HC200      ZCZ220-1.5APSU				
 =  +  +  +  False Ceiling      ZC-PT2XXP      ZCA-HC200      ZCA-TB200      ZCZ220-1.5APSU				
 =  +  +  +  Pendant mount      ZC-PT2XXP      ZCA-IPA      ZCA-ST25 (25cm) ZCA-ST50 (50cm) Pendant Pole      ZCZ220-1.5APSU				
 =  +  +  +  Wall Mount      ZC-PT2XXP      ZCA-IPA      ZCA-GT200      ZCZ220-1.5APSU				

### External

 =  +  +  Wall Mount      ZC-PT2XXP-XT      ZCA-GT200      ZCA-220-3.0A PSU
--

### Optional Accessories

				
ZCA-CST	ZCA-PTDM	ZCA-WBM	ZCA-GT100	ZCA-S201

# ZC-PT SERIES

## Indoor and Outdoor Functional Dome Series

Functions	ZC-PT218P	ZC-PT222P	ZC-PT223P	ZC-PT226P	ZC-PT210P
Optical Zoom Ratio	18x	22x	23x	26x	10x (Mini PTZ)
Digital Zoom			12X		10X
Effective Elements			752(H) x 582(V)		
Horizontal Resolution	480 TVL	480 TVL	480 TVL	480 TVL	450 TVL
Scanning Area	1/4" CCD ExView	1/4" CCD	1/4" CCD	1/4" CCD ExView	1/4" CCD ExView
Maximum Iris Aperture			F1.2(W)-F3.8(T)		
Scanning System			PAL, (NTSC version available)		
Synchronisation			Internal / Line Lock		
Video Output			1.0Vpp/75,BNC		
S/N Ratio (AGC OFF)			50dB		
Backlight Compensation			Yes		
Minimum Illumination (100 IRE)	0.7 lux	1 lux	0.01 lux (Night mode)	0.01 lux (Night mode)	1 lux
Focal Length	4.1 ~ 73.8 mm	4 ~ 88 mm	3.6 ~ 82.8 mm	3.5 ~ 91 mm	4 ~ 40 mm
Focus Mode			Auto / Manual		
White Balance			Auto / Manual		
On Screen Display			Yes		
Iris Control			Auto / Manual (1-360)		
Electronic Shutter	1/1~1/10k sec	1/50~1/30k sec	1/1.5~1/30k sec	1/1~1/10k sec	1/50~1/10k sec
AGC control			Auto / Manual		
Back Light Compensation			On / Off		
Wide Dynamic	No	No	Yes	No	No
Pan Travel	360° endless	360° endless	360° endless	360° endless	720°
Tilt Travel	-10°~100°	-10°~100°	-10°~190°	-10°~190°	0°~100°
Preset Pan / Tilt Speed			5 ~ 400° per sec		5 ~ 300° per sec
Preset accuracy			Pan: 0.225° Tilt: 0.45°		0.50°
Zoom focus accuracy			+ / - 0.45%		
Zones			16 zones, 20 characters per zone		
Presets			256		
Tours			4		
Remote Reset			Yes		
Privacy Zones	24	-	8	24	
Auto Pan			4		
Cruise			1		
Sequence			8		
Digital Flip			Digital/Mechanical		
Built-in Protocol			GANZ-S, GANZ-PT, Pelco D, P, VCL, Phillips, AD-Manchester, AD-422 etc		
Environment			Indoor/Outdoor		
Motion Detection	Yes	No	No	Yes	No
Controller Interface			RS-485 / UTP / Coax		RS-485
Operating Temperature			Indoor : 0°C ~40°C Outdoor:-30°C ~-50°C , Humidity 90% Max		
Water Proof Standard			IP 66 Standard (Outdoor: with Sunshield)		
Vandal cover	No	No	Yes	Yes	Yes
Dimension indoor/outdoor		INT: 131(D) x 226 (H) mm EXT: 172(D) x 302.5(H) mm		INT: 133(D) x 173(H)mm EXT: 172 (D) x 260 (H)mm	
Weight indoor/outdoor		1.6kg (INT) / 5.8 kg (EXT)		1.2kg (INT) / 2.1 kg	
Power Source indoor/outdoor			12VDC / 24VAC (INT) 24VAC (EXT)		
Power Consumption		INT: 30W EXT: 52W (w/ Heater)		INT: 14W EXT: 52W (w/ Heater)	



# Z SERIES

## Internal Camera Brackets



These camera brackets are ideal for internal use, designed to complement our YC and ZC camera range. Available in grey & cream.

ZP-B10(GW)	Internal Camera Bracket	White	Wall mount
ZP-B10(GR)	Internal Camera Bracket	Grey	Wall mount
ZP-B11(GW)	Internal Camera Bracket	White	Ceiling mount
ZP-B11(GR)	Internal Camera Bracket	Grey	Ceiling mount

A very light weight attractive silver bracket suitable for our YC, ZC and Spot camera range. The bracket is ceiling and wall mountable.

ZP-B15	Internal Camera Bracket	Silver	Ceiling/ Wall Mount
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A special grey bracket for use with the Spot Cam (ZC-L1210PHA) only. Cable management through the bracket helps to make a tidy installation. The bracket is ceiling and wall mountable.

ZCA-LB101	Spot Cam Bracket	Grey	Ceiling/Wall Mount
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# M SERIES AND ZMA SERIES

## CRT & LCD Monitor Brackets



Ceiling  
(MISC/MIDC)



Wall  
(MISW/MIDW)



ZMA-WB2  
2 knuckles



ZMA-WB3  
3 knuckles

### Monitors

MISC 12/14	For 12"-14" Monitors Ceiling Mount (275-377mm, height x width)	CEM-12A II/CEM-15A II/ ZM-CR114NP II/ ZM-CRH115NP II
MIDC 14/21	For 14"-21" Monitors Ceiling Mount (367-532mm, height x width)	CEM-20A /ZM-CR121NP II
MIDC 21/28	For 21"-28" Monitors Ceiling Mount (510-675mm, height x width)	
MISW 12/14	For 12"-14" Monitors Wall Mount	CEM-12A II/CEM-15A II/ ZM-CR114NP II/ZM-CRH115NP II/
MIDW 14/21	For 14"-21" Monitors Wall Mount	CEM-20A/ZM-CR121NP II
MIDW 21/28	For 21"-28" Monitors Wall Mount	
ZMA-WB3	3 knuckles, wall mount bracket	ZM-L215VC/ZM-L217P/ ZM-L219P TFT LCD Monitors
ZMA-WB2	2 knuckles, wall mount bracket	ZM-L215VC/ZM-L217P/ ZM-L219P TFT LCD Monitors
ZMA-RK17	17" Rack Mount Kit	ZM-L217P/ZM-L219P
ZMA-RK19	19" Rack Mount Kit	ZM-L217P/ZM-L219P
ZMA-RK8	8" Rack Mount Kit	ZM-L208C

(2 knuckles - Swivels left and right, total 180 degrees and the LCD Monitor swivels up to 270 degrees.  
3 knuckles - Swivels left and right, total 180 degrees and the LCD Monitor swivels up to 270 degrees and pivot moves, upwards and downwards.)

CAUTION: When installing a monitor bracket its very important to pay strict attention to the dimensions and weight of the monitor. Monitors are heavy and can cause serious damage or personal injury should they fall. CBC accepts no responsibility for damage or personal injury caused by incorrect or unsuitable installation of brackets or monitors or any resulting damage from unauthorised/inappropriate modifications.

# GH SERIES

## External Camera Housing

The GH series of housing have been designed to provide the greatest degree of protection required by a CCTV system while still being easy and simple to install. The housings have been designed to accommodate the most common lens/camera combinations. These include the 10x varifocal and 6x zoom lens from Computar.

The GH series of housings are rated as standard to IP67 making them suitable to be used in the most demanding of weather conditions. If however this is not enough, an IP68 housing can be supplied on request. The central body of the housing and the sunshield are made from die cast aluminium and the front and rear of the housing are made from reinforced techno polymer fibreglass. The kit units are supplied complete with cable managed wall brackets fitted with flexible power and video cables.

### Ordering Information

GH-230KIT	Midi housing kit, 230Vac
GH-24KIT	Midi housing kit, 24Vac
GH-12KIT	Midi housing kit, 12Vdc



Perfect Partners



Cameras Pages 14-45



Lenses Pages 4-12

MODEL	GH-230KIT	GH-24KIT	GH-12KIT
Water Resistance	IP 67		
Voltage Input	230 Vac	24 Vac	12 Vdc
Housing Weight	1690g		
Bracket Weight	460g		
Power Consumption	40mA	350mA	700mA
Operating Conditions	-20 to 50°C, relative air humidity 99% non condensing		
External Dimensions (W x H x D)	142mm x 142mm x 395mm		
Internal Dimensions (W x H x D)	77.92mm x 81.5mm x 203.5mm		
Sunshield	Diecast aluminium		
Centre Section	Diecast aluminium		
Front & Rear	Reinforced Techno Polymer Fibreglass		
Supplied with KIT bracket	Power & video cable (cable managed)		

### KEY FEATURES:

- Complete housing including wall mounting arm with pivot head, sun shield and heater
- Prewired with internal cable guide
- Simple installation & positioning of the camera
- Anti reflective front glass
- IP67
- IP68 available on request



# CH HOUSINGS

## Small and Medium Housings



Perfect Partners



Lenses Page 4-12



Cameras Page 14-45

Stylish Enviromental housings that are designed to make the installation and servicing easier. The housings have an innovative opening system that allows access to the housing's interior; the body and the sunshield slide forward and hang in place, while the unit remains fixed allowing access to the camera from all angles. This can be done from either side for a rapid installation and easy adjustment.

The body is made of die-cast aluminium and the sunshield of ABS material. Its IP66 weatheproof feature makes the housing ideal for all weather condition.

The CHEM can accept Vari focal and Fixed Focus lenses. The CHEB-II can accept Vari focal lenses, Fixed focus lenses and 6:1 zoom lenses.

**Ordering Information:**

- CHEM IP66 External housing, 230V input
- CHEM 12 IP66 External housing, 12Vdc input
- CHEM 24 IP66 External housing, 24Vac input
  
- CHEB-II IP66 External housing, 230V input
- CHEB-II/12 IP66 External housing, 12Vdc input
- CHEB-II/24 IP66 External housing, 24Vac input

MODEL	CHEM	CHEB-II
Water Resistance	IP66	
Construction	Aluminium	
Colour-Body	CBC Grey, Sun Shield RAL 9002	
Cable Glands	2	3
Operating Temperature	-20°C ~ 50°C (with heater)	
Heater Temperature On	< 15°C +/- 3°C	
Temperature Off	> 22°C +/- 3°C	
Heater consumption	IN 12Vdc/24Vac, consumption 20W / IN 115/230Vac, consumption 40W 1200mA (12Vdc) / 600mA (24Vac) / 180mA (230Vac)	
Blower Temperature On	> 35°C +/- 3°C	
Temperature Off	< 20°C +/- 3°C	
Optional	IN 12Vdc or 24Vac or 230Vac (4W max)	
Dimensions		
Internal (W x H x L) mm	65 x 70 x 300	90 x 85 x 330 (useable area)
External (W x H x L) mm	113 x 104 x 405	144 x 135 x 410
Weight	1.9 Kg	2.85Kg

**KEY FEATURES:**

- Indoor/Outdoor installation
- Snap on sunshield
- Cable managed option (CHEB-II)
- Slide extractable body with hinged system
- Cable glands
- IP66

# CHOV-II

## Medium Housing

Stylish Enviromental housing that is designed to make the installation and servicing easier. Due to its side opening, the accessibility to the lens, camera and its connections is quicker.

The body is made of aluminium and the sunshield of ABS material. Its IP 66 weatheproof features makes the houing ideal for all weather condition.

The CHOV II can be supplied with a integrated self-parking wiper (optional). It is possible to have either a standard bracket or a cable managed bracket with the housing.

The CHOV II can accept Vari focal lenses, Fixed focus lenses and 6:1 zoom lenses.

### Ordering Information:

CHOV II IP66 external Housing 230Vac Input  
 CHOV II /12 IP66 external Housing 12Vdc Input  
 CHOV II /24 IP66 external Housing 24Vac Input



Housing showing side opening with camera/lens (not included)

MODEL	CHOV-II
Water Resistance	IP66
Construction	Aluminium
Colour-Body	CBC Grey
Sun Shield	RAL 9002
Operating Temperature	-20°C ~ 50°C (with heater)
Heater Temperature On	< 15°C +/- 3°C
Temperature Off	> 22°C +/- 3°C
Heater Consumption	IN 12Vdc/24Vac, consumption 20W / IN 115/230Vac, consumption 40W 1200mA (12Vdc) / 600mA (24Vac / 180mA (230Vac)
Blower Temperature On	> 35°C +/- 3°C
Temperature Off	< 20°C +/- 3°C
	IN 12VDC or 24VAC or IN 100-240VAC, OUT12VDC (4W max)
Dimensions	
Internal (W x H) mm	100 x 70 (useable area)
External (W x H x L) mm	115 x 163 x 514
Weight	2.54Kg

### KEY FEATURES:

- Easier installation (side opening)
- Indoor/Outdoor installation (IP66)
- Integrated wiper option
- Wall and ceiling mount options (internal and external)
- Different mounting options; standard bracket, cable management bracket or P&T





# GH FAST RANGE

## GH Series External Camera Housing



Housing showing camera/lens (not included)

The innovative and stylish design of the new GH Fast housing makes the installation of this external camera housing much simpler and easier for the installer.

Dual access, from either side of the housing is made possible due to its unique dual side opening hinges. The hinged lid runs along the length of the housing body and permits room for work during installation of camera and lens. And, since the housing can be opened from either side any additional set-up can be made easily at the installation location.

The GH Fast housing is manufactured from the latest techno-polymer which gives the housing and IP rating of IP66 and protection against harmful UV rays. This material also makes the housing vandal resistant to IK10 EN50102.

The GH Fast housing is supplied as standard with external sunshield and cable managed wall bracket. The units are also pre cabled with a coaxial cable for video and power cord for voltage. Due to the design of the housing once installed they require little or no maintenance

**Ordering Codes:**

- GH-FWC230 External housing sunshield and wall bracket 230Vac
- GH-FWC24 External housing sunshield and wall bracket 24Vac
- GH-FWC12 External housing sunshield and wall bracket 12Vdc

Model	GH-FWC230	GH-FWC24	GH-FWC12
Ingress Protection	IP66		
Input Voltage	230Vac	24Vac	12Vdc
Power Consumption	40mA	350mA	700mA
Operating temperature	-20deg-50deg		
Dimensions	128 (w)x66(h)x220(l)mm, Sunshield 391(l)mm		
Weight	Approximately 2.1Kg including cables		

**KEY FEATURES:**

- Hassle free
- Simple to Install
- IP66 Housing
- Anti Vibration camera system
- Double side opening
- Cable managed
- Adjustable sunshield
- Different mounting options

# 900 SERIES

## External Camera Housings

The 900 series of environmental camera housings are designed and manufactured to accommodate most camera and lens combinations, including the Computar H30Z 30:1 range of CCTV lenses.

The housings are of aluminum construction with stainless steel fittings and fastenings. This style of construction gives the housing an environmental rating of IP66 and are a perfect match for the 615 and 610 series of Pan & Tilt motors.

The Housing comes in either 230Vac or 24V ac and can be also supplied with an integral wiper assembly unit, again in various voltages.

The housings are supplied with a Paxolin camera plate for easy fitting of the camera lens combination, a steel safety strap between the detachable lid and base of the housing. The housings are also fitted with the latest PTC resistor heaters to maintain the correct temperature within the housing and these PTC resistors heaters also eliminate the need for traditional thermostats.

The housings are designed to make installation as simple and as easy as possible and once in place they require little or no maintenance

### Options

Additional heaters  
Security option

Cooling Fans  
Toughened Glass



900 Housing without wiper

900/950 Housing & wiper complete

### Perfect Partners



30:1 Zoom Lens  
Page 8



Pan & Tilt Unit  
Page 54

MODEL	900EH	900/950EH
Operating Voltage	230Vac	230Vac
Heater (max)	32W	32W
Weight	<3.5Kg	<4.0Kg
Integral self park wiper	N/A	Yes
Voltage options		
24Vac	900/24A/EH	900/951/EH
	Other voltage options available on request	
Washer Units	N/A	900/wash
Internal Dimensions	(W)150x(H)155x(L)510	(W)150x(H)155x(L)510

### KEY FEATURES:

- Easy installation
- IP66
- Optional Wash unit
- Voltage options
- 3 entry Glands



## TPSK-II

### Vandal Resistant Housing



External dimensions: 386.5(w) x 178(h) x 187(l)mm

Vandal resistant ceiling housings have been designed for surveillance applications in places highly exposed to vandalism eg underground parking, train & bus stations, prisons, etc.

The TPSK is made of heavy duty steel sheet of 2.5mm thickness and its vandal resistant glass window (4mm thick) is made of polycarbonate. The unit is ceiling mountable.

**TPSK-II** Vandal resistant housing, Wedge style

## TPSC

### Vandal Resistant Housing



External dimensions: 354.5(w) x 178(h) x 155(l)mm

Vandal resistant ceiling housing for applications exposed to vandalism.

The TPSC is made of steel sheet of 1.5mm thickness and its vandal resistant glass window (4mm thick) is made of PMMA. The unit is ceiling mountable.

**TPSC** Vandal resistant housing, Wedge style

## IDPH

### Indoor Housing



Max. camera dimensions: 60(w) x 60(h) x 170(l)mm  
External dimensions: 62(w) x 62(h) x 320(l)mm

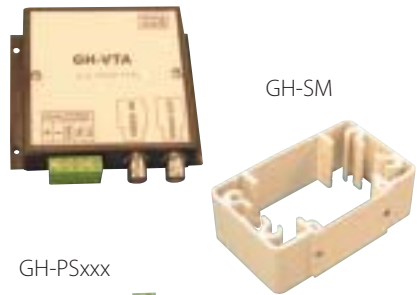
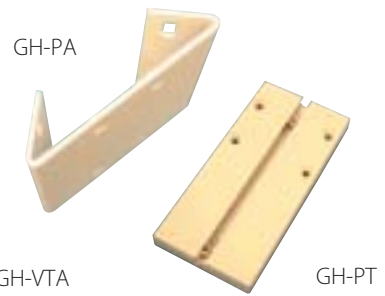
The IDPH is a low cost dual position housing for internal use. It is manufactured from high quality engineering thermoplastic for durability and aesthetic appeal.

The housing is available with a bracket which is Wall and Ceiling mountable

**IDPH** Indoor housing, with bracket

# GH & CH ACCESSORIES

- GH-SM      Spacer/wall mount adaptor for side running of cables
- GH-WM      Adjustable head and wall mount bracket
- GH-PA      Pole mount adaptor
- GH-PT      Pan & Tilt plate adaptor
- GH-CM      Ceiling mount bracket with inner running of cables
- GH-TK      Housing Tamper Kit for GH Housing
- GH-VTA      Video Tamper Kit for GH Housing
- GH-PS230/24    Internal power supply 230Vac/24Vac out
- GH-PS230/12    Internal power supply 230Vac/12Vdc
- GH-PS24/12    Internal power supply 24Vac/12Vdc out
- GH-B12      Blower option for GH Housing powered at 12Vdc
- GH-B24      Blower option for GH Housing powered at 24Vac



- WBOV      External housing bracket, Cable management (CHOV-II or CHEB-II)
- WBOV/P    External housing bracket, Cable management with box (CHOV-II)
- WBM      External housing bracket (CHEM)
- WBJ      External housing bracket (CHEM, CHEB-II & CHOV-II)



- CM4      Ceiling Mount for CHOV-II
- CM5      Ceiling Mount for CHEM, CHEB-II and CHOV-II
- CMP      Extension for CM4 and CM5



# 610-615 RANGE

## Pan & Tilt Units



### Perfect Partners



Column Spacers

This range of Pan and Tilt heads are designed to the highest quality and performance standards. Precision engineering culminates in a product line that is extremely compact and robust with certification to IP68.

A high load carrying ability with regenerative breaking for rapid deceleration ensures that precise control is always available at the fingertips. Backlash is a mere 0.15 degrees.

The precision engineering of these units make it a very stable mounting platform for your CCTV camera fitted with high zoom ratio lenses

These Pan and Tilt units are designed to make the installation as simple and as easy as possible and once installed they require little or no maintenance

The Pan and Tilts units are also available as AC or DC options, with or without presets and Side mount(SM) or over the top (OTT).

The mounting plate of the units has been designed to fit a standard 4" PCD. This standard mount allows for easy fitting of column spacers mounting brackets etc. (supplied separately)

These models are typically used for Town Centre surveillance Border Control, Ports, Traffic Surveillance or almost anywhere high load capabilities are required.

The most popular pan and tilt options are listed below but please contact us for any variation of these that you require.

Model Numbers	615/48/12/OTT	610/12/6/OTT
Operating Voltage	24Vdc	230Vac
Max Load (nominal)	12KG	12KG
Pan Speed (max)	48deg variable	12deg fixed
Tilt Speed (max)	12 deg variable	6deg fixed
Housing Mount	Over the top	Over the Top
	For Preset please add (P) after 615 or 610 ie 615P/xxxxxx	
	For Side mount please change (OTT) to (SM) ie 615/48/12/SM	
Accessories		
Column Spacer	700 (150mm)	702 (300mm)
Wall Bracket	704 (for above Pan Tilt motors)	
Corner Bracket	706 (for 704 wall bracket)	
IR Mount	600DER	

### KEY FEATURES:

- IP68
- AC or DC version
- Simple installation
- Suitable for all CCTV housing
- High Accuracy

# IR50/100 SERIES

## Short-Medium Infra Red Illuminators

The new IR 50 and IR 100 short and medium range LED Infra-Red illuminators provide class leading performance, long life and ultra low maintenance. Both models incorporate the very latest surface mount, high output, high efficiency LED's to deliver excellent night time pictures with improved optical output and outstanding reliability

IR 50 is available in a range of different fixed beam angles. IR 100 is equipped with Vari focal Illumination allowing the angle of light projection to be altered between 20 and 60 degrees to fit the specific demands of an installation. Each unit is fitted with a unique Cool Running™ thermal management system to control LED output and LED life. Consequently the IR series has a projected working life of 10 years.

IR series illuminators are provided complete with bracket and power supply and are designed for installation flexibility making them suitable for all low light installations. The power supply has a number of control features including adjustable power output, photocell and telemetry control.

### Ordering Information:

IR50/30, IR50/50, IR50/120

(30°, 50° and 120° angles)

IR100/2060, IR100/50100, IR100/120180

(20-60°, 50-100°, 120-180° angles)



IR50



IR100

### Perfect Partners



Mono Camera  
page 28



Day/Night Camera  
page 23-24



IR lens  
page 4

MODEL	IR 50	IR 100
Max Distance	up to 20m	up to 40m
Angle	30, 50 or 120° options	20-60, 50-100, 120-180° options
Wavelength	850nm or 940nm	
Dimensions (WxHxD)	75 x 100 x 50 mm	155 x 100 x 50 mm
Weight (lamp only)	1 kg	1.7 kg
Environmental Rating	IP66	
Colour	Black	
Bracketry (included)	U bracket	AI: top-bottom-wall
PSU	Included	
PSU Input Voltage	230V ac +/- 10%	
Power Consumption	10W max	25W max

For 940nm versions please suffix part numbers with /940  
Example IR300/2060/940. All distances based on 850nm

U bracket- For top, bottom or wall fixing

### KEY FEATURES:

- Outstanding night-time images
- Vari focal Illumination up to 180°
- Long Life expected 10 years
- High Power Latest LED technology
- Cool Running™ thermal management
- Even Output Illumination
- Zero light pollution
- Longer distance versions available
- Polycarbonate front glass





# IR300/500 SERIES

## Medium-Long Range Infra Red Illuminators



### Perfect Partners



IR Lens  
Page 4



Mono Camera  
Page 28



Day/Night Camera  
Page 23-24

The new IR 300 and IR 500 long range LED Infra-Red illuminators provide class leading performance, long life and ultra low maintenance. Both models incorporate the very latest surface mount, high output, high efficiency LED's to deliver excellent night-time pictures with improved optical output and outstanding reliability.

IR 300 and IR 500 are equipped with Vari focal Illumination allowing the angle of light projection to be altered between 20 and 60 degrees to fit the specific demands of an installation. Vari focal Illumination increases the flexibility of the light unit and means that a single product can be adapted to meet the needs of most installations.

Each unit is fitted with a unique Cool Running™ thermal management system to control LED output and LED life. Consequently the IR series has a projected working life of 10 years.

IR series illuminators are provided complete with wall brackets and power supply and are designed for flexibility during installations.

The power supply has a number of control features including adjustable power output, photocell and telemetry control.

IR300/2060, IR300/50100, IR300/120180  
(20-60°, 50-100°, 120-180° angles)  
IR500/2060, IR500/50100, IR500/120180  
(20-60°, 50-100°, 120-180° angles)

MODEL	IR 300	IR 500
Max Distance	up to 96m	up to 192m
Angle	20-60°, 50-100°, 120-180° options	
Wavelength	850nm or 940nm	850nm or 940nm
Dimensions (WxHxD)	205 x 135 x 60 mm	275 x 180 x 66 mm
Weight (lamp only)	2.5 kg	4 kg
Environmental Rating	IP66	IP66
Colour	Black	Black
Bracketry (included)	AI: top-bottom -wall	AI: top-bottom -wall
PSU	Included	Included
PSU Input Voltage	230V ac +/- 10%	230V ac +/- 10%
Power Consumption	80W max (nominal)	120W max (nominal)

For 940nm versions please suffix part numbers with /940  
Example IR300/2060/940. All distances based on 850nm

U bracket- For top, bottom or wall fixing

### KEY FEATURES:

- Outstanding night-time images
- Vari focal Illumination up to 180°
- Long Life expected 10 years
- High Power Latest LED technology
- Cool Running™ thermal management
- Even Output Illumination
- Zero light pollution
- 10° version covering up to 200m available
- Polycarbonate front glass

# IR750/50180 and IR500/1020

## Extreme Long Range Infra Red Illuminators

The new IR750/50180 and IR500/1020 are high power LED Infra-Red. Both models incorporate the very latest surface mount, high output, high efficiency LED's to deliver excellent night-time pictures with improved optical output and outstanding reliability.

IR750/50180 is designed for wide angle and dome applications and provides distances up to 150m at 50 degrees and 100m at 180 degrees.

IR500/1020 is designed for long range, narrow angle applications and provides distances up to 300m at 10 degrees.

IR units feature vari focal illumination to increase flexibility on site. A single product can be adapted to meet the needs of most installations. Each unit is fitted with a unique Cool Running™ thermal management system to control LED output and LED life. Consequently the IR series has a projected working life of 10 years.

IR series illuminators are provided complete with bracket and power supply and are designed for installation flexibility making them suitable for all low light installations. The power supply has a number of control features including adjustable power output, photocell and telemetry control.

IR750/50180 (50-180° angles)

IR500/1020 (10-20° angles)



IR750



IR500

Perfect Partners



PTZ Dome  
Page 39



C-All View  
camera  
Page 36

MODEL	IR 750/50180	IR 500/1020
Max Distance	100m @ 180 degrees	300m @ 10 degrees
Angle	VF 50-180 degrees	VF 10-20 degrees
Wavelength	850nm	850nm
Environmental Rating	IP66	IP66
Colour	Black	Black
Bracketry (included)	Al: top-bottom-wall	Al: top-bottom -wall
PSU	Included	Included
PSU Input Voltage	230V ac +/- 10%	230V ac +/- 10%
Power Consumption	120W max (nominal)	80W max (nominal)
Dimensions (WxHxD)	415 x 180 x 66 mm	275 x 180 x 66 mm
Weight (lamp only)	6 kg	4 kg

U bracket- For top, bottom or wall fixing

Please contact CBC for alternative wavelengths.

### KEY FEATURES:

- Ultra long range, ultra wide angle
- Outstanding night-time images
- Vari focal illumination 10-20 and 50-180 degrees
- Long Life expected 10 years
- High Power Latest LED technology
- Cool Running™ thermal management
- Even Output Illumination
- Zero light pollution



# WL RANGE

## White Light LED Illuminators



### Perfect Partners



Vari Focal Lens  
Page 4



Mega Pixel Camera  
Page 82



Colour & Mono Cameras  
Page 24

Designed to be used with colour or day / night cameras, the new energy efficient WL 50, WL100, WL 300 and WL 500 White-Light LED illuminators provide high performance, long life and ultra low maintenance. Each model incorporates the very latest surface mount, high output, high efficiency LED's to deliver excellent night-time pictures with improved optical output and outstanding reliability.

WL units provide colour corrected White-Light and can be used to provide CCTV lighting together with pedestrian and ambient lighting from a single light source. Each unit is equipped with Vari focal Illumination allowing the angle of light projection to be altered to fit the specific demands of an installation. Vari focal Illumination increases the flexibility of the light unit which means that a single product can be adapted to meet the needs of most installations.

Bracket and power supplies are supplied and are designed for installation flexibility. The power supply has a number of control features including adjustable power output, photocell and telemetry control.

- WL50/30, WL50/50, WL50/120 (30°, 50° and 120° angles)
- WL100/2060, WL100/50100, WL100/120180 (20-60, 50-100, 120-180° angles)
- WL300/2060, WL300/50100, WL300/120180 (20-60, 50-100, 120-180° angles)
- WL500/2060, WL500/50100, WL500/120180 (20-60, 50-100, 120-180° angles)

MODEL	WL500	WL300	WL100	WL50
Max Distance	up to 60m	up to 40m	up to 20m	up to 20m
Angle	20-60, 50-100, 120-180° options			20, 30 or 50° options
Wavelength	White Light			
Dimensions (WxHxD) mm	275 x 180 x 66	205 x 135 x 60	155 x 100 x 50	75 x 100 x 50
Weight (lamp only)	4 kg	2.5 kg	1.7 kg	1Kg
Environmental Rating	IP66			
Colour	Silver			
Bracketry (included)	Al: top-bottom-wall			
PSU	Included			
PSU Input Voltage	230V ac +/- 10%			
Power Consumption	80W max	50W max	25W max	10W max

### KEY FEATURES:

- C3 colour corrected White-Light for colour and day/night cameras
- Outstanding night-time images
- Varifocal Illumination (except WL50)
- Long Life expected 10 years
- High Power Latest LED technology
- Cool Running™ thermal management
- Even Output Illumination
- Ultra wide angle versions available
- Longer distance versions available

### IR and WL Accessories

SB1	Single mounting bracket for top mount P/T heads
DB2	Dual mounting bracket for top mount P/T heads
PSU-Standard	Includes power control, telemetry and photo cell with level adjustment
PSU-Premium	Includes power control, telemetry and photo cell with level adjustment plus camera power output
PB-180	Can fit up to 2x IR750. For use with PTZ domes & PTZ All View cameras
PB-360	Can fit up to 4x IR750. For use with PTZ domes & PTZ All View cameras

## Definition of Infra-Red

Infra-Red is a light that the human eye cannot see but monochrome or day / night CCTV cameras can. It is available in a range of wavelengths including 730nm (visible red glow) to semi-covert 850nm or fully covert 940nm. Distances are always reduced when using longer wavelength lamps.

## Vari Focal Illumination (VI)

Designed in both White-Light and Infra-Red variations, Vari Focal Illumination™ allows the installer to adjust the angle of the light projection from a single unit to fit the specific installation. Adjustment is quick and convenient and a number of angles from 20-60 degrees are easily selected. For fully functional dome cameras, specifically designed 180 degree versions are available.



WL Series - Achievable Distances			
		Metres	
		Wide	Narrow
<b>WL50</b>			
WL50/30	30 deg, white-light	15	Non VF
WL50/50	50 deg, white-light	11	Non VF
WL50/120	120 deg, white-light	6	Non VF
<b>WL100</b>			
WL100/2060	20-60 deg, white-light	15	22
WL100/50100	50-100 deg, white-light	10	15
WL100/120180	120-180 deg, white-light	7	10
<b>WL300</b>			
WL300/2060	20-60 deg, white-light	28	42
WL300/50100	50-100 deg, white-light	20	30
WL300/120180	120-180 deg, white-light	12	18
<b>WL500</b>			
WL500/2060	20-60 deg, white-light	40	60
WL500/50100	50-100 deg, white-light	28	42
WL500/120180	120-180 deg, white-light	16	24

IR Series - Achievable Distances			
		Metres	
		Wide	Narrow
<b>IR50</b>			
IR50/30	30 deg, 850nm	20	Non VF
IR50/50	50 deg, 850nm	14	Non VF
IR50/120	120 deg, 850nm	8	Non VF
IR50/50-940	50 deg, 940nm	10	Non VF
<b>IR100</b>			
IR100/2060	20-60 deg, 850nm	26	40
IR100/50100	50-100 deg, 850nm	18	28
IR100/120180	120-180 deg, 850nm	11	16
IR100/50100-940	50-100 deg, 940nm	12	17
<b>IR300</b>			
IR300/2060	20-60 deg, 850nm	63	96
IR300/50100	50-100 deg, 850nm	64	81
IR300/120180	120-180 deg, 850nm	31	46
IR300/50100-940	50-100 deg, 940nm	39	58
<b>IR500</b>			
IR500/1020	10-20 deg, 850nm	240	300
IR500/2060	20-60 deg, 850nm	127	192
IR500/50100	50-100 deg, 850nm	89	134
IR500/120180	120-180 deg, 850nm	51	77
IR500/50100-940	50-100 deg, 940nm	53	81
<b>IR750</b>			
IR750/50180	50-180 deg, 850nm	100	150

Distances may increase up to a x2 factor for internal applications



# UL 300 / 500

## High Powered Infrared Lamps



(PSU not included)

### Perfect Partners



Colour/Mono Camera  
Page 24



IR Lens  
Page 4



Power Supply Unit  
Page 61

The UL series of 300W and 500W infrared lamps have been designed to provide an outstanding degree of performance combined with low power consumption and high reliability. The lamps have a high efficiency allowing them to use 50% less power than their equivalent 300W or 500W lamp.

By separating the power supply and the lamp they provide a unit that is much lighter allowing pan and tilts to move more freely and be more reliable, additionally the power to the lamp is low voltage reducing the risk of electric shock.

The COSEC<sup>2</sup> technology used in the 10° & 30° lamps filters offer even illumination across the scene, eliminating the bright spot in the centre that is traditionally associated with infrared lighting. The wide range of filters, allow the lighting to be used in a wide degree of applications and with a wide range of cameras. From the overt 730nm and semi discrete 830nm general purpose filters on to the 940nm covert filter and the colour corrected white light filter for use with colour cameras coupled with the 300W and 500W lamps provide a lamp and filter for almost any application.

### Ordering Codes:

- UL300-730 IR Lamp 180w 6, 10, 30 or 60 degree beams
- UL300-830 IR Lamp 180w 6, 10, 30 or 60 degree beams
- UL500-730 IR Lamp 220w 6, 10, 30 or 60 degree beams
- UL500-830 IR Lamp 220w 6, 10, 30 or 60 degree beams

MODEL	UL 300	UL 500
Water Resistance	IP 66	
Radiated Output	300W	500W
Consumption	170W	220W
Construction	Aluminium casting/extrusion	
Weight	1.9Kg	2.3Kg
Colour	Black	
Filter Specifications	730nm, 830nm, 940nm Colour corrected white light	
Beam Specifications	6° Spot, 10° Cosec <sup>2</sup> , 30° Cosec <sup>2</sup> , 60° flood	
Ambient Temperature	40° (night time running)	
Power Supply	PSU-3SS or 3ST	PSU-5SS or 5ST
Main Output	230Vac 50Hz	
Voltage Output	Nominal 28Vac adjustable	
Power Output	220VA	420VA
Photocell	Yes	
Remote Control	Yes (via volt free contact with soft start)	
Built-in Photo Cell	Yes	
Weight	3.0Kg	5.0Kg

### KEY FEATURES:

- Uses 60% less power
- Cosec<sup>2</sup> provides even illumination
- Light weight
- Wide range of filter options
- Wide range of beam patterns
- High output radiation
- IP66
- Photocell built into PSU

### Accessories

- UL300-BULB 180w UL300 Replacement Bulb
- UL500-BULB 220w UL500 Replacement Bulb
- UL300/500-SB Bracket for Single IR Lamp
- UL300/500-DB Bracket for Double IR Lamp

# UL MINI

## Low Powered Infrared Lamps

The UL-MINI low powered series of infrared lights have been developed to provide IR lighting in situations where additional lighting is required over a short distance. The UL-MINI has a high powered output efficiency providing the equivalent of 100W of lighting for 30% less power.

The lamp has three angle options 10°, 30°, 60° providing matched angles to the most popular fixed and varifocal lenses. Additionally there are a range of filters available 730nm & 830nm standard filters to 940nm covert filters and the colour corrected white light filter.

**Ordering Codes:**

- UL MINI/730/10 IR Lamp 75w 10 Degrees
- UL MINI/730/30 IR Lamp 75w 30 Degrees
- UL MINI/730/60 IR Lamp 75w 60 Degrees

(PSU not Included)



**Perfect Partners**



Housings  
Page 47-51

Colour/Mono  
Camera  
Page 25

IR Lens  
Page 4

MODEL	UL MINI
Water Resistance	IP 66
Radiated Power	100W
Bulb Life	8000 hours
Consumption	70W
Construction	Aluminium
Filters	730nm, 830nm, 940nm, Colour
Beam Patterns	10°, 30°, 60°
Power Supply	220-240Vac
Built-in Photo Cell	Yes
Weight	800g
Dimensions (L x W x H)	
UL-MINI-PSU-S (Single)	120 x 120 x 65 mm, 360g
UL-MINI-PSU-D (Double)	160 x 80 x 65 mm, 600g

**KEY FEATURES:**

- Low power consumption
- High reliability (8000 hrs)
- Small & Robust

Accessories

- UL MINI PSU (S) Power Supply for 1x UL Mini 230VAC
- UL MINI PSU (T) Power Supply for 2x UL Mini 230VAC
- UL MINI BULB 75w UL Mini Replacement Bulb
- UL MINI SB Bracket for UL Mini Single
- UL MINI DB Bracket for UL Mini Double



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## UL SUPERLED

### High Powered Infrared Lamps



240(l)x180(w)x119(h) mm

SuperLED is designed for night-time CCTV schemes which demand a high level of reliability and minimum maintenance costs. The SuperLED is designed for medium to long range applications where long life is required. It has been developed for external applications with ranges up to 175 metres with IR extended cameras and lenses or up to 100 metres using mid-range cameras.

**SuperLED-850 IR Lamp 80-140W 10 and 20 degree beams  
PSU included**

## UL LED

### Low Powered Infrared Lamps



150(l)x108(w)x80(h) mm

The UL-LED is a solid state infrared light utilising light emitting diodes to provide low running costs and high reliability. This lamp is available as either a semi discrete 850nm or covert 940nm infrared lamp. The LED based technology provides almost endless life and takes away the requirement for bulb changing.

**UL LED-850 IR Lamp 60w 20 and 30 degree beam  
PSU included**

## UL MINI LED

### Low Powered Infrared Lamps



140(l)x90(w)x90(h) mm

This is an ultra long life, high reliability Infra-Red illuminator using solid state, high efficiency LED's. The UL MiniLED has been developed for indoor and external applications with ranges up to 20 metres using IR sensitive cameras and lenses and is available as either a semi discrete 850nm or covert 940nm infrared lamp. The inherent low power consumption of the solid-state array results in very low running costs over the life of the system.

**UL Mini LED-850 70W\* IR Lamp 30 and 60 degree beams  
\*PSU not included**

**UL Mini SB Bracket, single**  
**UL Mini DB Bracket, double**



# ZR-DHC1630NP

## 16 Channel PC Based DVR



rear view

The ZR-DHC1630NP 16 channel PC based realtime recording and display DVR combines the usability of a PC with the reliability of a traditional DVR.

The DVR has advanced functionality including the possibility to search for motion events retrospectively. Typically if something was stolen then the area can be highlighted and the system will search for motion in the area.

The system also has the function to add a test data stream typically a till system (POS) allowing the till data to be synchronised with the video allowing the function to search for a till transaction and the associated video to be viewed.

The DVR can be viewed and controlled either by a web browser or for extended functions via the free GMS (GANZ management software), these have the option for password access control.

Back-up is easily achieved and can be done in JPEG and Bitmap for still images or, original DVR format, AVI or SFX, when backing up the original DVR format. A player can be downloaded to allow simple playback on any PC.

### Ordering Code:

ZR-DHC1630NP 16 Channel PC Based DVR

Available in 500Gb, 1Tb, 1.5Tb hard drive sizes

### Screen shots



set up



watch



play



mapping

### Client Software

The client based software has four operating modes, the first is the client server (DVR server) settings and programming. This part of the software allows remote configuration of the DVR. Simplifying on site installation.

The Second mode is the Watch view, this allows any cameras from any of the DVRs to be seen in full screen or multiscreen from quad up to a 64 way split. These views can then be saved for future quick recall. The watch mode also allows control of any of the PTZs or domes to be controlled or configured. The third mode is the playback mode. This allows playback via the client software from any of the DVRs.

Multiple DVR playback can be done at the same time with DVR events being searched by the simple player bar at the bottom of the screen or via the event tab on the right hand side. When playing back bookmarks can be created for fast retrieval of events in the future. The fourth and final mode is the mapping mode, this allows maps to be set up of the site and cameras, dvrs, alarms to be added to the map to show to the operator the exact position of the devices, this allows the operator clear and easy control when moving from camera to camera. Live video can also be seen in this mode making tracking of object/people easier.

# ZR-DHC1630NP

## 16 Channel PC Based DVR

MODEL	ZR-DHC1630NP
Type	PC Based
Operating System	MS Windows XP Embedded
Video Inputs	16 Ports (BNC / 1Vp-p, 75Ohm)
Video Output	CVBS 1 Port (1 BNC), VGA, 2 Full SPOTs
Video Format	NTSC / PAL
Video Resolution	NTSC : 704x480, 704x240, 352x240 PAL : 704x576, 704x288, 352x288
Display Frame Rate	NTSC : 480 fps, PAL : 400 fps
Display Screen	Divide 1, 4, 6, 9, 10, 16 Division
Video Codec	Encoding & Decoding: Modified MPEG-4
Recording Frame Rate	NTSC: 120 fps@704x480, 240 fps@704x240, 480 fps@352x240, PAL : 100 fps@704x576, 200 fps@704x288, 400 fps@352x288
Recording Schedule	Daily (interval of 1 hour)
Audio Inputs & Output	16 Ports (Inputs sampling rate:8kHz Mono), 1 Ports Output
Alarm Inputs	16 Ports
Control Outputs	4 Ports
Internal recording device (Hard Disk Drive)	Default : 1pc. x 3.5 inch SATA drive for OS Expansion storage : up to 4pcs. x 3.5 inch IDE or SATA drive
NIC	LAN(100/1000 Ethernet(RJ45))
USB	6 Ports, USB2.0 high speed
DVD-RW	Yes
PS/2	Yes (1 Keyboard, 1 Mouse)
RS-232/RS-485	1 Port / 1 Port
Video Loss Detection	Yes
Image Authentication	Digital Watermark
Audio Codec	Codec: GSM 610 (8KHz Mono)
Event Log	Available
External Devices (Recording & Backup)	* Remote Network Drive * USB: HDD Drive, Memory Stick
Network protocol	TCP/IP
Remote access	Remote software (GMS program)
Remote alarm & Emergency notification	Remote GMS program
Password Access Control (Local, Remote)	Multi User Level Password supported
Watch Dog	Yes
PTZ dome Control latest list of protocols supported)	Yes (check with technical support for
Dimensions	430(W)x460(L)x176(H) (mm)
Weight	16kg excluding storage HDD
Operating temperature	0°C~+40°C
Power	AC 110~240V 50/60Hz Input, 300 Watt ( 110/220V Toggle switch)

### KEY FEATURES:

- MPEG4 compression
- Real-time recording
- Real-time display including multiscreen
- Telemetry control of various PTZ domes and receivers
- Post event motion search
- POS input
- Automatic DST /GMT adjustment
- Event archive via USB, HDD, CD writer, DVD writer, NAS
- Watermark
- User friendly graphic user interface
- Motion detection
- Thumbnail search
- View and control via network
- Free client software



# ZR-DHD SERIES

## 9 & 16 Channel TRIPLEX+ Digital Recorders with built in DVD Writer



### Perfect Partners



Keyboard  
page 72



External Storage

The ZR-DHD series of 9 & 16 channel TRIPLEX+ DVRs combine flexibility, versatility and usability in a single unit. The DVR allows the operator to play, record, and view multi-screen at the same time. In addition, remote view and record can be achieved over the TCP/IP network when using the free client software. These DVRs now come with an integrated DVD writer.

The DVR has internal space for 3 x HDD, with the ability to add additional space of up to 20 further HDDs via the high speed firewire port.

Controlling the DVR remotely couldn't be more simple. This can be achieved by using the C-DKBD keyboard or, alternatively over TCP/IP connection with the client software or internet explorer.

Event archiving is straight forward via the built in DVD-RW. These can also be done through a wide range of other mediums including USB memory stick or over TCP/IP. Each unit incorporates automatic daylight saving time adjustment through an in built calendar or can be continually adjusted via the network time protocol.

### Ordering Information:

ZR-DHD921NP-250	9 Channel Triplex+ DVR, 250GB
ZR-DHD921NP-500	9 Channel Triplex+ DVR, 500GB
ZR-DHD1621NP-750	16 Channel Triplex+ DVR, 750GB
ZR-DHD1621NP-1.2TB	16 Channel Triplex+ DVR, 1.2TB

\*Other options of hard drives available upon request

MODEL	ZR-DHD921NP	ZR-DHD1621NP
Video Format	PAL/NTSC	
Compression System	Video: Wavelet, Audio: AC97	
DVR Type	TRIPLEX +	
Operating System	Embedded Linux (not stored on HDD)	
Video Input	9 x Composite 1.0Vp-p auto terminating	16 x Composite 1.0Vp-p auto terminating
Audio In / Out	1 channel mono	
Screen Options	1, 4, 6, 7, 8, 9, PIP, CIF	1, 4, 6, 7, 8, 9, 10, 13, 16, PIP, CIF
Record Modes	Manual, continuous, alarm, motion	
Record Speed	PAL 50fps, NTSC 60fps @ 720 x 280, PAL 100fps, NTSC 120fps @ 360 x 280	
Quality Setting	7 levels	
Pre and Post Alarm	Yes	
Motion Detection	Yes, programmable per camera	
Telemetry Control	Yes, multi-protocol (C-Dome, ZC-PT Dome, Pelco P, Pelco D, BBV, AD, Panasonic, Vicon)	
Telemetry Ports	1 x half duplex RS-485 or 1 x full duplex RS-422 and 1 x half-duplex RS-485	
Remote Control	Optional Keypad (C-DKBD), web browser or PC Client	
Internal HDD	3 x IDE ATA133 (typically 1.2 TByte)	
Time Synchronisation	NTP or master/slave	
Software Update	USB or FTP	
Notification	On screen, relay output, email, log	
Dimensions	432 (W) x 88 (H) x 450 (D) mm	
Weight / Mounting	10Kg (no HDD) / Desk or Rack Rack kit supplied	
Power Consumption	50W excluding HDDs	
Input Voltage	115VAC or 230VAC	
Operating Conditions	0 to 40° C, 10 ~ 80%, no condensing	

### KEY FEATURES:

- TRIPLEX+
- Wavelet compression
- Built in DVD writer
- Multiple display options
- Telemetry control of PTZ
- Remote control via C-DKBD
- Jog/shuttle control of recorded images
- Expandable external storage
- Networkable
- Event archive via USB, Firewire, TCP/IP
- Free Client software
- Multi-password protection
- Automatic DST/GMT adjustment

# ZR-DHD SERIES

## 9 & 16 Channel TRIPLEX+ Digital Recorders with built in DVD Writer

The built-in DVD writer provides a simple means of burning pictures and data onto disk for ease of transportable evidence and archive. The format used is DVD-RW.



ZR-DHD1621NP rear view

The free GANZ Client Software is the network and Administration program for the ZR-DHD1621NP and ZR-DHD921NP. GANZ DVR Client can connect to both 9-channel and 16-channel DVR's. The Client Software can Display up to 64 multiple screens from up to 4 DVR's connected via the network.



Backup of remote live or playback signals of the DVR can be recorded on the hard disk of the client computer and up to 128 DVR's can be controlled. The Client supports searching of events, such as alarm, time/date or motion from any of the remote DVR's and can display events (alarm, motion, system error, etc) automatically when they occur. The Client also supports an Image Convert Function which converts downloaded image data on the client hard disk to JPG, MPG, or AVI format, Print Function which Prints out the downloaded image data stored on the client hard disk, Multi Password which assigns a password to each user to indicate his or her respective rights and Screen Capture Function that sends the image to a JPEG file.

The DVR keypad, C-DKBD allows full control of all DVR functions remotely from typically several metres away with the a standard interconnection cable or over 500M with a dedicated data cable run. In addition to DVR control, full telemetry control of the C-Dome is also a standard feature of this keypad.



The ZR-DHD Wireless ADSL Router supports up to 125 Mbps performance and 50% greater range than standard 802.11g Wireless routers. It employs Industry leading security features that protect your network from hackers and unauthorised access from the Internet and from wireless interlopers. With simple 1-2-3 configuration steps, it will have you up and running in minutes and the Web-based diagnostics and connection monitoring software sets a new standard for convenience and ease of use.





# C-MPDVR SERIES

## MPEG4 Digital Video Recorders



DVD drive open



(not available  
with CMPDVR-04/lite)

Remote Control

### Perfect Partners



ZC-D3000 Dome  
Page 15



LCD Monitor  
Page 75

The C-MP DVR series of 4, 8 & 16 channel MPEG4 Pentaplex DVRs combine the latest compression technology with a simple user interface. The units come with a built-in DVD-RW (except C-MPDVR-04-lite) and HDD providing storage of up to 500GB.

The Pentaplex function (Pentaplex means view, record, archive locally, view and record remotely) allows the operator to view live information & playback information on the same display whilst backing up a previous event. During this time the record process is uninterrupted and an additional operator could be viewing via the network connection.

The MPEG4 compression allows the DVR to achieve maximum recording efficiency for the available hard disk drive. Space is extended when compared to other compression techniques.

The recording function can be programmed for continuous, alarm or motion recording. Additionally these recordings can be scheduled to start and stop and different parts of the day. Event backup is done via the built in DVD Writer.

### Ordering Information

C-MPDVR-04/160-Lite	4 channel MPEG4 DVR, 160 GB (without DVD-RW)
C-MPDVR-04/250-Lite	4 channel MPEG4 DVR, 250 GB (without DVD-RW)
C-MPDVR-08/250	8 channel MPEG4 DVR with DVD-RW, 250GB
C-MPDVR-08/500	8 channel MPEG4 DVR with DVD-RW, 500GB
C-MPDVR-16/500	16 channel MPEG4 DVR with DVD-RW, 500GB
C-MPDVR-ARRAY	Additional disk storage Array

# C-MPDVR SERIES

## MPEG4 Digital Video Recorders

### KEY FEATURES:

- MPEG4 compression
- Pentaplex (5 functions)
- Network access with IE or Client
- IR remote control (except C-MPDVR Lite version)
- Search via time/date, motion or alarm
- Built in DVD writer for event back up (except C-MPDVR04-lite)
- Dual monitor output (with VGA adaptor)
- Expandable external storage
- Firmware upgrade via USB
- Password protection
- Realtime recording in CIF mode



rear view

Optional Accessory:



Disk Array - External storage device in 19" Rack mount, 2U high and providing up to 1.5TB capacity.

MODEL	C-MPDVR04-LITE	C-MPDVR04	C-MPDVR08	C-MPDVR16
Video format	PAL/NTSC	PAL/NTSC	PAL/NTSC	PAL/NTSC
Compression system	MPEG4	MPEG4	MPEG4	MPEG4
DVR type	PENTAPLEX	PENTAPLEX	PENTAPLEX	PENTAPLEX
Operating system Embedded	Linux	Linux	Linux	Linux
HDD	IDE Type, ATA66, Support HDD x 1			
Video input	4x Composite 1.0Vp-p auto terminating	4x Composite 1.0Vp-p auto terminating	8x Composite 1.0Vp-p auto terminating	16x Composite 1.0Vp-p auto terminating
Video output	Main monitor output & Call monitor output: Composite video signal 1 Vp-p 75 ohms BNC			
Audio in/out	2 audio inputs, 1 audio output (mono)		4 audio inputs, 2 audio outputs (mono)	
Record modes	Continuous, Manual / Timer / Motion / Alarm			
DVD Writer	No	Yes	Yes	Yes
Watermark	Yes	Yes	Yes	Yes
Record rate	25ips PAL/ 30ips NTSC		50ips PAL/ 60ips NTSC	100ips PAL/ 120ips NTSC
Frame (720 x 576)	100ips PAL/ 120ips NTSC		200ips PAL/ 240ips NTSC	400ips PAL/ 480ips NTSC
CIF (352 x 288)	Yes, programmable per camera, 16 x 12 grids per camera			
Motion detection	4 adjustable variable with precise calculation for motion detection			
Motion detect sensitivity	Yes (8MB)			
Pre-alarm recording	TCP/IP, PPPoE, DHCP and DDNS			
Network protocol	USB / Network			
Software update	By email or FTP upload			
Alarm Notification	4 inputs, 1 output	8 inputs, 1 output	16 inputs, 1 output	Yes
Alarm in/out	No	Yes	Yes	Yes
Remote control	10/100 Base-T. Support remote control and live view via Ethernet			
Ethernet	2x digital zoom			
Picture Zoom	Supports upto 6 letters			
Camera title	Yes			
Video loss detection	Hue / Colour / Contrast / Brightness			
Video adjustment	YY/MM/DD, DD/MM/YY, MM/DD/YY, and OFF			
Date Display format	Yes			
Daylight saving	Auto, after power reconnected			
System recovery	Independent Disk Array			
Optional peripherals	432mm (w) x 90mm (h) x 326mm (d)			
Dimensions	4Kg (no HDD) / Desk mount			
Weight / mounting	64W including HDDs			
Power consumption	19Vdc or 100-260Vac with supplied power adaptor			
Input voltage	0 - 40 degrees C			
Operating conditions				



## QD-04P

### 4 Channel Colour Quad



(W)240 x (H) 45 x (D) 150mm

#### KEY FEATURES:

- 4 Channel Colour Quad
- On-screen set up menus
- Electronic playback zoom
- Real time display (25 pictures per sec)
- Quick remote control via PC
- 4 Alarm inputs
- 230 VAC power adaptor supplied

QD-04P Colour Quad with Switching

## D-PLEX 16 ECO

### 16 Channel Duplex Multiplexer



(W)432 x (H) 76 x (D) 311mm

#### KEY FEATURES:

- Full duplex functions
- Activity detection
- Alarm inputs
- Camera titling
- RS232/RS485 remote control via PC
- VCR switch pulse compatible
- Automatic gain control
- 230 VAC power adaptor supplied

D-PLEX 16-ECO Colour Duplex Multiplexer

## CTR-4000 SERIES

### Time Lapse Video Cassette Recorders



(W)36 x (H) 94 x (D) 270mm

#### KEY FEATURES:

- Forward and reverse playback and frame by frame switching
- Timer recording
- Alarm ready even when unit is switched off
- Alarm search facility
- On-screen display

CTR-4024 Time Lapse VCR, 24h

CTR-4960 Time Lapse VCR, 960h

# C-D SERIES

## Small Dome Matrix Systems

For use with the C-Dome range and controlled from the C-DKBD keyboard the two small intelligent matrix models, C-D08M2 (8 x 2) and the C-D16M2 (16 x 2) provide switching for 8 or 16 cameras respectively through dual monitor outputs. Up to 2 control keyboards can be connected to each matrix unit for dual system control.

Either coax or twisted pair telemetry control can be routed via each of the matrix switches and, additionally, with 360 presets per dome, standard and mimic tours stored in memory, it only partly describes how powerful these units are. But there's more, up to 144 alarm inputs can be used to call up any of the presets or tours.

For the twisted pair RS 485 control there is a star distribution module, C-D-STAR485, that can be used to solve the most ergonomic wiring configurations.



### Perfect Partners



Keyboard  
Page 72



C Dome  
Page 39

QUICK GUIDE, ACCESSORIES AND RELATED PRODUCTS					ORDERING CODES
Camera inputs	Monitor outputs	Control points	Telemetry via Coax	Telemetry via RS485 TP	
8	2	2	Yes	Yes	C-D08M2
16	2	2	Yes	Yes	C-D16M2
<b>Accessories</b>					
Star driver for RS485 star configuration					C-D-STAR485
<b>Related products</b>					
Keyboard		page 72		C-DKBD	
C-Domes		page 39-42		C-D range	

### KEY FEATURES:

- Intelligent 8 and 16 camera matrix switches with dual monitor outputs
- Up to 2 control positions for flexible monitoring
- Either Coax or twisted pair telemetry for versatility and ease of installation
- Up to 144 alarm inputs for call up of accurate camera preset positions and tours
- Time and date display with camera ID
- Star card for easy twisted pair wiring



# C-DKBD KEYBOARD

## Control Keyboard



### Perfect Partners

C-Dome Range  
Page 39



ZR-DHD1621NP  
Page 66



Matrix  
Page 71

The C-DKBD Keyboard is designed to operate with both C-Domes and high end ZR-DHD1621/921 DVR's. Utilising a 3 axis joystick, controlling and programming both the domes or DVR's is simple.

Switching and controlling the matrix is also very simple. When connected to the domes, full variable speed and preset configuration is possible along with programming of standard and mimic tours. Even control of lift and gain in the dome head is possible. Add to this privacy zone settings and an ability to finely control the C-Domes 400,000 position stepper motors at variable speed then it becomes clear that this is a powerful keypad.

Should one wish to control the DVR remotely all functions such as screen split, search functions, programming, recording speeds and quality settings, etc, are possible.

Keyboard layout is designed for the most ergonomic approach so dedicated keys such as preset, tours, play and record buttons are easy to see and use. Combining the DVR and C-Dome means that there is no need for a matrix for up to 16 cameras when used with RS 485 telemetry. The C-DKBD comes complete with a PSU.

### QUICK GUIDE, ACCESSORIES AND RELATED PRODUCTS ORDERING CODES

Camera inputs	Monitor outputs	Control points	Telemetry via Coax	Telemetry via RS485 TP	
8	2	2	Yes	Yes	C-D08M2
16	2	2	Yes	Yes	C-D16M2
Accessories					
Star driver for RS485 star configuration				C-D-STAR485	

### KEY FEATURES:

- High accuracy control and programming of Domes, Matrix and DVR's from a single keyboard
- 3 axis joystick for fine control of zoom, pan and tilt on the dome to ensure nothing is missed.
- Full variable speed control.
- No need for a matrix switcher when using a DVR with C-Domes (RS 485) and other cameras.
- Time and date display with camera ID

### CONFIGURATION GUIDE

Requirement	Telemetry	Control keyboard	Matrix	DVR	Cameras
Switching, programming and control of 8 or 16 PTZ domes & cameras	RS 485 COAX	C-DKBD-RS485 C-DKBD-COAX	C-D08M2 or C-D16M2	Not used	C-D range & any other non-PTZ camera
As above but with digital recording (including programming and control of DVR)	RS 485 COAX	C-DKBD-RS485 C-DKBD-COAX	Not used	ZR-DHD921NP ZR-DHD1621NP	C-D range & any other non-PTZ camera
As above but with networking and archiving			C-D16M2		
See page 89 for system layout					

# ZCA-SC201

## DOME Control Keyboard

The ZCA-SC201 keyboard can easily be integrated with our full range of CCTV products, such as a Digital video recorder, PTZ Dome camera and other CCTV devices with an RS-485 interface for remote control and system configuration.

Backlit LCD display and 3-axis control joystick provide user friendly operation providing control for upto 223 Ganz ZC-PT domes and 8 DVRs. Multiple protocols enable the user to integrate our products into existing systems from other CCTV brands and extend the system connectivity.

The keyboard has 4 built in protocols:

- \* GANZ-S (ZC-S series)
- \* GANZ-PT (ZC-PT series)
- \* Pelco D
- \* Pelco P

The built-in firmware upgrade circuits allow the user to easily upgrade the firmware via the RS-232 port



### Perfect Partners



ZC-PT Domes  
Page 43



ZR-DHD1621NP Page 66

### KEY FEATURES:

- 3 axis joystick control
- Controls PTZ Functions
- Preset position & cruise control
- Built-in Real Time Clock
- Controls Dome Cameras, PTZ receivers, Multiplexers and DVRs
- Baud rate setting
- RS-485/RS-232C interface





# ZP-TX/RX SERIES

## Matrix & Telemetry System



### Perfect Partners



Zoom Lens Page 8



Large Housing  
Page 51



ZR-DHD1621NP Page 66

The ZP-TX/RX series of matrix systems and accessories provides matrix switching and control of cameras from 16 through to 96 cameras. The unique structure of the system allows you to install what you need and expand the system when the site requires.

The system supports coaxial or RS485 based telemetry systems making it simple to upgrade fixed cameras to PTZs or run long distances through fibre optics or similar links.

Alarms can be added to the system using the 16 input alarm cards. Up to 6 of these alarm cards can be added providing 96 inputs. The alarm cards can be distributed along the RS485 bus allowing simple installation and wiring. Control of existing PTZs and domes can be achieved by using the starcard converter or the ZP-RX100 dome converter. The majority of the popular protocols are built into these devices.

The ZP-TX1500 matrix system is simple to operate and provides sophisticated features usually found on high end complex matrix systems. A typical feature is the camera/monitor/keyboard selection set up which allows the system to be configured so that cameras can be restricted from certain monitors and keyboards and only specific keyboards can be allowed PTZ control of cameras.

### ORDERING CODE DESCRIPTION

ORDERING CODE	DESCRIPTION
ZP-TX1500/8	Matrix unit with 1 keyboard (nn denotes camera input quantity) 8 monitor outputs
ZP-TX1500/EXP	Onsite expander unit (to expand existing matrix by 16 cameras up to 96)
ZP-TX1500/KBD	Additional keyboard for ZP-TX1500 matrix
ZP-TX1500/S	RS485/RS422 starcard
ZP-TX1500/SC	RS485/RS422 starcard converter, outputs a wide range of industry protocols
ZP-TX1500/AL16	16 alarm input, 2 alarm output card
ZP-RX100	Coax telemetry dome interface, allowing control of many of the industries domes
ZP-RX100/24	As above with 24VAC PSU for dome
ZP-RX300WBX	Coax telemetry receiver for simple AC P&T, plus lens control
ZP-RX400P	Coax telemetry receiver, fully featured for AC P&T plus lens, aux controls and presets
ZP-RX400DC	Coax telemetry receiver, fully featured for DC P&T plus lens, aux controls and presets
ZP-RX45x/WBX	RS485(multi portocol) telemetry receiver, fully featured for AC P&T plus lens, aux controls and presets
ZP-RX55x/WBX	RS485(multiprotocol) telemetry receiver, fully featured for DC P&T plus lens, aux controls and presets

### KEY FEATURES:

- 16 – 96 cameras
- Simple to expand
- Telemetry control of PTZ via coax or RS485
- Control of many protocols
- Wide range of dome interfaces
- Password protection
- Up to 96 alarm inputs
- Easy to setup on screen displays
- Telemetry receivers for AC & DC pan & tilts
- Site mapping & control software

# ZM-L SERIES

## Professional Colour TFT LCD Monitors

The ZM-L range of professional LCD Monitors redefines the performance of LCD displays with a stylish new design and advanced functionality.

The monitors offer resolution of 1280x1024 pixels for crisp clear images and the high contrast ratio of up to 500:1.

This range of monitors feature analogue input as well as digital; DVI, VGA and S-Video capabilities, providing various connection options. The slim design fits into most working environments and on most desktops. The units are supplied with a lock down desk mount stand that can be adjusted to suite your viewing position and allows the monitor to be fitted with any standard 100mm VESA accessories.

The combination of advanced LCD technology and the added features make this the perfect display for any user.

### Ordering Information:

ZM-L217P 17" TFT LCD, High Resolution

ZM-L219P 19" TFT LCD, High Resolution

### Accessories:

ZMA-RK17 17" Rack Mount Kit

ZMA-RK19 19" Rack Mount Kit



### KEY FEATURES:

- 17", and 19" models
- Clear, sharp images
- PIP (picture in picture feature)
- Wide viewing angle
- NTSC/PAL auto mode
- Multi language OSD control
- Multiple inputs including DVI
- Universal power supply

Perfect Partners



ZMA-WB2 2 knuckles



ZMA-WB3 3 knuckles

MODEL	ZM-L217P	ZM-L219P
Video Signal	PAL / NTSC auto mode	
LCD Display	17"	19"
Pixel Pitch	0.264(H) x 0.264 (V)mm	0.294(H) x 0.294 (V)mm
Resolution	650 TVL 1280 x 1024 @ 60/75Hz	
Scan Frequency (H) (V)	PC: 31.5K~80KHz Video 15750/15625Hz PC: 56Hz~75Hz Video 50/60Hz	
Display Colour	16.2 M colours	
Response Time	12ms(tr+tf)	
Contrast Ratio	500:1	
Viewing Angle (H/V)	160/160	140/135
Brightness	450 cd/m2	
Display Mode	VGA, DVI, CVBS1(in/out) CVBS2(in/out), S-Video	
Signal Connector	Composite signal 0.5 ~2Vpp / 75ohm (auto termination), Y Signal 1Vpp, C signal 0.3Vpp	
OSD Menu VGA / DVI	Brightness, Contrast, H-Position, V-Position, Clock, Phase, Colour temp, White balance, User Colour B, OSD H-Pos, OSD V-Pos, Volume, PIP, Language, Recall	
VIDEO	Colour, Brightness, Contrast, Sharpness, Volume, H-Position, Language, Colour temp, Scan, PIP, Recall	
Audio Speaker	2W + 2W	
Vesa Mounting	VESA 75 / VESA 100	
Power Requirement	100 ~ 240V	
Power Consumption	50W	60W
Operating Conditions	0 ~ 40°	
External Dimensions in mm (W x H x D)	375 x 369.7 x 170	505.2 x 475.7 x 182
Weight (approximate)	5 kg	10 kg



Sales and information +44 (0) 208 732 3300



# ZM-L SERIES

## Professional Colour TFT LCD Monitors



8" TFT LCD

15" TFT LCD

### Perfect Partners

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ZMA-WB2  
2 knuckles



ZMA-WB3  
3 knuckles

The ZM-L range of professional LCD Monitors redefines the performance of LCD displays with a stylish new design and advanced functionality.

The monitors offer resolution of 1280x1024 pixels for crisp clear images and the high contrast ratio of up to 500:1.

Two sizes are available in this range; 8", and 15" models. The TFT LCD monitors also provide access to OSD (On Screen Display) controls and offer built in multi-media speakers. The Monitors work with both PAL and NTSC signals and in a voltage range of 12V.

### Ordering Codes:

ZM-L208C 8" TFT LCD

ZM-L215VC 15" TFT LCD

### Accessories:

ZMA-RK8 8" Rack Mount Kit

### KEY FEATURES:

- 8" and 15" models
- Clear & bright colour pictures
- PIP (picture in picture feature)
- Wide viewing angle
- NTSC/PAL auto mode
- Multi language OSD control

MODEL	ZM-L208C	ZM-L215VC
Video Signal	PAL / NTSC auto mode	
LCD Display	8"	15"
Pixel Pitch	0.0675 (W) x 0.2025(H) mm	0.297(W) x 0.297 (H)mm
Resolution	> 300 TVL	500 TVL
Scan Frequency (H) x (V)	800 (H) x 600 (V)	30K-80KHz (H), 56Hz-75Hz (V)
Display Mode	VGA, DVI, Composite, S-Video, Component	
Signal Connector	2 Video BNC inputs/outputs, 1 S-Video input 1 audio input/output	VGA in, DVI in (option), BNC in/out, Y/C in/out, Y Cb Cr in (option), Audio in/out
OSD Menu VGA / DVI	Brightness, Contrast, H-Position, V-Position, Clock, Phase, Colour temp, User colour R, User colour G, User Colour B, OSD H-Pos, OSD V-Pos, Volume, PIP, Language, Recall	
VIDEO	Colour, Brightness, Contrast, Sharpness, Volume, H-Position, Language, Colour temp, Scan, PIP, Recall	
Audio Speaker	2W	2W
Power Requirement	12V	
Power Consumption	20W	50W
Operating Conditions	0 to 40°	
External Dimensions in mm (W x H x D)	190(W) x 173(H) x 25(D)mm	375 x 369.7 x 170
Weight (approximate)	1 kg	5 kg

# ZM-L SERIES

## Commercial Colour TFT LCD Monitors

The ZM-L range of commercial LCD Monitors offer good picture quality and a sleek and pleasant design normally associated with higher end units.

An impressive 500:1 contrast ratio and 1280x1024 resolution and response time of 8ms gives you the ultimate performance and delivers crisp clear images. This range of monitors also feature analogue input VGA and S-Video capabilities providing various connection options.

The slim design maximises desktop space and makes a perfect fit for almost any office or commercial application. The desk mount can be easily removed to allow the monitor to be fitted with any standard 100mm VESA accessories.

### Ordering Codes:

- ZM-L015S 15" TFT LCD Monitor
- ZM-L017S 17" TFT LCD Monitor
- ZM-L019S 19" TFT LCD Monitor



### Perfect Partners



ZMA-WB2  
2 knuckles



ZMA-WB3  
3 knuckles



ZC-D6039PHA Fixed Dome  
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### KEY FEATURES:

- 15", 17" and 19" models
- Wide viewing angle
- High contrast ratio
- Built in speaker
- Multi language OSD

MODEL	ZM-L015S	ZM-L017S	ZM-L019S
Video Signal	PAL / NTSC		
LCD Display	15"	17"	19"
Pixel Pitch	0.297(H) x 0.297 (V)mm @ 75Hz		
Resolution	1024 x 768	1280 x 1024	
Display Colour	16.2 m colours		
response Time	8ms		
Contrast ratio	500:1	500:1	500:1
Viewing Angle	H:150° V:150°		H: 170° V: 170°
Scan Frequency (H)	50Hz		
(V)	60Hz		
Display Mode	VGA, Audio Video Composite		
Signal Connector	PC VGA input port x 1, Composite Video input port x 1, S-Video input port x 1, Mono audio for Video x 2, Stereo audio for PC x 1, TV RF input x 1, Stereo audio output for headphone x 1		
DVI Input	Yes		
Audio Speaker	2W + 2W		
Power Requirement	12V		
Power Consumption	40W		
Operating Conditions	Temperature: 0 ~ 50°, Humidity: 10% ~ 90%		
External Dimensions in mm (W x H x D)	415 x 140 x 395	435 x 145 x 385	475 x 260 x 445
Weight (approximate)	4.5 kg	5 kg	8kg



# ZM-CR SERIES

## Colour Series of CRT Monitors



The ZM-CR series of monitors have been designed to combine both high quality images with reliable and robust construction. The monitors comes in 3 sizes 14", 15" and 21", the 15" model is high resolution, 800TVL.

All the monitors have a metal casing, and come with the additional feature of carry handles to make the installation process easier.

All the monitors in the range work with both PAL and NTSC signals and in a voltage range of 100 – 240 Vac allowing the monitors to be used virtually all over the world.

### Ordering Information

ZM-CR114NP-II 14" Colour Monitor

ZM-CRH115NP-II 15" Colour Monitor, High Resolution

ZM-CR121NP-II 21" Colour Monitor

### Perfect Partners

Monitor Brackets



MISC (Ceiling mount)



MISW (Wall mount)

### KEY FEATURES:

- 14", 15" and 21" models
- PAL & NTSC compatible
- Auto loop through
- High Resolution (15" model)
- Multi-Language OSD set up
- Built-in microprocessor digital control
- Y/C input
- Dual Voltage 100-240 Vac

MODEL	ZM-CR114NP-II	ZM-CR121NP-II	ZM-CRH115NP-II
CRT	14" Diagonal 90°	21" Diagonal 90°	15" Diagonal 90°
Video Signal	PAL/NTSC		
Resolution	400 TVL	580 TVL	800 TVL
Audio In/Out	RCA in x 3 / RCA out x 3		
Scanning Frequency	15.625 KHz (PAL), 50Hz / 15.734KHz (NTSC) , 60Hz		
Connector	Video BNC in x 1, Y/C in x 1 Video BNC out x 1, Y/C out x 1	Video BNC in x 2, Y/C in x 1 Video BNC out x 2, Y/C out x 1	
Power Requiements	100-240Vac		
Power Consumption	65w	80w	95w
Operating Conditions	Temperature: -10°C ~ +50°C, Humidity: 10% ~ 90%		
External Dimensions in mm (W x H x D)	350 x 350x 360	492 x 474 x 482	368 x 361 x 376
Weight (approximate)	14kg	27 kg	15 kg

# CEM-A-II

## Mono Series of CRT Monitors

The CEM-A II range of Ganz monitors have been designed to be rugged and reliable high quality monitors, providing great quality images in the most demanding conditions. There are four monitors in the range: 9", 12", 15" and 20".

All the monitors are fitted with a wide-ranging power supply, allowing them to work on voltages from 100Vac to 240Vac. They all have audio facilities.

The resolution on 9" and 12" monitors is 800 TVL while the 15" and 20" monitors boast 1000 TVL. Controls on the front allow adjustment of contrast, brightness and volume. The connections to the monitor are industry standard connectors and are situated on the rear.

### Ordering Information:

- CEM-09A-II 9" B&W monitor, 800 TVL, 100-240Vac
- CEM-12A-II 12" B&W monitor, 800 TVL, 100-240Vac
- CEM-15A-II 15" B&W monitor, 1000 TVL, 100-240Vac
- CEM-20A-II 20" B&W monitor, 1000 TVL, 100-240Vac



### KEY FEATURES:

- 9",12",15" & 20" options
- Audio facility on all models
- Desk top case
- Loop-through
- Universal power input 100 - 240V

MODEL	CEM-09A-II	CEM-12A-II	CEM-15A-II	CEM-20A-II
CRT	9" Diagonal 90°	12" Diagonal 90°	15" Diagonal 90°	20" Diagonal 90°
Video Signal	CCIR/EIA monochrome			
Resolution	800 TVL		1000 TVL	
Scanning Frequency	15.750 KHz / 60 Hz (EIA) / 15.625 KHz / 50 Hz (CCIR)			
Video In/Out	1 x in BNC 1 x out BNC, termination switched			
Audio In/Out	Yes			
Power Requirement	100-240Vac, 50/60Hz			
Power Consumption	20W	30W	35W	36W
Adjustment	Power on/off, Brightness, Contrast, Volume, Hi, V-Hold, Sub-Bri, V-Size			
Audio	Yes			
Operating Temperature	-10°C ~ +50°C			
Operating Humidity	10% - 90%			
Dimensions in mm (W x H x D)	222x 238 x 250	304x 320x 310	350 x 353 x 360	472 x 450 x 360
Weight (approximate)	4.5Kg	8.0Kg	12.0Kg	20.0Kg





# C-NV32RSS

## VSoIP Network Video Recorder



The C-NV32RSS Networked Video Recorder system has been designed to provide a platform independent recording solution that can grow as your requirements expand. Providing a common platform that has growing support for GANZ IP servers and third party servers allowing you to specify a recording solution now that will support your chosen devices in future expansions.

Designed as a client server architecture to fit standalone installations as easy as it can be deployed throughout a high end airport installation, with all the required features of a CCTV recording solution.

Able to record up to 32 IP video streams while playing back to 32 clients using firewall friendly RTSP based streaming. All common VCR type functions are available such as start, stop, forward, rewind, pause and snapshot.

Once recorded, clips can be archived and exported for viewing off site utilising the built in video player application.

MODEL	C-NV32RSS
Channels	32 Record, 32 Playback
Storage Capacity	TBA
Alarm Management	Yes
Security	Multiple User / Group Level
Bandwidth	Up to 64Mbps
Network Interface	10/100 Base-T Ethernet
Protocols	RTSP, RTP, HTTP, DHCP, Others

\* Software only

### KEY FEATURES:

- 32 Recording Streams
- 32 Playback Streams
- Native video formats supported
- Record Scheduling
- Instant Recording
- Expandable Storage
- 100Mbps Network interface
- VSoIP Manager Configuration Interface
- VSoIP Compatible

# C-NV-CLIENT

## VSoIP NVR Management Software

The C-NV-Client VSoIP Management Suite provides software to build a scalable CCTV management solution with. Having native support for the VSoIP NVR, GANZ IP devices and third party encoders makes it unique in the industry and best positioned to provide a unified interface to all your IP devices.

Designed from the ground up with a client server architecture it enables you to have site, group and user control of access to feature such as Live viewing, scheduled recording, instant recording, navigation maps, PTZ control Alarm management and audit trails.

Combined with the VSoIP NVR, GANZ video servers and video decoders, a complete and robust CCTV solution can be deployed with minimal administration and a shallow learning curve.



### Perfect Partners



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MODEL	C-NV-CLIENT
Views	Single / Quad / Mapping
Video Views/Panels	Up to 5 displays
Video Codecs	MPEG4, MPEG2, MJPEG, others
Resolution	As per input stream
PTZ Control	Yes (wide range of protocols)
Alarm Source	Alarm, Video Motion
Security	Multiple User / Group Level
Protocols	RTSP, RTP, HTTP, DHCP, others
Operating System	Windows XP
PC System	Pentium Core Solo, 512MB or better

### KEY FEATURES:

- Single / Quad / Maps Live Viewing
- Record Schedule Management
- Server based HTML Navigational Map Views of site, building, etc
- Alarm Stack, with Pending, Acknowledged and Closed actions
- Full screen mode
- PTZ Camera Control
- Alarm integration – Input Contacts & Motion
- User / Password Security
- VSoIP NVR & GANZ Support
- VSoIP Compatible



# C-NV4VS

## 4 Channel MPEG4 Network Video Server



The C-NV4VS MPEG4 networked video server allows 4 standard CCTV cameras to be connected to an IP network and to become part of a VSoIP installation. Combined with optional on board recording the MPEG4 Network Video Server becomes an integral part of a distributed security management system.

Utilising MPEG4 video compression with fully compatible RTSP/RTP streaming standards provides a wide choice of client software including the new VSoIP Security Management suite. Providing up to 30 fps and at resolutions up to 4CIF ensures the highest possible picture quality for each connected camera.

### Perfect Partners



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MODEL	C-NV4VS
Channels	4
Video Format	PAL / NTSC 1.0V(p-p) / 75 ohms
Compression	MPEG4
Resolution	QCIF, CIF, VGA, 4CIF, D1
Bandwidth	32Kbps to 2Mbps
Network Interface	10/100 Base-T Ethernet
Protocols	RTSP, RTP, HTTP, DHCP
Power	12V / 5A (supply included)
Dimensions	50 (H) x 275 (W) x 172 (D) mm
Weight	2.0 Kg

### KEY FEATURES:

- Single-channel encoder
- MPEG4 Video Compression
- Standard Viewer support
- 4 NTSC or PAL analogue inputs
- Up to 30 frames per second per input
- Up to 4CIF / D1 resolution
- 100Mbps Network interface
- On-board HTTP Configuration
- VSoIP Compatible

# C-NV-MPD

## Multi-Platform Decoder

The C-NV-MPD Multiplatform Decoder converts a standard analogue monitor into a multi manufacturer IP video display device with monitor wall features. This allows monitors to be connected to an IP network and become part of a VSoIP installation.

Controlled either directly from the VSoIP Manager or via the on-board HTTP configuration pages it makes adding analogue output from supported IP video cameras and servers a breeze.

Supporting all common video codecs such as MJPEG, MPEG4 and MPEG2 amongst others, whilst also supporting all top manufacturers such as GANZ and other makes which makes it suitable for different applications.



### Perfect Partners



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MODEL	C-NV-MPD
Video Format	PAL / NTSC 1.0V(p-p) / 75 ohms
Video Views/Panels	Up to 16 displays
Decompression	MPEG4, MPEG2, MJPEG, others
Resolution	As per input stream
Bandwidth	Up to 2Mbps
Network Interface	10/100 Base-T Ethernet
Protocols	RTSP, RTP, HTTP, DHCP, others
Power	12V / 5A (supply included)
Dimensions	50 (H) x 275 (W) x 172 (D) mm
Weight	2.0 Kg

### KEY FEATURES:

- Supports all common Video Codecs
- Multiple Manufacturer Support
- PAL or NTSC analogue output
- VGA analogue output (higher resolution)
- Monitor Wall Support
- Up to 16 video viewing panels
- 100Mbps Network interface
- On-board HTTP Configuration
- VSoIP Compatible



# ZN-C9000

## Colour IP Camera



### Perfect Partners



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ZN-T9000  
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The ZN-C9000 CS mount IP colour camera offers DVD like quality MPEG-4 video, at up to 30 images per second, over IP networks. It provides Dual Mpeg4 streaming for two independently configurable MPEG-4 video streams.

The ZN-C9000 is compact enough to fit in a standard external housing making it perfect for any application including small installations.

The IP Camera supports any CS mount Manual or Auto iris lenses. A USB interface for future expansion of functions is available at the rear of the camera.

The ZN-R9000 video decoder can be used to display the video signal from the ZN-C9000 camera directly to a CCTV monitor or DVR.

The viewing mode can be controlled remotely by a management software like VSolP.

### Ordering Codes:

ZN-C9000      Colour IP Camera

MODEL	ZN-C9000
Video Standards	ISO/IEC 14496 (MPEG-4); Jpeg
Video Data Rate	9.6kBit/s – 6MBit/s
Camera	1/3" Interline CCD
Pixel	752 (H) x 582(V) pixel
Resolution	480 TVL
Scanning Frequency	15.625KHz (H) 50.00Hz (V)
S/N Ratio	>50dB
Video output	1.0Vp-p / 75 ohm, BNC
Sensitivity	1.5Lux (F1.2) @ 50 IRE
DC iris control	Electronic shutter 1/50 sec fixed (1/120 sec @ FL mode)
Operating Voltage	12Vdc
Power Consumption	Approx. 800mA
LAN Interface	1 x Ethernet 10/100 Base-T, automatic adaptation, half/full duplex, RJ45
Data Interfaces	1 x RS232/RS422/RS485, bi-directional, ST500 1 x USB 2.0 (for future expansion of functions)
Alarm Inputs	4 x push-in terminals (non-isolated closing contact), max trip resistance 10 ohm
Relay Output	1 x push-in terminal, 30Vp-p, 2A
Dimensions	98(W) x 33(H) x 100 (D) mm
Weight	400g
Operating Temperature	0°C - 50°C (32 - 122 °F) ambient temperature
Humidity	20 – 80% atmospheric humidity (non condensing)
Approvals	CE: IEC 60950; UL 1950; AS/NZS 3548; EN 55103-1, -2; EN 55130-4; EN 55022; EN 55024; EN 61000-3-2; EN 61000-3-3; FCC 47 CFR Ch.1 Part 15

### KEY FEATURES:

- High-quality MPEG-4 @ full D1/4CIF/2CIF/Half D1 /CIF/QCIF
- VSolP recording
- Storage-efficient Dual Streaming
- Ultra-compact size
- Multicast & Internet Streaming
- Alarm inputs & relay output
- Fast Ethernet interface
- Serial data port

# C-MP5P

## High Resolution Mega Pixel Camera, 5 Mega Pixel

The MP series of high resolution mega pixel camera offers truly exceptional picture quality. This high definition surveillance camera sets new standards in video quality and performance. Based on progressive scan technology the 5Mpixel sensor can stream video upto 2560x1600 resolution

This IP based cameras not only produces high quality crystal clear images but also allows you to have zoomed areas. These are areas that are zoomed in to give greater detail of sensitive locations. This also offers forensic examination of areas of the image that were in the past unrecognisable.

This high definition performance is 15 times the resolution of an analogue CCTV camera.

The camera also has the ability to be powered over the network or locally via a separate 12V dc power supply.

This is the perfect camera in a location where you have a wide range of light levels in your scene but you need accurate and very high quality images.



### Perfect Partners



Mega Pixel Lens  
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MODEL		C-MP5P
Camera		1/2" CMOS Image sensor
		5Mpixel Colour 2592(H)x1944(V) pixel array
		Bayer mosaic RGB filter
	S/N Ratio	41dB
	Dynamic range	60dB
	Min illumination	1 lux @F1.4
Network	Max bandwidth	55Mbps
	Compression	Motion Jpeg 21 levels
	TFTP, HTTP	100baseT Ethernet
	Programmable	BLC, Flickerless, white balance, Flip, low light mode, Electronic PTZ Gain etc
Physical	Dimensions	125mm(l) x 76mm(w)x 64mm(h)
	Weight	450g
	Voltage	9-12Vdc 45W
	Temp	0-50°C Humidity 90%

### KEY FEATURES:

- HDTV Resolution images
- Low light
- Mega pixel upto 5Mpixel
- Crystal Clear images
- Greater detail
- Fully programmable
- Electronic Pan Tilt Zoom
- Power over Ethernet (POE)
- Ultra Zoom feature





# C-MP3P

## High Resolution Mega Pixel Camera, 3 & 1 Mega Pixel



### Perfect Partners



Mega Pixel Lens  
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The MP Series high resolution mega pixel day/night camera offers a unique solution to 24Hr surveillance.

This IP based camera not only produces high quality crystal clear images but also allow you to have up to 3 zoomed areas. These are areas that are zoomed in to give greater detail of sensitive locations.

The C-MP3 offers the perfect solution for full 24Hr surveillance Day/Night operation. The dual ocular technology combines two mega pixel sensors. In the day time the 3 mega pixel colour sensor operates and when the light levels fall the 1.3 mega pixel monochrome sensor takes over. The switching between the two sensors is performed automatically and does not involve any mechanical switching.

The camera also has the ability to be power over the network (POE) or locally via a separate 12Vdc power supply.

This is the perfect camera in location where you have a wide range of light levels in your scene but you need accurate and very high quality images.

MODEL		C-MP3P	
Camera	1/2" CMOS Image sensor		
	3Mpixel Colour 2048(H)x1536(V)	1.3Mpixel Mono 1280(H)x1024(V)	
Bayer mosaic	RGB filter		
S/N Ratio	45dB		
	Dynamic range	60dB	
Min illumination	Colour 1 lux @F1.4	Mono 0.01lux @F1.4	
Network	Max bandwidth	55Mbps	
	Compression	Motion Jpeg 21 levels	
	TFTP, HTTP	100baseT Ethernet	
	Programmable	BLC, Flickerless, white balance, Flip, low light mode, Electronic PTZ Gain etc	
Physical	Dimensions	125mm(l) x 76mm(w)x 64mm(h)	
	Weight	450g	
	Voltage	9-12Vdc 45W	
	Temp	0-50°C Humidity 90%	

### KEY FEATURES:

- HDTV Resolution
- Day or Night
- Mega pixel upto 5Mp
- 2 Sensors
- 3 Mega pixel or 1.3 Mega pixel sensors
- No moving mechanical parts
- Fully programmable
- Electronic Pan Tilt Zoom
- Power over Ethernet (POE)

# ZN-T9000 & ZN-R9000

## IP Video Server Range

The ZN T9000 video encoders offers DVD like quality MPEG-4 video, at up to 30 images per second, over IP networks. They provide Dual Mpeg4 streaming for two independently configurable MPEG-4 video streams. The ZN T9000 is ultra-compact, so it is perfect for any application including installations where space is an issue like external camera housings. These units support PAL/NTSC sources.

The ZN R9000 video decoder can be set up to display video in single-view or quad-view mode. It is capable of decoding up to 4 video streams at the same time. The viewing mode can be controlled remotely by a management system like VSolP.

The ZN R9000 can alternatively drive a VGA display directly, and thus is ideally suited for applications like flat screen monitor walls.

Audio is available on request. The audio versions will offer bidirectional audio communication in parallel to the video. Besides the standard line level interface, built in amplifiers allow direct connection to microphones and speakers

**Ordering Codes:**

- ZN T9000            single channel video encoder
- ZN T9000A        single channel video encoder with audio
- ZN R9000         single channel video decoder
- ZN R9000A       single channel video decoder with audio
- ZN RMK            Rack Mount Kit (5 units in 1HU)



**Perfect Partners**



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MODEL	ZN T9000
Video Standards	ISO/IEC 14496 (MPEG-4); Jpeg
Video Data Rate	9.6kBit/s – 6MBit/s
Video Resolution	704 x 576/480 (4 CIF full D1: 25/30 fields/s) 704 x 288/240 (2CIF: 25/30 fields/s) 464 x 576/480 (2/3 D1: 25/30 fields/s) 352 x 576/480 (half D1: 25/30 fields/s) 352 x 288/240 (CIF: 25/30 fields/s) 176 x 144/120 (QCIF: 25/30 fields/s)
Latency	120ms
Audio Data Rate	80kBit/s
Network Protocols	RTP, Telnet, UDP, TCP, IP, HTTP, IGMPv2/v3, ICMP, ARP, SNMP
Input Voltage	12-24Vdc, Spring Clamp contact
Power Usage	Approx 6VA
Operating Temperature	0°C - 50°C (32 - 122 °F) ambient temperature
Humidity	20 – 80% atmospheric humidity (non condensing)
Approvals	CE: IEC 60950; UL 1950; AS/NZS 3548; EN 55103-1, -2; EN 55130-4; EN 55022; EN 55024; EN 61000-3-2; EN 61000-3-3; FCC 47 CFR Ch.1 Part 15
Dimensions	98(W) x 33 (H) x 100(D)mm
Weight	400g

**KEY FEATURES:**

- Single-channel encoder
- High-quality MPEG-4 @ full D1/4CIF/2CIF/Half D1/ CIF/QCIF
- USB and VSolP recording
- Storage-efficient Dual Streaming
- Ultra-compact size
- Multicast & Internet Streaming
- Alarm inputs & relay output
- FastEthernet interface
- Serial data port
- Audio models



# ZN-NH257P / ZV-S201P

## High Resolution Colour/Mono Network Camera and MPEG4 Network Video Server



Perfect Partners

Video Server



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Utilising MPEG-4 compression, the ZN-NH257P network camera & the video server offer a smooth 25fps refresh rate under limited bandwidth. The camera also features an analogue output for local monitoring. In addition, this new network camera range includes many value-added features such as motion detection, audio detection, e-mail notification and RS232C/485 interface.

The ZV-S201P MPEG-4 Network video server allows a standard CCTV camera to be connected to the Ganz IP video monitoring and recording system.

In addition to this, RS232/485 port allows a data connection to the video server providing a control path to allow integration of fully functional PTZ cameras.

### Ordering Information

ZN-NH257P Col/Mono Network camera, High Resolution

ZV-S201P MPEG-4 Network Video Server

MODEL	ZN-NH257P
TV System	Pal
Video Output	1.0V (p-p) / 75
Resolution (horizontal)	480 TVL
Minimum Illumination	Colour 0.6 lux (F1.2/30IRE), Mono 0.04 lux (F1.2/30IRE)
Image Sensor	1/3" IT CCD
Effective Elements	768(H) x 494(V)
Iris Control	DC iris, AES: Linear shutter (1/60 to 1/20000), VIDEO iris: Vcc = DC 12 V, 50 mA max. Sig.= 0.7 Vp-p High impedance
Power Supply	12V DC
Power Consumption	10 W or less
External Dimensions	60 (W) x 65 (H) x 126 (D) mm
Weight (approximate)	400g
Operating Temperature & Humidity	-10 to +50 Degrees C, 85% RH Max. (No Condensation)
Storage Temperature & Humidity	-20 to +60 Degrees C, 95% RH Max. (No Condensation)
Input / Output Terminal	Video output: BNC, Power input: 2-pin screwless terminal blocks, Auto-iris output: 4-pin connector (D4-151N-100/equivalent), B/W model Fix terminal: 2-pin screwless terminal blocks

### KEY FEATURES:

- Real-time MPEG-4 video encoding
- 25 frames per second
- 10Kbps-1Mbps bandwidth
- 100Mbps RJ45 LAN interface
- NTSC / PAL input
- RS232 / RS485
- Audio (optional)
- Broadcast upto 10 clients
- PC Viewer
- On-board HTTP server

MODEL	ZV-S201P
Image Compression	MPEG-4 Video Resolution: 640 (H) x 240 (V) Bit rate: 64Kbps ~ 1Mbps, Frame rate: MAX 25fps
Audio Compression	ITU-T G.726, Bidirectional,
Audio Signal	In: Microphone level in (mono), Out: Line out (mono)
Serial Data	RS232C/RS485 each 1ch
Digital In/Out	TTL level transmission in 2ch/out each 3ch
Network Interface	10/100 Base-T Ethernet
Protocols	TCP-IP/DHCP/SMTP/ARP/PING
LED	POWER (Red)/LED 1 (Yellow)/LED 2 (Green)

# ZN-MRS SOFTWARE SERIES

## Management Software

The ZNS-MRS series of management software for the GANZ series of IP cameras allow up to 32 cameras to be viewed, recorded and managed from a single PC/server. Live images are displayed in two simple pages of 4, 9 or 16 way cameras, this allows the operator to simply and quickly move to the desired camera. Any camera can be viewed full screen.

The software also facilitates control of PTZ cameras from standard pan and tilts through to fully functional PTZ domes. This can operate on a wide range of protocols that have been pre-programmed.

Recording is done by storing the MPEG4 streams from the cameras programmed. The recording can be initiated manually, via a schedule, alarm input, video motion detection, video loss or from the audio level.

Playback can also be done from the same PC, if multiple recording PCs are being used then anyone of them can playback images from the other. Play back can be initiated from a straight time and date selection or a search for an alarm event. Additionally the powerful feature to retrospectively search for movement in the video of any camera, allows the system to find an event such as an item being stolen.

### Ordering Codes:

ZN-MRS88 cameras software	
ZN-MRS18	16 cameras software
ZN-MRS32	32 cameras software
ZN-MS4096	4096 cameras software



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ZV-S201P Server  
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Model	ZN-MRS8	ZN-MRS18	ZN-MRS32	ZN-MS4096
Cameras	8	18	32	4096
Display	1,4	1,4,9	1,4,9,16	1,4,9,16
Groups of cameras	2	2	2	256
Max fields per second	200fps	450fps	800fps	400fps
Software function	record, playback, alarm management, event archive			No Recording
Live Viewing	Yes			
Covert	Yes			
Recording	Yes, manual, schedule, Alarm, motion, continuous			N/A
Video stream	MPEG4			
Audio	Yes (bidirectional live & recorded)			
Alarm management	Yes, programmable response			
Playback	Yes, from this server or remote server			
Event back up	Yes, to most medias			
Camera configuration	Yes			
PTZ control	Yes (wide range of protocols)			
Alarm source	alarm, video motion, audio level, video loss			
Password	Yes, multilevel			
Search	time date/event/post motion search			
Auto delete	Yes, programmable			N/A

### KEY FEATURES:

- Single PC/server for all functions
- Telemetry control of PTZ
- Wide range of inbuilt protocols
- Post event motion search
- Automatic DST/GMT adjustment
- Expandable external storage
- Multi-password protection
- Events triggerable via motion, alarm input, video loss or audio level
- Bidirectional audio (with both recorded)
- Record & display up to 800fps



# ZN-PT304 SERIES

## Network Pan / Tilt Cameras



wireless model

The ZN-PT304 are pan/tilt network cameras with superior picture quality and with extremely efficient bandwidth utilisation using MPEG4 technology, the ideal solution for remote surveillance.

The ZN-PT304 cameras give you the ability to create and maintain an effective and reliable IP Surveillance System. Utilising state-of-the-art IP Network Cameras technology the users can build a completely scalable, high performance surveillance system that can effectively monitor and protect valuable assets.

Once installed the ZN-PT304 cameras will give you the ability to locally or remotely monitor your areas of concern absolutely anywhere and at any time.

Networked surveillance makes it possible to send live images and audio for remote monitoring. This can be used in a multitude of applications including troubleshooting, surveillance, security and many other activities requiring a remote monitoring. You can easily control and view the camera using a standard web browser or the management software that is supplied free.

### Ordering Information

ZN-PT304L IP colour camera with PTZ function

ZN-PT304WL IP colour camera with PTZ function, Wireless

Model	ZN-PT304	ZN-PT304WL
Image Sensor	1/4" CMOS	
Resolution	640 (H) x 480 (V)	
Minimum Illumination	1.0 Lux / F2.0	
S/N Ratio	> 60db	
Lens	4.0mm	
Electronic Shutter	1/60 to 1/15,000 sec	
Audio	Yes, Omnidirectional	
Video	MPEG4 video streaming, JPEG for stills	
Video Frame rate	Upto 25 fps	
Electronic Flip & Mirror	Yes	
	Adjustable image size quality and bit rate	
Image Sizes	From 160 x 120 to 640 x 480	
Pan & Tilt	Pan range: 0-350° (+175° ~ - 175°) Tilt range: 0-125° (+90° ~ - 35°) auto pan mode & auto patrol mode	
Network	UPnP, TCP/IP, SMTP, RTSP/RTP/RTCP, HTTP, FTP, Telnet, NTP, DNS, DDNS, DHCP, PPPoE 10 baseT/100 baseT fast Ethernet auto negotiation, Wireless (ZN-PT304WL model)	
Power Supply	12V dc	
Operating Conditions	Temperature: 0°~ 40°C H	
Dimensions	10(W) x 130(H) x 110(D)mm	
Weight	259g (ZN-PT304L) / 271g (ZN-PT304WL)	
Viewing System Requirements	OS: Microsoft Windows 98 SE, ME, 2000, XP Browser: Internet Explorer 5.0 or above	

### KEY FEATURES:

- Compact design
- MPEG4 Compression
- Easy to install
- Motorised wide-range Pan/Tilt
- Audio
- Intelligent motion detection



A course designed by CBC for Analogue and Digital CCTV users to move into the IP world with ease and vice versa.  
AIM of the Course:

To understand how to Integrate analogue CCTV systems with IP Networks.

By the end of the course the student will be able to deploy a "Stand-Alone" IP based video surveillance system with a good foundation knowledge of the emerging IP based technologies available. The student will also get a broad understanding of the "Integration of CCTV Surveillance with IP Networks".

#### Course details and duration:

#### Pre requisites

Have good understanding of computers

#### Course Duration

3-days

#### Examination Details

- Written / Multiple Choice
- Practical

#### Course content:

- IP Networking
- TCP/ IP
- OSI Model
- Network Cabling Topologies
- Software interaction with hardware
- LAN / WAN technologies
- Ethernet
- Video Storage in computer Systems
- ISP's & communication technologies
- Differences between manufacturers products & technologies
- Successfully implement a mini video solution using a mini LAN.
- CCTV Optonics, Cameras, CCTV Control equipment, Multiplexers DVR's (digital Video Recorders)
- Web Servers
- Implement a stand-alone IP Video Network

#### Three day course

The three day course helps the CCTV installer to learn background information on traditional surveillance technologies and historical overview on the evolution of analogue based surveillance technology.

The CCTV Installer will gain an understanding of IP technologies and how to integrate IP with modern IP based surveillance equipment.

- TCP/IP general overview
- Understand Ethernet technologies, IEEE Standards 802.3
- Cabling Typology
- Understanding Video Storage in Computer Systems
- Understand Communication Technologies such as ISDN, Broadband, Lease Line etc.
- Bandwidth considerations

The last session of the course is a Practical session – How one successfully implements Video Surveillance Solution using IP.

**CERTIFICATION: VSoIP Certified Engineer**



Bickenhall College of Computing



Sales and information +44 (0) 208 732 3300





# RSC-KITS

## Roadstar ANPR systems



### Examples of Positioning and Number Plate Types



Large camera angles

Inverse plates



Square plates

Borderless plates

Used for vehicle identification, the RSC-Kit is a package of easy to install components that gives users a complete automatic number plate recognition (ANPR) system for up to two ANPR cameras (see page 94) and six overview cameras, depending upon the particular kit chosen.

An ANPR system provides number plate capture, storage and process of data for applications such as automatic barrier control in car parks, toll booths, access to restricted sites, etc, or can be used in control of vehicle flow, petrol stations, hotels and leisure complexes in fact, any application where vehicle management is important.

The special ANPR camera (available as 10M or 20M options) is used to view number plates during daylight and night time conditions. This information along with details from the overview cameras such as, the driver, vehicle type and colour is sent to the processor for storage and any particular action such as raising barriers, sounding alarms, etc, depending upon the application being used.

An optional external LED display (page 95) can be added to provide information to users.

The RSC-Kits comprise of one or two ANPR cameras, pre-configured processor with capture card(s), roadstar software, keyboard & mouse, 17" LCD monitor, memory stick, dongle, test monitor, mason drills, fixings, 50M video cable, metal CCTV warning sign and tape measure. An optional LED display sign can be added (see page 95).

Model	RSC-Kit10	RSC-Kit20	RSC-Kit10-2	RSC-Kit20-2
Number of cameras	One ANPR lane capture camera and up to three overview cameras		Two lane capture ANPR cameras and up to six overview cameras	
Distance	10M	20M	10M	20M
Video standard	PAL			
Records per computer	Up to 200,000 records of number plates on mini computer			
Equipment included with the kit:	ComputerMini PC with pre-installed ANPR software, keyboard & mouse, video capture card and dongle			
ANPR camera (page 94)	RST10	RST20	2x RST10	2x RST20
Monitor	LCD Monitors			
Accessories	UPS, test monitor, tools, drills, fixings, cables, metal CCTV warning sign, tape measure,			
Specification	Please contact the sales office for the complete data sheet			

### KEY FEATURES:

- All in one ANPR system solution
- Up to 2 ANPR cameras included depending upon Kit
- 10M or 20M distance options on ANPR camera
- Day or night identification
- Complete package with easy to install system components
- Can be used to control barriers and display messages
- No software licence fees
- Additional overview cameras can be added

The RSC (Roadstar capture) range is an automatic number plate recognition (ANPR) system consisting of processor and software that is expandable from a single lane up to a four lanes either in single steps or all at once. This size of the system can be specified either at the outset of the requirement or can be field upgradeable as and when necessary. There are no license fees required when expanding as only the price of capture cards needs to be considered.

The Roadstar software processes the number plate day or night images from ANPR cameras and vehicle type, colour, occupants and any other identifying features from the overview cameras. It then provides reports from the data and responds according to the set up.

Each lane consists of an ANPR camera and up to three overview cameras. The overview cameras can be displayed as single pictures or in quad mode with 21 frames each per capture.

For high flexibility several reporting screens can be set up according to its particular application. For example, statistical analysis will show average speed, average stay time, etc, whereas the review screen can replay and provide search criteria for all recorded data. Known vehicle owners can have their own data entered into the database relating their name, position, department, company, etc, to their vehicle. Alarm settings within the system can be programmed to alert for mismatch, stolen vehicles, over speed, non-authorized entry, etc.

Applications such as automatic barrier control (RSC-Relay page 95) in car parks, toll booths, and access to restricted sites are possible or, used in control of vehicle flow, petrol stations, hotels and leisure complexes in fact, any application where vehicle management is important.

An optional external LED display (RSC-Display page 95) can be added to provide information to users.



### Perfect Partners



Barrier Relay Control  
Page 95



ANPR Camera  
Page 94

### KEY FEATURES:

- Available as one to four lanes
- Field expandable
- No license fees
- Day or night identification
- Highly accurate readings
- Processes both ANPR and overview cameras
- Quad display of vehicle from different cameras
- Powerful search criteria
- Huge vehicle driver database
- Alarm settings
- Extensive reporting capability
- High accuracy (99%)

Model	RSC-1	RSC-2	RSC-3	RSC-4
Camera inputs	4 (1 Lane capture ANPR plus 3 overview cameras)	8 (2 Lane capture ANPR plus 6 overview cameras)	12 (3 Lane capture ANPR plus 9 overview cameras)	16 (4 Lane capture ANPR plus 12 overview cameras)
Video standard	PAL (NTSC by request)			
Detection area	Dependent upon camera/lens configurations			
Max capture speed	120MPH (193KPH)			
ANPR motion images	2-21 pictures per second			
Minimum plate text height	Must not be less than 14 pixels (max 28 pixels)			
Records per RSC computer	Up to one million records of number plates			
Alarms	Overstay, entry, exit, speeding, etc			
Sound on event	Stolen vehicle match, hotlist match, alarm match, video loss			



# ROADSTAR RST SERIES

## Roadstar ANPR Cameras



### Perfect Partners



Roadstar Software  
Page 93

The Ganz Roadstar camera captures the images of car number plates from moving vehicles both day and night conditions. When the headlights are switched on, the dark IR lights located beneath the housing illuminates the registration plate without blinding the driver. Due to the nature of the application images appear in black and white.

A specially made filter and camera are expertly set up during the assembly process. The Roadstar camera system comprises of camera, filters, lens, brackets and an IR illuminator. The assembly, wiring and testing is performed prior to packing and customer shipment. The ANPR camera overcomes all problems associated with number plate capture - speed, reflectivity, sunlight, car headlights and depth of field - regardless of ambient lighting conditions.

Because the installation of the assembly is simple, it can be wall or pole mounted in car parks, hotels, petrol stations, highways, etc.

The integrated number plate capture camera is designed for high performance, long life and low maintenance.

NOTE: During night-time operation ROADSTAR will only provide images of number plate – there will be no further video information. During the day, ROADSTAR may provide some additional background scene information.

### Ordering codes:

RST-10	10m ANPR Camera
RST-20	20m ANPR Camera
RST-30	30m ANPR Camera
RST-40	40m ANPR Camera

MODEL	RST-10	RST-20	RST-30	RST-40
Capture distance	10M	20M	30M	40M
Resolution	570TVL			
Wavelength	850NM			
Environmental	IP66			
Constuction & finish	Diecast aluminium in black RAL9005			
LED Life	Average 10 years			
Fixing	Wall bracket (included)			
Voltage input (PSU included)	230Vac			
Power consumption	150W			
Weight	3.57Kg			

### KEY FEATURES:

- Pre-assembled and expertly set up
- Easy to install
- Captures images of vehicle travelling in excess of 120MPH (193KPH)
- 10M, 20M, 30M and 40M distances
- High resolution
- 24Hr round the clock operation
- LED Dark IR illumination
- 3 Years warranty

## RSC-NET

### Roadstar networked ANPR systems



The RSC-Net server allows users to link a number of ANPR systems (RSC-Net-1 to RSC-Net-4) together over a network to share a central database. Working in the same way as the RSC-1/RSC-4 series they are scalable from a relatively small number of ANPR systems on a location up to major systems that cover many geographic sites. The server will accommodate up to 255 x RSC-4 systems and provides a massive database. Barrier control (RSC-Relay) and external display (RSC-Display) are additional options.

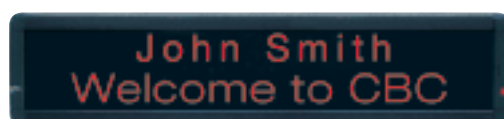
#### Ordering Information:

RSC-NET1	Capture Card, 1 lane plus 3 overview inputs
RSC-NET2	Capture Card 2, for 2nd lane expansion plus 3 overview inputs
RSC-NET3	Capture Card3, for 3rd lane expansion plus 3 overview inputs
RSC-NET4	Capture Card 4, for 4th lane plus 3 overview inputs
RSC-RELAY	Barrier Relay Controller

\* Please contact the sales office for further details.

#### KEY FEATURES:

- Up to 255 capture processors per server
- Up to 4 ANPR and 12 overview cameras per processor
- Vehicle & driver database included full graphical reporting
- Camera location maps & photos
- Automatic barrier control & message sign options



For illustration only

The RSC-Display sign is wired to the computer and used to display messages or number plates depending upon the application.

The display provides 24 illuminated characters in a 2 line format with 60mm high characters and is housed in an IP65 weatherproof vandal resistant case. It has an Auto Dim facility. There are red, yellow and green display options. External dimensions are 1550mm x 215mm

#### Ordering Information:

RSC-Display	External LED display sign
-------------	---------------------------

\* Please contact the sales office for further details.

## RSC-DISPLAY

### Roadstar external LED display sign

#### KEY FEATURES:

- Outdoor 2-line, 24 chars per line
- Characters are 60mm high
- Red, yellow or green character options
- Size 1550mm x 215mm
- Auto-dimmer
- Vandal-resistant
- IP 65



# C-TP SERIES

## Twisted Pair Transmission; Passive Series



### Perfect Partners



Video Ground  
Loop Isolator  
Page 105






DVR Balun  
Page 105

UTP (Unbalanced Twisted Pair) is a way of transmitting CCTV video signals on ordinary CAT 5 type data cables using Baluns (Balance Unbalance)

C-TP range of twisted pair transmission products are designed for CCTV signal transmission over unshielded twisted pair wire (CAT 5 network cable). This type of transmission is an alternative solution to the traditional coaxial and fiber based systems and gives the following benefits; Fast, easy installation, saving time and money, substantial savings on the cost of the cable itself, superb quality on long range transmission.

Most new commercial (and often residential) building developments install CAT 5 data "backbones" as standard for building management systems. These can be integrated TCP/IP or standard protocol networks. If there is spare unused cabling available, UTP CCTV systems can be installed without the need for additional costly extra wiring. Cat 5 cable is significantly cheaper than traditional RG59 and can fit far more conductors into a smaller space.

	Ordering Codes C-TP101VHL	Single channel Video Transceiver with extra interference rejection
	C-TP104V	4 Channel passive Video Transceiver
	C-TP116V	16 channel Video Transceiver hub

MODEL	C-TP101VHL	C-TP104V	C-TP116V	C-TP101VPK
Transceiver	yes	yes	yes	yes
Video (BNC)	1	4	16	1 1
Cat 5 Connection	screwed terminal	4 screwed terminal	16 screwed terminal	screwed terminal
Power over Cat 5	No	No	No	yes yes
Max Distance Cat 5		Passive to Passive 600metres Passive to Active 1Km		50m max distance using 12Vdc

### KEY FEATURES:

- Immunity to noise
- Long distances
- Easy installation
- Multiple video signals in the same bundle
- RS-422/RS-485 in the same bundle
- 12VDC/24VAC in the same bundle
- Lower cabling costs and space saving
- Better interference immunity

# C-TP SERIES

## Twisted Pair Transmission; Active Series

UTP (Unbalanced Twisted Pair) is a way of transmitting CCTV video signals on ordinary low cost CAT 5 type data cables using Baluns (Balance Unbalance)

C-TP range of twisted pair transmission products are designed for CCTV signal transmission over unshielded twisted pair wire (CAT 5 network cable). This type of transmission is an alternative solution to the traditional coaxial and fiber based systems and gives the following benefits;

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**Perfect** Partners



Video Ground Loop Isolator  
Page 105



DVR Balun  
Page 105

**Ordering Codes**



C-TP108VR 8 channel active receiver hub



C-TPA116VR 16 channel active receiver hub with distribution amp & surge protected

MODEL	C-TP101VT	C-TP101VR	C-TP104VR	C-TP108VR	C-TP116VR
TX or RX		TX	RX	RX	RX
Video (BNC)		1	1	5	8
Cat 5 Connection		Screwed terminal	Screwed terminal	4 Screwed terminal	6 Screwed terminal
Max distance Cat 5			Active to Passive 1Km Active to Active 1.5Km		
Power supply (not supplied)			12Vdc		

**KEY FEATURES:**

- Immunity to noise
- Long distances
- Easy installation
- Multiple video signals in the same bundle
- RS-422/RS-485 in the same bundle
- 12VDC/24VAC in the same bundle
- Lower cabling costs and space saving
- Better interference immunity





# COAXI.NET



### Perfect Partners



Colour/mono  
Camera  
Page 24



Megapixel  
Camera  
Page 85

Coaxi.Net is a layer 1 device that turns any standard analogue coaxial cable into a high speed 100baseT Ethernet connection.

These simple units are always connected in pairs and both transmit and receive. They are connected to each end of your existing coaxial cable to complete a RJ45-RJ45 connection providing an effective straight-through network cable – but at distances of up to 250m for full data rate.

Once connected, the Coaxi.Net units instantly provide a full 100baseT full duplex Ethernet connection, with the devices being totally transparent to your network.

They require no setup: Connect the coaxial cable, RJ45 cable and power to each end and the link will work. It is that simple. The onboard status LEDs will always give you visible diagnostics of your link.

By using a network switch at the camera end, Coaxi.Net can turn a single analogue camera connection into a multiple IP camera connection. Ideal for upgrading analogue systems to an IP solution NO FUSS, NO SETUP – JUST CONNECT!

### Ordering Codes

Coaxi.Net (Pair)	CN-HWC
12V DC PSU	CVPSU12
Wall mount bracket (1 unit)	CN-WMB
Rack mount bracket (8 units)	CN-1U
PSU and cable for 8 units	CN-RMPSU

MODEL	CN-HW/BNC	CN-HW/RJ45
Connections	Analogue BNC	Ethernet RJ45
	75ohm RG59 or similar 250m max distance for full rate	Straight, cross over auto detect 10baseT,100baseT auto switch
Power Supply	Screw Terminals detachable plug	
Connector	12V DC-24V AC auto detect	
Operating Voltage	200mA 12V DC 100mA 24V AC	
Current	Physical	
Operating Temperature	-10deg C ~ 50degC	
Dimensions	104mm (L) x (83mm excluding connectors) x 54mm (W) 23mm (H)	
Relative Humidity	85% non-condensing	
Compliance	CE, FCC RoHS	
Weight	110g	

### KEY FEATURES:

- Uses existing coaxial video cable (75ohm)
- Simple to install. No setup required
- Full 100baseT full duplex Ethernet network connection.
- Devices are transparent to network
- No MAC or IP Address
- Extended distance up to 250meters for full data rate. Up to 350m at half data rate.
- Automatic adaptation to cable quality and length
- Dynamic asymmetric assignment of bandwidth
- Supports any IP device
- Supports multiple IP devices
- Compact low-power units



# W800 SERIES

## Radar Detection System



The new RadarView system detects and tracks intruders moving at ranges up to a 500 metres radius from the sensor. An audible and visual alarm can be raised to alert security staff, avoiding the need for them to constantly monitor screens. The radar will independently control up to 5 separate PTZ cameras to display and track multiple threats at the same time.

With approximately 100 times less emitted power than a conventional mobile phone, the radar is entirely safe to operate. Its compact size and undemanding power and corm requirements make it easy to install as a temporary or permanent fixture, with no expensive maintenance regime.

The radar scans in 360° and will perform to specification in all weather and light conditions, 24 hours a day. It is also unique in its effectiveness as a sensor over expanses of water.

Radar	W800	W800-H
Max range	800m	800m
Range resolution	0.25m	0.25m
Measurement rate	850 per second	850 per second
Target false alarm rate	1 per 24 hours	1 per 24 hours
Detect/track man walking	10-500 meters line-of-sight	0-700 meters line-of-sight
Detect/track man running	10-450 metres	10-600 metres
Detect person crawling (hands and knees)	10-300 metres	10-400 metres
Detect person crawling (low profile)	10-175m	10-250m
Scanner field of view	360 degrees	360 degrees
Scan speed	1.0 Hz	1.0 Hz
Interfaces	100 MB Ethernet	100 MB Ethernet
Supply voltage	+24V nominal (12-36v)	+24V nominal (12-36v)
Power consumption	22W	22W
Environmental	IP66, NEMA-4X	IP66, NEMA-4X
Temperature	-20 to 60°C	-20 to 60°C

### KEY FEATURES:

- Field proven British commercial off-the-shelf technology
- Built in self test, condition monitoring and calibration
- 'Fit & forget', low maintenance requirement
- 360° coverage, including over water
- High range & azimuth resolution for excellent target detection
- Effective in all weather and light conditions

# W800 SERIES

## Radar Detection System

The radar beam spreads outwards from the sensor at a narrow horizontal and vertical angle, hitting the ground and filling a volume of space like a torch beam. It is practically impossible to evade. False alarms can be filtered out in the security software or by camera verification.

The radar is supplied complete with a suite of NS3-CT site security software. This is normally pre-installed on a rack mounted computer. It allows the operator to establish detection zones on a background map or aerial photograph of the area, upon which is displayed the location, speed and direction of any intruder. The software commands PTZ cameras to focus upon and display the threats detected.



PC Rack Mount illustration



Screen shots

### KEY FEATURES:

- Configurable to identify objects above a given size so that irrelevant background movements are filtered out
- Discriminated between threats and background clutter based on heading, speed and geographical area
- Detects small objects including a walking, crouching or crawling person
- Provides a record of movements over time across the entire survey area, or it can focus on specific areas, for example the walkways between buildings
- Directs a CCTV camera to a detected threat and automatically controls the camera to follow the threat in head/shoulders or wide area settings
- Records avi files and raw data sets or screen shot bitmaps
- Overlays a detected intruder position on a background map or aerial photograph of the area
- Selectable zones of interest to display in the field of view
- Assignment of detection zones, providing different levels of alarm in sensitive areas
- Assignment of non critical zones to allow for normal site operation
- Automatically compensates for background changes to the environment e.g. moving trees, grass
- Able to calculate heading, position and velocity of intruders and plots their track



## VM300

### View Finder



The view finder is commonly used to determine which focal length of lens should be used to give correct angle of view in a particular situation. It does this by altering the scene through the eye piece and relating it to a particular format focal length, which can be easily read off the scales on the barrel. The scales relate to 1/4", 1/3", 1/2", 2/3" and 1". Simple to use, it helps to eliminate problems by matching the field to the size of lens required.

#### VM300 Viewfinder

## FILTER SET UP KIT



A filter kit is essential during the installation and initial set up of any CCTV system where it is necessary to ensure that the equipment is adjusted to the optimum settings for the varying light conditions to which the camera will be subjected. By using certain optical filters mounted on the front of the lens, it is possible to assist the set up procedure by simulating different operating conditions. E.g. IR pass and ND3 for IR set up on black and white cameras.

#### FSK Filter Set Up Kit - includes Polarising, ND1, ND3, IR cut, IR pass

# LENS ACCESSORIES



VM 100	Extension Tube Kit
VM 400	C/CS Mount Converter
DL00	Dummy lens
EX1.5C	C-Mount 1.5x Extender
EX2C	C-Mount 2x Extender
EX1.5CS	CS-Mount 1.5x Extender
EX2CS	CS-Mount 2x Extender



- Programmable video distributor
- 4 inputs, 8 outputs
- Simple configuration
- Easy to install

VD4.8P Video Distribution Amp

## VD4.8P



270(w) x 40(h) x 180(d) mm





## PSM-012P

### 4" Mono Portable Monitor



65(w) x 65(h) x 57(d) mm

- 4" B&W (PSM 012P) Flat Screen
- 12 hour battery charge time
- High resolution display
- Sturdy carry case (PSM 012P)

PSM012      4" B&W Portable Service Monitor  
with Battery pack/Charger/Case

PSM012-BP      Spare Battery Pack for PSM012

PSM012-CH      Spare Battery Charger

PSM012-MC      Monitor and Leather case only

PSM012-M      Monitor only

PSM012-LC      Leather look case only

## PSM-056P

### 5.6" Colour TFT LCD Monitor



- Ideal for testing and demonstrating
- 320x234 pixels resolution
- Auto recognition (NTSC/PAL)
- OSD (multi-language)
- Test pattern generator
- Carrying strap and travel case
- Rechargeable battery and AC adaptor
- DC 9~24V

# VIDEO GROUND LOOP ISOLATOR AND DVR BALUNS

Video ground loop isolator are passive devices which reduce Ground loop interference with CCTV signals and can easily install in a new or added to existing systems. It is useful where a video signal is transmitted via cable between points with different ground potentials (Differences in ground potentials are typically caused by unbalanced power line loads).

Video Synch signals when not balanced would cause picture interference, sending weak signals into the DVR, the DVR Baluns helps to eliminate these interferences.

- C-GLI High Performance video ground loop isolator
- C-DVRB DVR Balun



# CAMERAS

**2:1 INTERLACE** – The combination of two individual fields of 312.5 lines to create a single frame of 625 lines (CCIR standard).

**A/V. (Audio/Visual)** The input on consumer devices that allows the connection of baseband video.

**A.G.C. (Automatic Gain Control)** An electronic circuit that varies to keep the signal at a constant predefined level; typically used in cameras at low light levels. This can also introduce noise in the video signal often referred to as a grainy appearance. The higher the level of AGC the more the signal is amplified, typical values 12 – 20 dB i.e. a gain of approx 4x - 10x.

**A.I. (Auto Iris)** An electronic circuit fitted to the iris of a lens that allows the iris to vary automatically to help compensate for large changes in light levels using video and power levels from the camera.

**A.L.C. (Automatic Level Control)** On AI lenses, also known as the peak/average control. Adjusting this control allows the auto iris circuitry to either take bright spots more into consideration (peak), bringing out detail in bright areas, or less into consideration (average) bringing out detail in shadows.

**AMBIENT LIGHT LEVEL** - The background or general light level of a given area or scene.

**ANALOGUE** - A signal in which any level is represented by a directly proportional voltage; not digital.

**ANGLE OF VIEW** - Angle of view is the angle covered by a picture for a particular lens and camera combination. The higher the number, the wider the area that can be covered by the camera-lens combination. However, the angle will decrease with the format size, of either the camera or the lens

**APERTURE** - The 'opening' of a lens, a measure of its light gathering capability. Relative Aperture is a ratio between its focal length and effective aperture, measured in F numbers, generally the lower the better.

**ASPECT RATIO** - The ratio of the vertical to the horizontal dimension of an image. This is normally 3:4.

**ASPHERICAL LENS** - A lens designed with a non spherical shape optics. This allows 3

benefits, improved light efficiency (lower f stop), more compact and less distortion.

**AUTO WHITE BALANCE** - Feature on colour cameras whereby the camera constantly adjusts to the scene colours to maintain a reference to white.

**ATTENUATION** - A term that refers to signal loss in a transmission system.

**B.L.C. (Back Light Compensation)** A feature of modern CCD cameras which electronically compensates for high background lighting to give detail which would normally be silhouetted.

**BACK FOCUS** The mechanical aligning of the imaging device with the focal point of the lens. This becomes most important on zoom lenses so they "track" when zooming in and out (stays in focus throughout the zoom range).

**BALANCED SIGNAL** - Method of transmitting video, usually over twisted pair cable, that consists of two equal but opposite signals being sent down two conductors. Typically a way of reducing noise within the signal so the signal can be sent further.

**BALUN (Balanced Unbalanced)** A device that connects a balanced line, such as twisted pair, to an unbalanced line, such as coax cable.

**BAND WIDTH** - The frequency range that an electronic circuit can accept.

**BASE-BAND VIDEO** - A video signal that has no form of modulation. Typically used in CCTV and can be displayed on a monitor, most TVs will also accept this signal via the AV (audio/visual).

**BLACK LEVEL** - The level on a video signal, just above the sync pulses, where black portions of the picture are represented.

**BLANKING** (Field and line flyback blanking) - The period of the composite video signal when the retrace occurs, making it invisible on the screen. This avoids the appearance of thin white lines in the picture.

**BNC** - Video connector, the most commonly used in CCTV.

**C MOUNT** Long established industrial

standard for connecting cameras and lenses, widely used in the CCTV industry. The distance from the flange surface to the focal point is 17.526 mm.

**C.C.D. (Charged Coupled Device)** The chip that collects the light, performs the same function as a camera tube. Most modern cameras use a CCD, the size is measured diagonally and can be 1/4", 1/3", 1/2" or 2/3". There are two types, frame transfer and interline transfer.

**CHROMA BURST** - The reference signal included in the video signal after the horizontal sync pulse. This enables a colour monitor to lock on to a colour composite video signal.

**CHROMINANCE** - The part of a colour video signal that carries the colour information.

**C.C.D. (Charged Coupled Device)** A 'chip' that performs the same function as a camera tube.

**C.C.I.R. (Comite Consultatif International des Radiocommunications)** The European TV standard 625 lines 50 fields.

**CS Mount (Special C mount)** New standard for connecting cameras and lenses. It has a shorter penetration into the camera, needed for many modern CCD designs. The distance from the flange surface to the focal point is 12.5mm

**CS TO C MOUNT ADAPTOR** - This is also known as a spacer ring, and is used when you want to fit a C-mount lens on a CS-mount camera. A 5 mm spacer changing the flange to focal point from 12.5 mm to 17.5 mm.

**CO-AXIAL CABLE** - Any cable that has a conductor and shield sharing the same axis. Typical coaxial cable would be RG59.

**COMPOSITE SYNC** - A signal comprising of both Line and Field sync pulses but without any video information.

**COMPOSITE VIDEO** - A complete video signal, comprising of sync and video information. The sync pulse should be 0.3 volts and the video signal should be 0.7 volts.

**CROSSTALK** - Unwanted interference from another adjacent communications channel.



**dB (decibel)** - A logarithmic ratio between two signals. It is used as the unit of noise or signal strength, each 6dB doubles the voltage.

**DEPTH OF FIELD** - The proportion of the field of view that is in correct focus. The depth of field in focus **DECREASES** when: the focal length is longer, the f number is smaller, or the object distance is shorter.

**DIGITAL SIGNAL** - A signal that is made up of 1s and 0 and therefore can be processed by a microprocessor.

**D.D. (Direct Drive)** This is a lens with an IRIS that varies automatically depending on the light level. The lens itself has no circuitry (just a motor or galvo), with the camera providing the drive and damping voltages therefore driving the lens directly.

**E.I. (Electronic Iris)** Automatically varies a CCD camera's shutter to mimic Auto Iris control, allowing fixed or manual iris lenses to be used in a wider range of areas.

**EIA (Electronic Industries Association)**  
A standards organisation in the US specialising in the electrical and functional characteristics of interface equipment. Also the name given to the standard used in the USA for monochrome cameras.

**EIA/TIA** - The US Electronics Industries Association and Telecommunications Industries Association, which have merged. The EIA is a US trade organisation for the electronics industry that concentrates on hardware interface standards.

**EXTERNAL SYNC** - The ability of CCTV equipment, normally cameras, to accept one or more of the standard sync formats so as to align itself to the rest of the system. Traditionally used in analogue multiplexing where very accurate synchronisation of cameras was required.

**EXview™** - The latest interline CCD sensor from SONY that has increased sensitivity across the visible spectrum and the near IR.

**F STOP** - This is the ratio of the focal length to the effective diameter of the lens (**f/A**). It is not a measure of the efficiency or the transmission value of the lens. The smaller the f number the more light is passed.

**FC** - Foot candles, used in some USA specifications to define sensitivity. 10fc is approx. 1 lux.

**FIELD** - One half of a frame, consisting of either the odd or the even numbered lines, 50 fields are transmitted every second.

**FIELD OF VIEW**- The view achieved with a particular lens; varies with the focal length and the CCD size of a camera.

**FLANGE BACK LENGTH** - The distance from the back flange of a lens to the sensor face. This is 17.526 mm for C-mount and 12.5 mm for CS-mount lenses.

**FOCAL LENGTH**- Of a lens, the distance in millimetres, between its secondary principal point and its focal point. The higher the number the greater the magnification and the less the field of view.

**FOCAL POINT**- The point on the axis of a lens to which parallel rays of light will cover.

**FRAME** - One complete TV picture made up of approximately 625 lines. 25 frames are transmitted every second.

**FRAME TRANSFER CCD**- Type of CCD chip which consists of vertical charge transfer channels placed side by side. During vertical blanking, the charge generated in the light sensitive imaging area is rapidly transferred into a shielded storage area. During the horizontal blanking, this charge is shifted down a line at a time into a horizontal shift register where it is clocked out during each line period to form the video signal. Traditionally this system was preferred to eliminate vertical smear (car headlamps).

**GALVANOMETRIC (GALVOMETRIC)**  
One method of converting the small electric currents produced by Auto Iris circuits into physical movement of the iris diaphragm. Used in both Auto Iris and Direct Drive lenses.

**GAMMA CORRECTION** - An electronic correction carried out by the camera circuitry to balance the brightness seen by the camera to that of the monitor.

**GEN LOCK** - See external sync

**GROUND LOOP** - An unwanted continuous or temporary ground current flowing back and forth between two devices that are at

different ground potentials.

**GROUND LOOP TRANSFORMER** - An isolation transformer. There is no direct connection between input and output.

**HERTZ (Hz)** - The number of variations per second (e.g. picture frames, alternating of the current, etc).

**IDENT** - Characters generated onto a video signal, for example, titles, time and date.

**ILLUMINANCE** - The measurement of light in lumens per square metre, the unit of which is the lux.

**IMPEDANCE** - The effective resistance of an electronic circuit to an A.C. signal.

**IMAGE SENSOR FORMAT** - Size of the CCD element in the camera.

**INFRA RED LIGHT** - The wavelength of light produced above the visible part of the spectrum.

**INTERLACE** - The accurate combining of two fields, one odd one even, into a single frame. For standard video picture make up, you would have 50 fields per second interlaced, which equates to 25 frames per second.

**INTERLINE TRANSFER CCD**Type of CCD chip in which the photosensors acquire and store an electric charge according to the intensity of light falling on them. The charges are first transferred to a vertical shift register and then a horizontal shift register. This is controlled by an external pulse timing system.

**INTERNAL SYNC** (crystal controlled)  
A camera that generates its sync pulses without reference to any other source. Normally using a crystal controlled oscillator.

**IP RATING** - This is used as an index of environmental protection. The number combination defines the protection from outside influences afforded by an enclosure. The minimum rating for most external housings for cameras is IP65.

**IR SHIFT** - The difference in the field of view in focus between daylight and infrared light.

**ISIT (INTENSIFIED SILICON INTENSIFIED TARGET)** - A camera used in exceptionally low light conditions. This type of camera is susceptible to damage and requires great



# CAMERAS

care when used in normal lighting conditions. Some cameras have an internal sensor that automatically cuts out the first level of intensification.

**LENS MOUNT** - See C-Mount and CS-Mount.

**LINE LOCK** - To synchronise the field sync pulses, of an AC powered camera, to the frequency of the voltage input (line voltage).

**LINE POWERED** - A camera in which the power is supplied along the same coaxial cable that carries the video signal. Makes for ease of installation, but cabling distances can be restricted and connections to other equipment can cause problems.

**LUMINANCE (Y)**- The part of a video signal that consists of the monochrome data.

**LUX**- Metric measure of the light striking a surface. The light available from that surface will depend on how reflective it is.

**MECHANICAL FOCUS** - The mechanical aligning of the imaging device with the focal point of the lens, most often on zoom lenses, to ensure the image stays in focus throughout the zoom range that the system has been set to.

**MONOCHROME** - Black and white, not colour.

**N.T.S.C.** (National Television Standards Committee. See EIA) - Colour TV system used in the USA.

**N/D (Neutral Density)**- A filter that attenuates light equally over the whole visible spectrum. Normally used when setting back focus of camera/lens combinations in the day time (allows the replication of night time conditions)

**OSD** - On-Screen Display. The ability of a camera or a piece of camera control equipment to display its set-up menu on a display monitor. Thereby greatly simplifying installation

**P.A.L.** (Phase Alternate Line. See CCIR) Colour TV system used in the UK.

**P-P (Peak-to-Peak)** The voltage of a signal measured between its most positive and negative points. CCIR standard video is 1 volt P-P.

**Peak White Inverter (Eclipser)**An electronic circuit that turns any white part of a video signal, over a preset level, to black. If installed in the auto iris video line it decreases the contrast of one picture, bringing out detail otherwise lost in shadow.

**PEDESTAL** The portion of a video signal between the sync. pulses and the black level.

**PSU** - Power supply unit.

**REFLECTANCE** - The ratio of light returned from a surface expressed as a percentage.

**REFLECTED LIGHT** - Scene illumination multiplied by reflectance. This is the amount of light returned to the camera and determines the quality of picture.

**S/N (SIGNAL TO NOISE) RATIO** - a measurement of the noise level in a signal expressed in dB (decibels). In a video signal, values from 45 dB to 60 dB produce an acceptable picture. Less than 40 dB is likely to produce a 'noisy' picture.

**SCENE ILLUMINATION** - The density of light in LUX falling on the area to be viewed. For best results the ratio of the lightest to the darkest areas should not exceed a factor of two.

**S.E.C.A.M.** (System Electronique Couleur Avec Memoire. See CCIR) Colour TV system used in France.

**SENSITIVITY** - Of a camera, usually specified in LUX, should be the amount of light falling upon an imaging device to produce a video signal of 1-volt peak to peak. Confusingly, it is often referred to as the amount of light at the lens, which is not technically accurate and can be misleading unless the lens specification is provided in detail, including its light transmission value.

**SIT (SILICONE INTENSIFIED TARGET)** - A camera for use in very low light levels.

**SPECTRAL RESPONSE** - The sensitivity of the imaging device to different frequencies of light. This is usually in the range of 300-1000 nanometres. Visible light is up to 730nm, dull red infrared lighting from 700-850nm, invisible infrared is over 850nm.

**SYNC** (Synchronisation pulses) Pulses generated, normally by the camera, to tell other pieces of equipment when a picture

(field sync) or one line of a picture (line sync) is to start.

**TERMINATED** (75 Ohm terminated) Video input of a piece of CCTV equipment, wired to be the last in a particular video line.

**TERMINATION** - The video cable requires an impedance of 75 ohms at normal video signal bandwidth. This is often called 'low Z'. There is a switch on the back of the monitors to select either 75 ohm or 'high Z' (sometimes 'high/low'). If a signal is looped through more than one monitor all should be set to 'high' except at last, which should be to 'low' or 75 ohm.

**TVL (Television Lines - Resolution)** The maximum number of changes between light and dark on a picture across 3/4 of the width dictates the resolution of a CCTV product, measured in TVL.

**UNTERMINATED** - Video input of a piece of equipment, wired so as to allow the video signal to be fed to further equipment. Does not necessarily include extra sockets for the extra cables.

**V.B.S.** (Video, Burst, Sync) - A composite colour video signal.

**V.S.** (Video Sync) - A composite monochrome video signal.

**VARIFOCA LENS** - A type of lens that enables a manual selection between two focal lengths, to give the desired picture view. A good option for customers, who are unsure of angle or distance, as it saves having to try multiple lenses.

**WHITE LEVEL** - The brightest part of a video signal corresponding to approximately 1.0 volt (0.7 volts above the black level).

**Y** - The black and white video signal.

**Y/C** - A method of sending video pictures in 2 separate parts down 2 separate cables. The component parts are Y (the Black and White portion) and C (the colour portion).

# DVR RECORDING TIMES



## ZR-DHD1621NP 16 channel DVR with 750GByte and 1.2TByte HDD fitted

Pictures per sec per camera	3pps		2pps		1pps		1/2pps		1/3pps		1/4pps	
	750GB	1.2TB	750GB	1.2TB	750GB	1.2TB	750GB	1.2TB	750GB	1.2TB	750GB	1.2TB
Q7	10d 13hrs	16d 20hrs	15d 19hrs	25d 7hrs	31d 14hrs	50d 14hrs	63d 5hrs	101d 3hrs	94d 20hrs	151d 17hrs	126d 10hrs	202d 6hrs
Q5	12d 16hrs	20d 5hrs	189d 23hrs	30d 8hrs	37d 22hrs	60d 16hrs	75d 21hrs	121d 9hrs	113d 18hrs	182d 1hrs	151d 17hrs	242d 17hrs
Q3	18 23hrs	30d 8hrs	28d 11hrs	45d 12hrs	56d 21hrs	91d 1hrs	113d 19hrs	182d 1hrs	170d 16hrs	273d 1hrs	227d 13hrs	364d 2hrs
Q1	37d 22hrs	60d 17hrs	56d 21hrs	91d 0hrs	113d 19hrs	182d 1hrs	227d 13hrs	364d 2hrs	341d 8hrs	546d 3hrs	455d 3hrs	728d 4hrs



## ZR-DHD921NP 9 channel DVR with 250GByte and 500GByte HDD fitted

Pictures per sec per camera	5pps		3pps		2pps		1pps		1/2pps		1/3pps	
	250GB	500GB	250GB	500GB	250GB	500GB	250GB	500GB	250GB	500GB	250GB	500GB
Q7	3d 18hrs	7d 12hrs	6d 6hrs	12d 13hrs	9d 9hrs	18d 17hrs	18d 17hrs	37d 11hrs	37d 11hrs	74d 22hrs	56d 4hrs	112d 8hrs
Q5	4d 12hrs	9d 0hrs	7d 12hrs	14d 23hrs	11d 6hrs	22d 19hrs	22d 19hrs	44d 23hrs	44d 23hrs	89d 22hrs	67d 10hrs	134d 20hrs
Q3	6d 18hrs	13d 11hrs	11d 5hrs	22d 11hrs	16d 20hrs	33d 17hrs	33d 17hrs	67d 10hrs	67d 10hrs	134d 20hrs	101d 3hrs	202d 6hrs
Q1	13d 11hrs	26d 23hrs	22d 11hrs	44d 23hrs	33d 17hrs	67d 10hrs	67d 10hrs	134d 20hrs	134d 20hrs	269d 17hrs	202d 6hrs	404d 13hrs





# DVR RECORDING TIMES

## C-MPDVR MPEG4 DVR Series

### Recording times for 160GB

Record speeds		16 channel				8 channel				4 channel			
720 x 576	Frame	100 ips	50 ips	25 ips	12.5 ips	50 ips	25 ips	12.5 ips	6 ips	25 ips	12.5 ips	6 ips	3 ips
360 x 288	CIF	400 ips	200 ips	100 ips	50 ips	200 ips	100 ips	50 ips	25 ips	100 ips	50 ips	25 ips	12 ips
Record quality		Record time in days and hours											
Best	Frame	1d 17hrs	3d 1 hrs	5d 14hrs	9d 0hrs	3d 11hrs	6d 3hrs	11d 4hrs	18d 1hrs	6d 23hrs	12d 6hrs	22d 8hrs	36d 3hrs
	CIF	2d 2hrs	3d 15hrs	6d 16hrs	10d 18hrs	4d 4hrs	7d 7hrs	13d 8hrs	21d 13hrs	8d 8hrs	14d 15hrs	26d 16hrs	43d 2hrs
High	Frame	2d 5hrs	3d 21hrs	7d 1hrs	11d 10hrs	4d 10hrs	7d 18hrs	14d 3hrs	22d 20hrs	8d 20hrs	15d 12hrs	28d 7hrs	45d 17hrs
	CIF	2d 22hrs	5d 3hrs	9d 9hrs	15d 4hrs	5d 20hrs	10d 7hrs	18d 19hrs	30d 8hrs	11d 17hrs	20d 15hrs	37d 14hrs	60d 17hrs
Normal	Frame	2d 21 hrs	5d 2hrs	9d 7hrs	15d 0hrs	5d 19hrs	10d 4hrs	18d 14hrs	30d 0hrs	11d 14hrs	20d 9hrs	37d 4hrs	60d 1hrs
	CIF	3d 20hrs	6d 18hrs	12d 8hrs	19d 23hrs	7d 17hrs	13d 13hrs	24d 17hrs	39d 23hrs	15d 11hrs	27d 3hrs	49d 11hrs	79d 22hrs
Basic	Frame	4d 16hrs	8d 5hrs	15d 0hrs	24d 6hrs	9d 9hrs	16d 11hrs	30d 1hrs	48d 13hrs	18d 18hrs	32d 23hrs	60d 2hrs	97d 2hrs
	CIF	5d 8hrs	9d 9hrs	17d 3hrs	27d 16hrs	10d 17hrs	18d 19hrs	34d 6hrs	55d 8hrs	21d 10hrs	37d 15hrs	68d 12hrs	110d 17hrs

### Recording times for 250GB

Record speeds		16 channel				8 channel				4 channel			
720 x 576	Frame	100 ips	50 ips	25 ips	12.5 ips	50 ips	25 ips	12.5 ips	6 ips	25 ips	12.5 ips	6 ips	3 ips
360 x 288	CIF	400 ips	200 ips	100 ips	50 ips	200 ips	100 ips	50 ips	25 ips	100 ips	50 ips	25 ips	12 ips
Record quality		Record time in days and hours											
Best	Frame	2d 17	4d 19h	8d 17h	14d 2h	5d 11h	9d 14h	17d 11h	28d 5h	10d 22h	19d 4h	34d 22h	56d 11h
	CIF	3d 6h	5d 17h	10d 10h	16d 19h	6d 12h	11d 10h	20d 20h	33d 15h	13d 0h	22d 21h	41d 16h	67d 7h
High	Frame	3d 10h	6d 1h	11d 1h	17d 20h	6d 21h	12d 3h	22d 2h	35d 17h	13d 9h	24d 6h	44d 5h	71d 10h
	CIF	4d 14h	8d 1h	14d 16h	23d 17h	9d 4h	16d 3h	29d 8h	47d 10h	18d 8h	32d 6h	58d 17h	94d 21h
Normal	Frame	4d 12h	7d 23h	14d 12h	23d 11h	9d 1h	15d 22h	29d 1h	46d 22h	18d 3h	31d 21h	58d 2h	93d 20h
	CIF	6d 0h	10d 14h	19d 7h	31d 5h	12d 1h	21d 5h	38d 15h	62d 10h	24d 3h	42d 10h	77d 7h	124d 12h
Basic	Frame	7d 8h	12d 21h	23d 11h	37d 22h	14d 16h	25d 18h	46d 22h	75d 20h	29d 8h	51d 13h	93d 21h	151d 16h
	CIF	8d 8h	14d 16h	26d 18h	43d 6h	16d 17h	29d 9h	53d 13h	86d 12h	33d 11h	58d 19h	107d 2h	173d 0h

### Recording times for 500GB

Record speeds		16 channel				8 channel				4 channel			
720 x 576	Frame	100 ips	50 ips	25 ips	12.5 ips	50 ips	25 ips	12.5 ips	6 ips	25 ips	12.5 ips	6 ips	3 ips
360 x 288	CIF	400 ips	200 ips	100 ips	50 ips	200 ips	100 ips	50 ips	25 ips	100 ips	50 ips	25 ips	12 ips
Record quality		Record time in days and hours											
Best	Frame	5d 11h	9d 14h	17d 11h	28d 5h	10d 22h	19d 4h	34d 22h	56d 11h	21d 20h	38d 9h	69d 21h	112d 22h
	CIF	6d 12h	11d 10h	20d 20h	33d 15h	13d 0h	22d 21h	41d 16h	67d 7h	26d 1h	45d 18h	83d 8h	134d 15h
High	Frame	6d 21h	12d 3h	22d 2h	35d 17h	13d 19h	24d 6h	44d 5h	71d 10h	27d 15h	48d 13h	88d 10h	142d 21h
	CIF	9d 4h	16d 3h	29d 8h	47d 10h	18d 8h	32d 6h	58d 17h	94d 21h	36d 17h	64d 12h	117d 11h	189d 19h
Normal	Frame	9d 1h	15d 22h	29d 1h	46d 22h	18d 3h	31d 21h	58d 2h	93d 20h	36d 7h	63d 19h	116d 4h	187d 17h
	CIF	12d 1h	21d 5h	38d 15h	62d 10h	24d 3h	42d 10h	77d 7h	124d 21h	48d 7h	84d 21h	154d 14h	249d 18h
Basic	Frame	14d 16h	25d 18h	46d 22h	75d 20h	29d 8h	51d 13h	93d 21h	151d 16h	58d 16h	103d 2h	187d 19h	303d 9h
	CIF	16d 17h	29d 9h	53d 13h	86d 12h	33d 11h	58d 19h	107d 2h	173d 0h	66d 22h	117d 14h	214d 4h	346d 1h

### Recording times for 1000GB (250GB on board + 3 x 250GB in external array)

Record speeds		16 channel				8 channel				4 channel			
720 x 576	Frame	100 ips	50 ips	25 ips	12.5 ips	50 ips	25 ips	12.5 ips	6 ips	25 ips	12.5 ips	6 ips	3 ips
360 x 288	CIF	400 ips	200 ips	100 ips	50 ips	200 ips	100 ips	50 ips	25 ips	100 ips	50 ips	25 ips	12 ips
Record quality		Record time in days and hours											
Best	Frame	10d 22h	19d 4h	34d 22h	56d 11h	21d 20h	38d 9h	69d 21h	112d 22h	43d 16h	76d 18h	139d 19h	225d 20h
	CIF	13d 0h	22d 21h	41d 16h	67d 7h	26d 1h	45d 18h	83d 8h	134d 15h	52d 2h	91d 12h	166d 16h	269d 6h
High	Frame	13d 8h	24d 6h	44d 5h	71d 10h	27d 15h	48d 13h	88d 10h	142d 21h	55d 6h	97d 3h	176d 21h	285d 19h
	CIF	18d 8h	32d 6h	58d 17h	94d 21h	36d 17h	64d 12h	117d 11h	189d 19h	73d 10h	129d 0h	234d 22h	379d 14h
Normal	Frame	18d 3h	31d 21h	58d 2h	93d 20h	36d 7h	63d 19h	116d 4h	187d 17h	72d 14h	127d 14h	232d 9h	375d 10h
	CIF	24d 3h	42d 10h	77d 7h	124d 21h	48d 7h	84d 21h	154d 14h	249d 18h	96d 14h	169d 18h	309d 4h	499d 12h
Basic	Frame	29d 8h	51d 13h	93d 21h	151d 16h	58d 16h	103d 2h	187d 19h	303d 9h	117d 8h	206d 5h	375d 14h	606d 19h
	CIF	33d 11h	58d 19h	107d 2h	173d 0h	66d 22h	117d 14h	214d 4h	346d 1h	133d 20h	235d 4h	428d 9h	692d 2h



**10BaseT** - Ethernet specification for unshielded twisted pair cable (category5) transmits signals at 10 Mbps (megabits per second) with a distance limit of 100 meters per segment.

**100BaseT** - Ethernet specification for unshielded twisted pair cabling that is used to transmit data at 100 Mbps (megabits per second) with a distance limit of 100 meters per segment.

**1000BaseTX** - Ethernet specification for unshielded twisted pair cabling that is used to transmit data at 1 Gbps (gigabits per second) with a distance limitation of 220 meters per segment.

**Asynchronous Transfer Mode (ATM)** - A network protocol that transmits data at a speed of 155 Mbps and higher. It is most often used to interconnect two or more local area networks.

**Backbone** - A cable to which multiple nodes or workstations are attached.

**Bit** - Binary digit in the binary numbering system. Its value can be 0 or 1. In an 8-bit character scheme, it takes 8 bits to make a byte (character) of data.

**Bridge** - Devices that connect and pass packets between two network segments that use the same communications protocol.

**Client/Server** - A networking system in which one or more file servers (Server) provide services; such as network management, application and centralised data storage for workstations (Clients).

**CSMA/CA** - Carrier Sense Multiple Access Collision Avoidance is a network access method in which each device signals its intent to transmit before it actually does so. This prevents other devices from sending information, thus preventing collisions from occurring between signals from two or more devices. This is the access method used by LocalTalk.

**CSMA/CD** - Carrier Sense Multiple Access Collision Detection is a network access method in which devices that are ready to transmit data first check the channel for a carrier. If no carrier is sensed, a device can transmit. If two devices transmit at once, a collision occurs and each computer backs off and waits a random amount of time before attempting to retransmit. This is the access method used by Ethernet.

**End User** - Refers to the human executing applications on the workstation.

**Ethernet** - A network protocol invented by Xerox Corporation and developed jointly by Xerox, Intel and Digital Equipment Corporation. Ethernet networks use CSMA/CD and run over a variety of cable types at 10 Mbps (megabits per second).

**Fast Ethernet** - A new Ethernet standard that supports 100 Mbps using category 5 twisted pair or fiber optic cable.

**Fiber Distributed Data Interface (FDDI)** - A network protocol that is used primarily to interconnect two or more local area networks, often over large distances.

**File Server** - A computer connected to the network that contains primary files/applications and shares them as requested with the other computers on the network. If the file server is dedicated for that purpose only, it is connected to a client/server network. An example of a client/server network is Novell Netware. All the computers connected to a peer-to-peer network are capable of being the file server. Two examples of peer-to-peer networks are LANtastic and Windows for Workgroups.

**Gigabit Ethernet** - An Ethernet protocol that raises the transmission rates to 1 Gbps (gigabits per second). It is primarily used for a high speed backbone of a network.

**Gigabyte (Gb)** - One billion bytes of information. One thousand megabytes.

**Hub** - A hardware device that contains multiple independent but connected modules of network and internetwork equipment. Hubs can be active (where they repeat signals sent through them) or passive (where they do not repeat but merely split signals sent through them).

**Intranet** - Network internal to an organization that uses Internet protocols.

**Internet** - A global network of networks used to exchange information using the TCP/IP protocol. It allows for electronic mail and the accessing and retrieval of information from remote sources.

**LAN (Local Area Network)** - A network connecting computers in a relatively small area such as a building.

**IP Camera** A CCTV Camera that can be connected directly into a TCP/IP network

**MAN (Metropolitan Area Network)** - A network connecting computers over a large geographical area, such as a city or school district.

**Modem (Modulator/Demodulator)** - Devices that convert digital and analog signals. Modems allow computer data (digital) to be transmitted over voice-grade telephone lines (analog).

**Multiplexer** - A device that allows multiple logical signals to be transmitted simultaneously across a single physical channel.

**Network Interface Card (NIC)** - A board that provides network communication capabilities to and from a computer.

**Network Operating System (NOS)** - Operating system designed to pass information and communicate between more than one computer. Examples include AppleShare, Novell NetWare, and Windows NT Server.

**Node** - End point of a network connection. Nodes include any device attached to a network such as IP Cameras, Video Servers or workstations.

**Node Devices** - Any computer or peripheral that is connected to the network.

**Physical Topology** - The physical layout of the network; how the cables are arranged; and how the computers are connected.

**Point-to-Point** - A direct link between two objects in a network.

**Ports** - A connection point for a cable.

**Protocol** - A formal description of a set of rules and conventions that govern how devices on a network exchange information.

**RAID (Redundant Array of Inexpensive Disks)** - A configuration of multiple disks designed to preserve data after a disk casualty.

**RAM (Random Access Memory)** - The working memory of a computer where data and programs are temporarily stored. RAM only holds information when the computer is on.

**RJ-45** - Standard connectors used for unshielded twisted-pair cable.

**Router** - A device that routes information between interconnected networks. It can select the best path to route a message, as well as translate information from one network to another. It is similar to a super intelligent bridge.

**SCSI (Small Computer Serial Interface)** - An interface controller that allows several peripherals to be connected to the same port on a computer.

**Segment** - Refers to a section of cable on a network. In Ethernet networks, two types of segments are defined. A populated or trunk segment is a network cable that has one or more nodes attached to it. A link segment is a cable that connects a computer to an interconnecting device, such as a repeater or concentrator, or connects a interconnecting device to another interconnecting device.

**Speed of Data Transfer** - The rate at which information travels through a network, usually measured in megabits per second.

**Star Topology** - LAN topology in which each node on a network is connected directly to a central network hub or concentrator.

**Terminator** - A device that provides electrical resistance at the end of a transmission line. Its function is to absorb signals on the line, thereby keeping them from bouncing back and being received again by the network.

**Topology** - There are two types of topology: physical and logical. The physical topology of a network refers to the configuration of cables, computers, and other peripherals. Logical topology is the method used to pass the information between workstations. Issues involving logical topologies are discussed on the Protocol chapter

**Transceiver (Transmitter/Receiver)** - A Device that receives and sends signals over a medium. In networks, it is generally used to allow for the connection between two different types of cable connectors, such as AUI and RJ-45.

**Twisted Pair** - Network cabling that consists of four pairs of wires that are manufactured with the wires twisted to certain specifications. Available in shielded and unshielded versions.

**USB (Universal Serial Bus) Port** - A hardware interface for low-speed peripherals such as the keyboard, mouse, joystick, scanner, printer, and telephony devices.

**Video Server** A device that can convert a standard analogue signal from a traditional CCTV camera to and IP signal that can be connect to your TCP/IP network

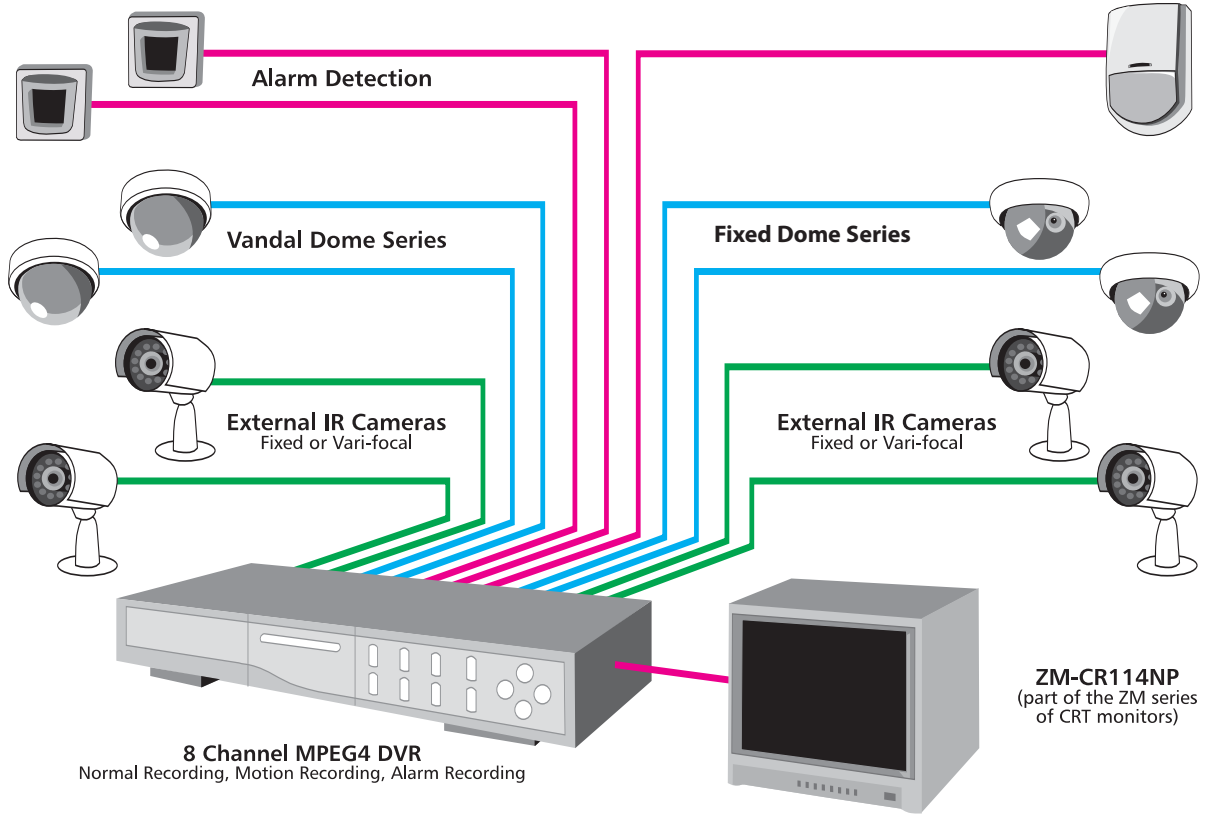
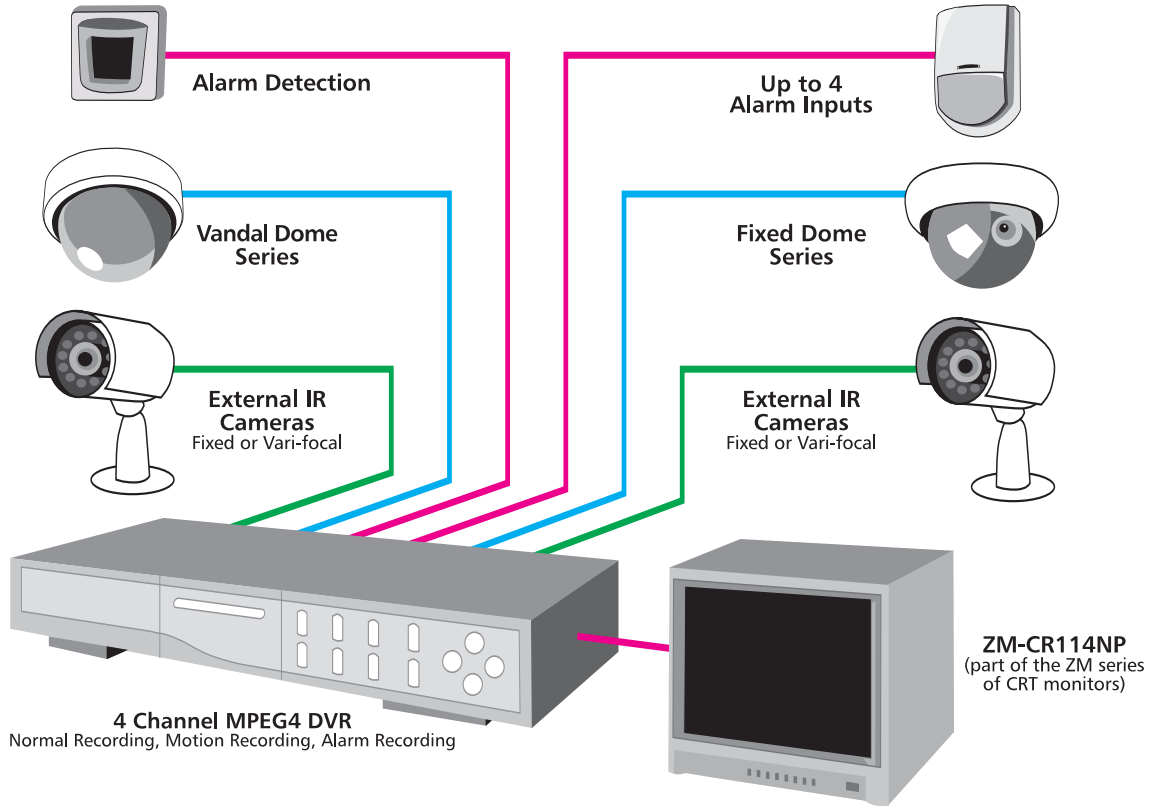
**WAN (Wide Area Network)** - A network connecting computers within very large areas, such as states, countries, and the world.

**Workgroup** - A collection of workstations and servers on a LAN that are designated to communicate and exchange data with one another.

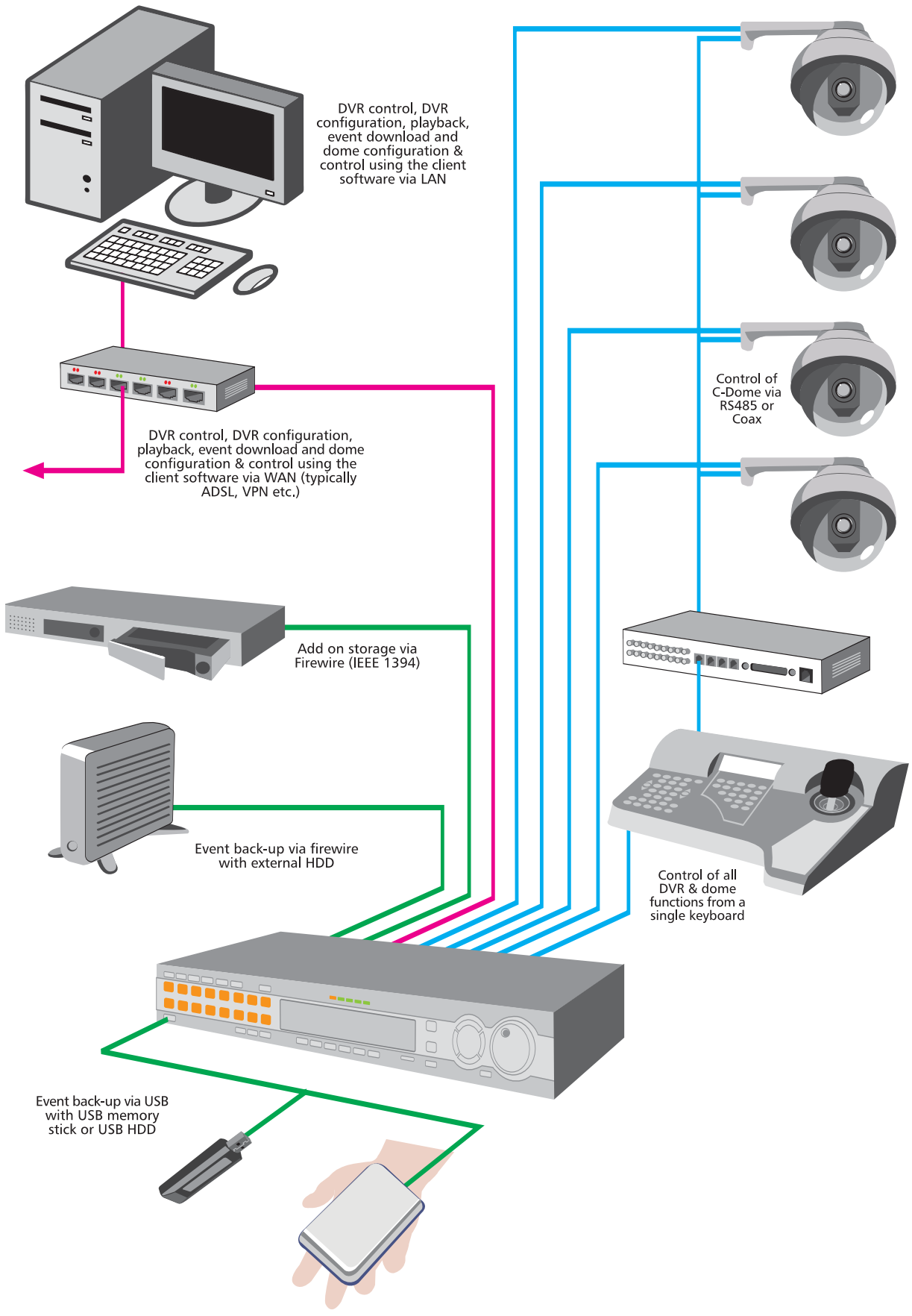
**Workstation** - A computer connected to a network at which users interact with software stored on the network.



# SIMPLE STAND ALONE SYSTEMS



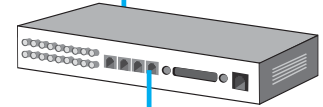
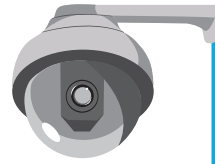
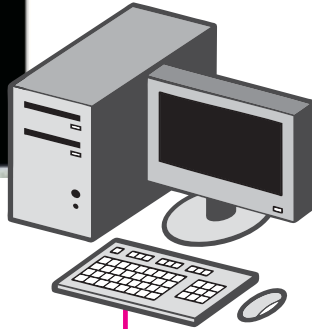
# 9/16 CHANNEL EMBEDDED DVR SYSTEM



# ASSOCIATED SYSTEM DEVICES



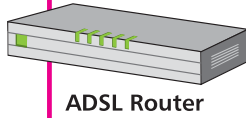
PC running Internet Explorer allowing live, playback and PTZ control of the DVR via LAN or WAN.



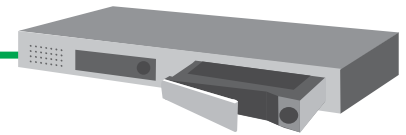
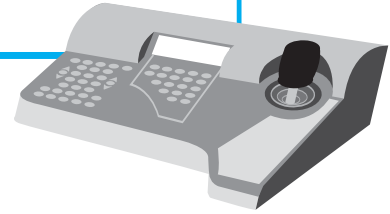
C-DKBD & C-D16M2 providing remote control of the DVR and RS485 or COAX control of the C-dome series



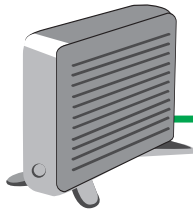
PC running client software allowing live, playback, PTZ control, programming & event archive of the DVR via LAN or WAN.



ADSL Router



ZR-DH-4Bay External storage devices, either 4 or 12 bay, can be added giving max. storage capability of up to 24TB.



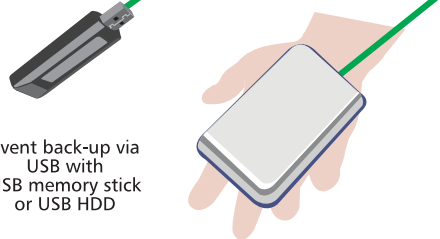
Event back-up via firewire with external HD



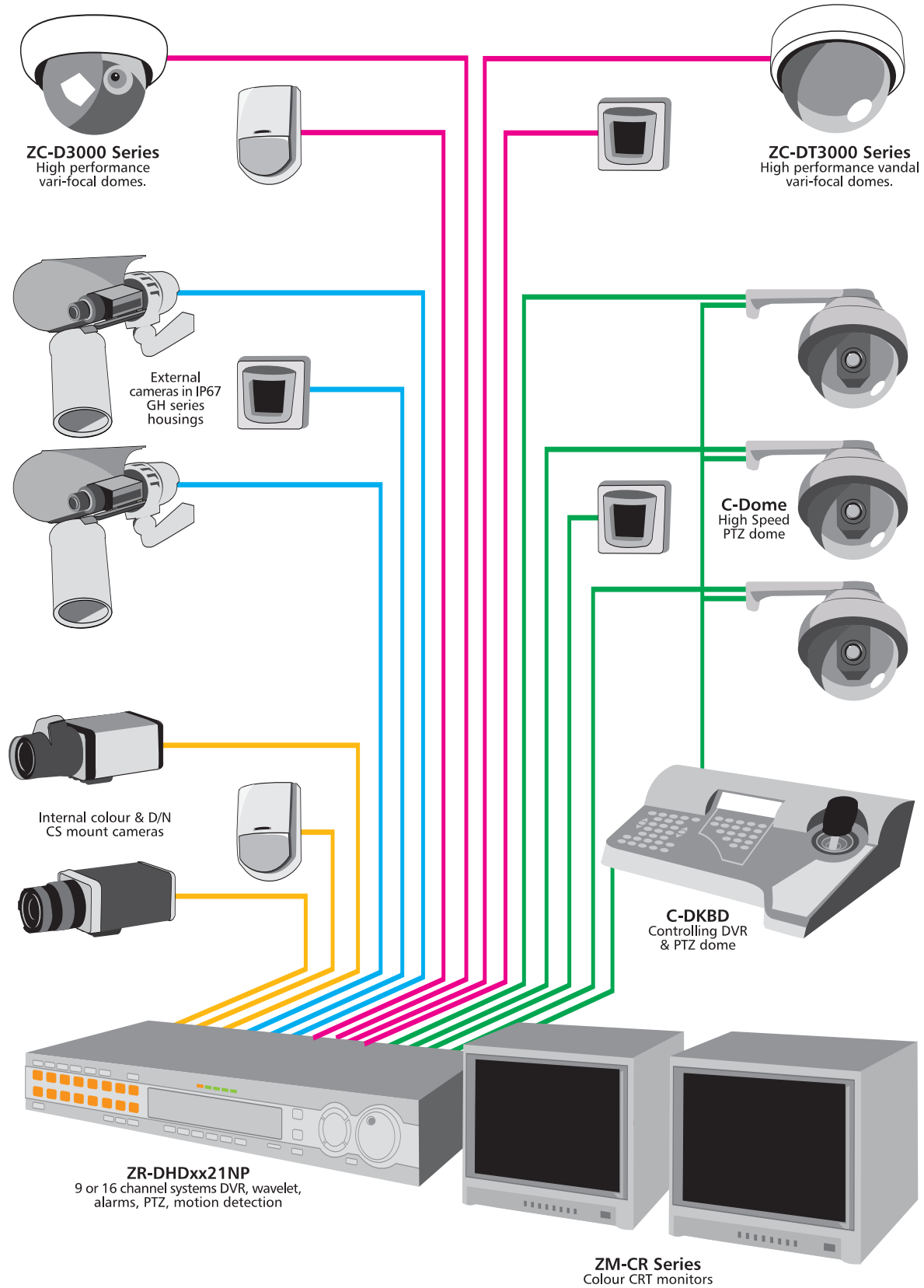
P9125 - 1KVA to 6KVA Online series of UPS, stabilising line voltage, line filtering and protecting the DVR and recorded data from power loss.



Event back-up via USB with USB memory stick or USB HDD

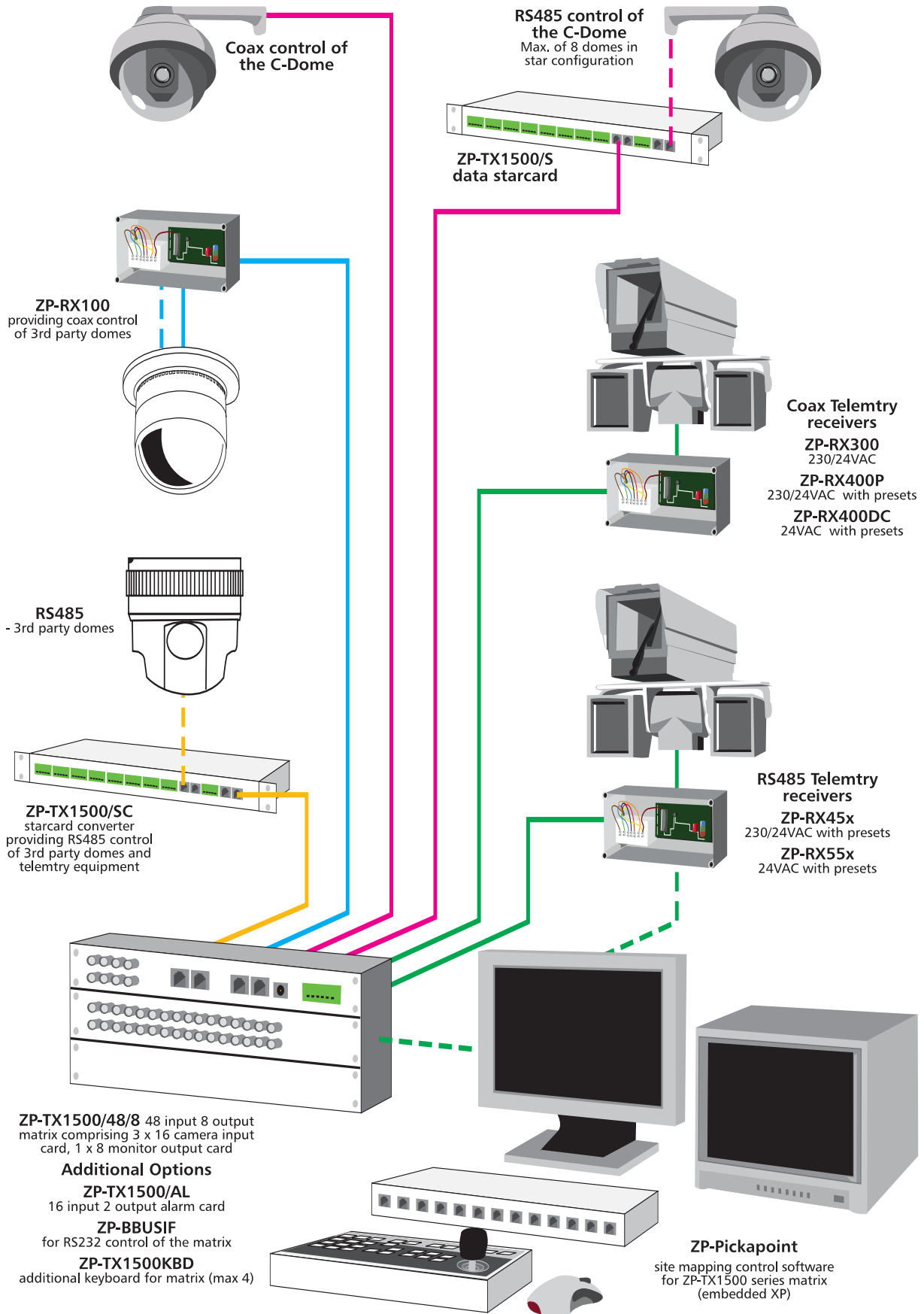


# 9 CHANNEL SYSTEMS DVR WITH PTZ DOME CONTROL AND ALARM INPUTS

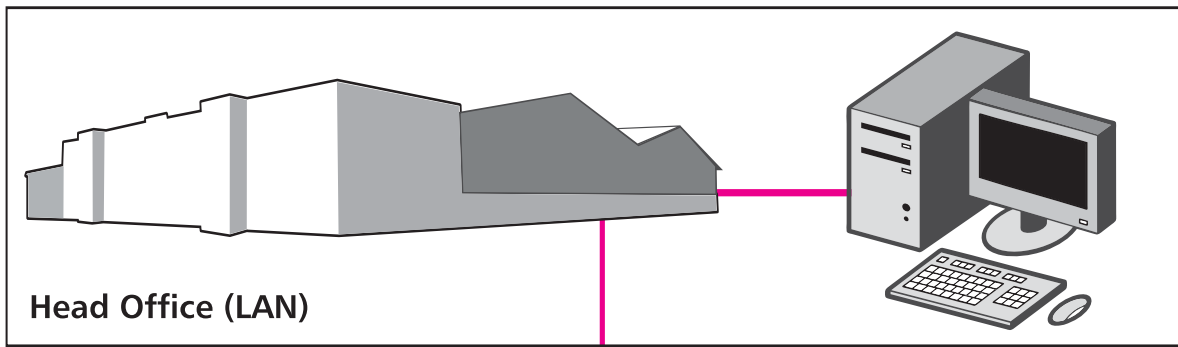




# MATRIX SYSTEM

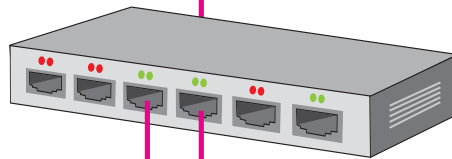


# IP TRANSMISSION

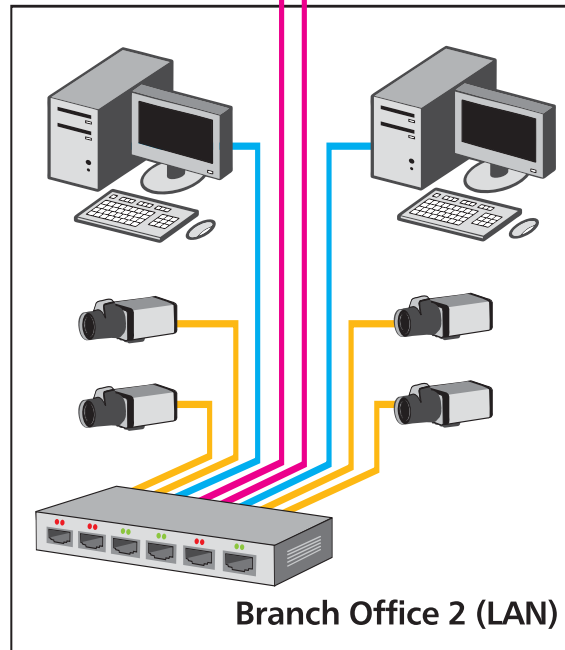
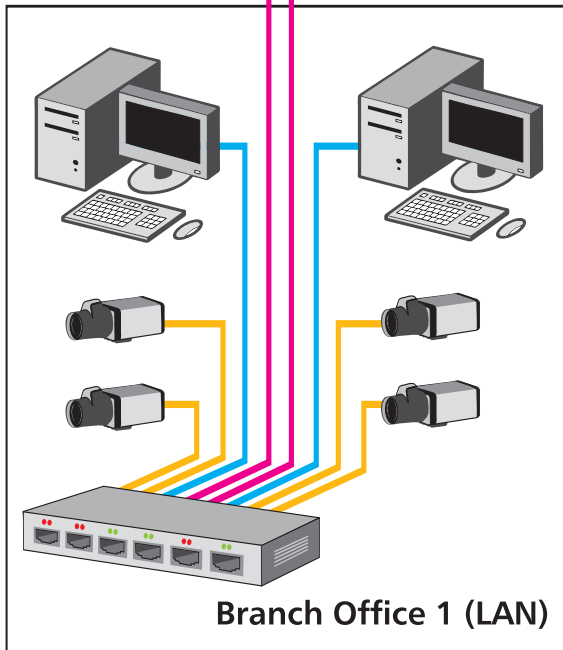


## Router / Firewall / NAT / Gateway (WAN)

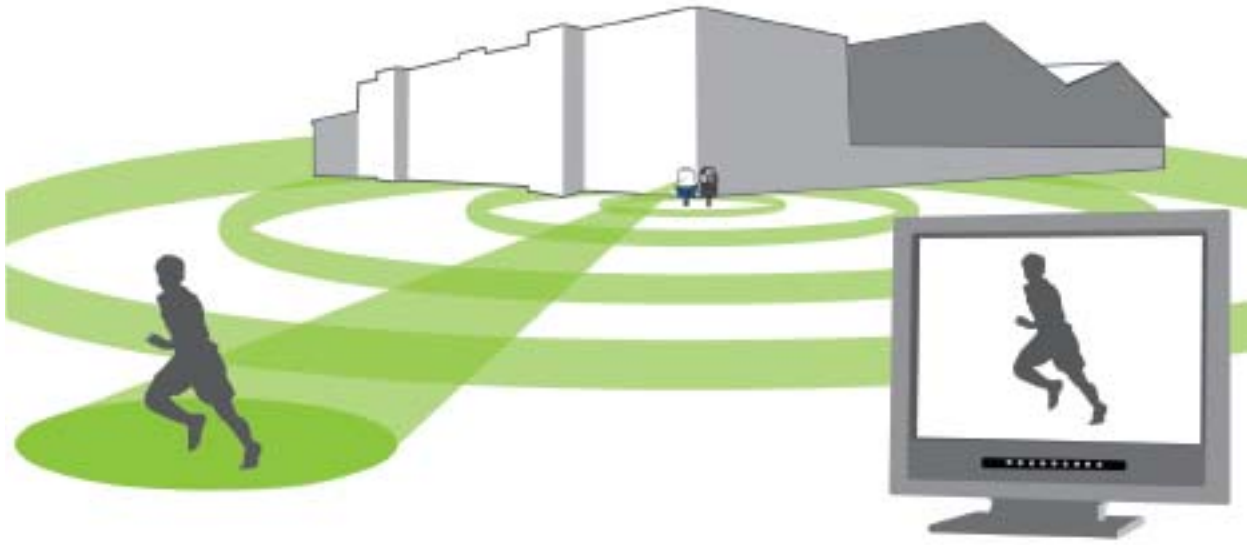
The router has two IP addresses. One external address is set by the ISP and is sometimes known as the internet or WAN address. The internal address is part of your LAN addressing scheme, for example, 192.169.0.1



ISP Assigned Fixed IP Address

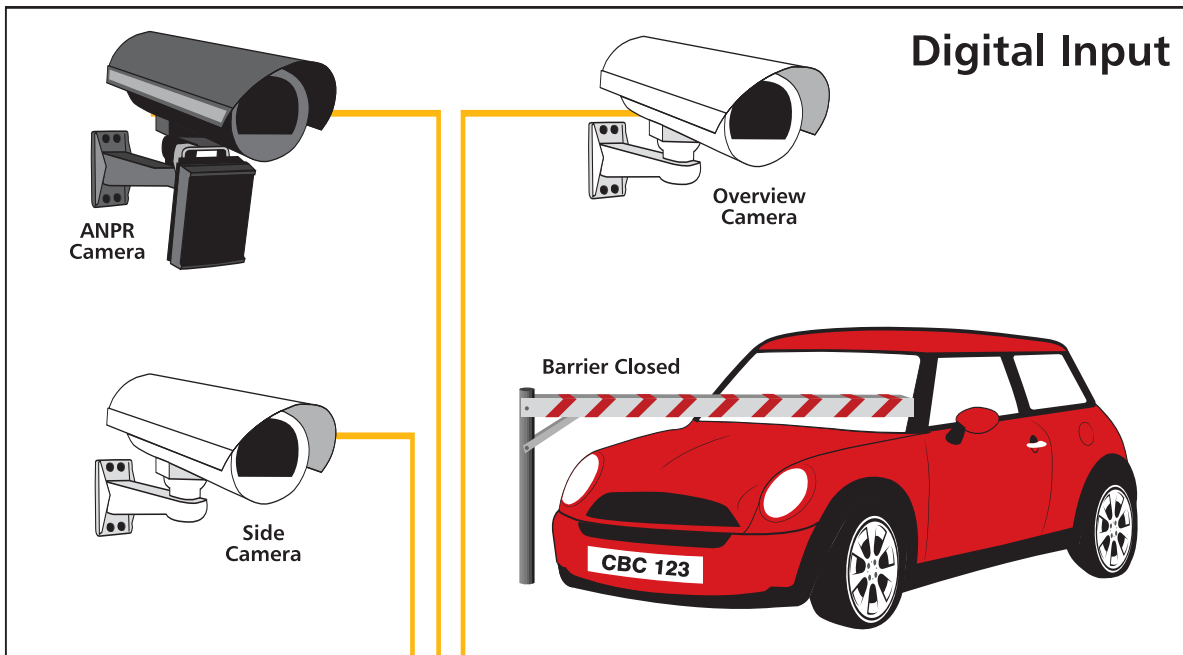


# RADAR DETECTION ILLUSTRATION

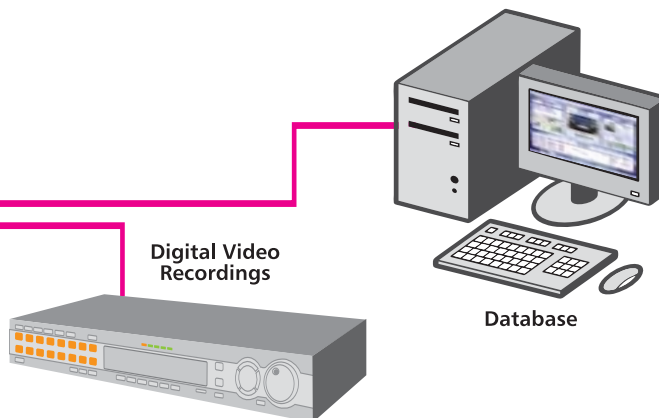


# ROADSTAR AUTO NUMBER PLATE CAPTURE SYSTEM

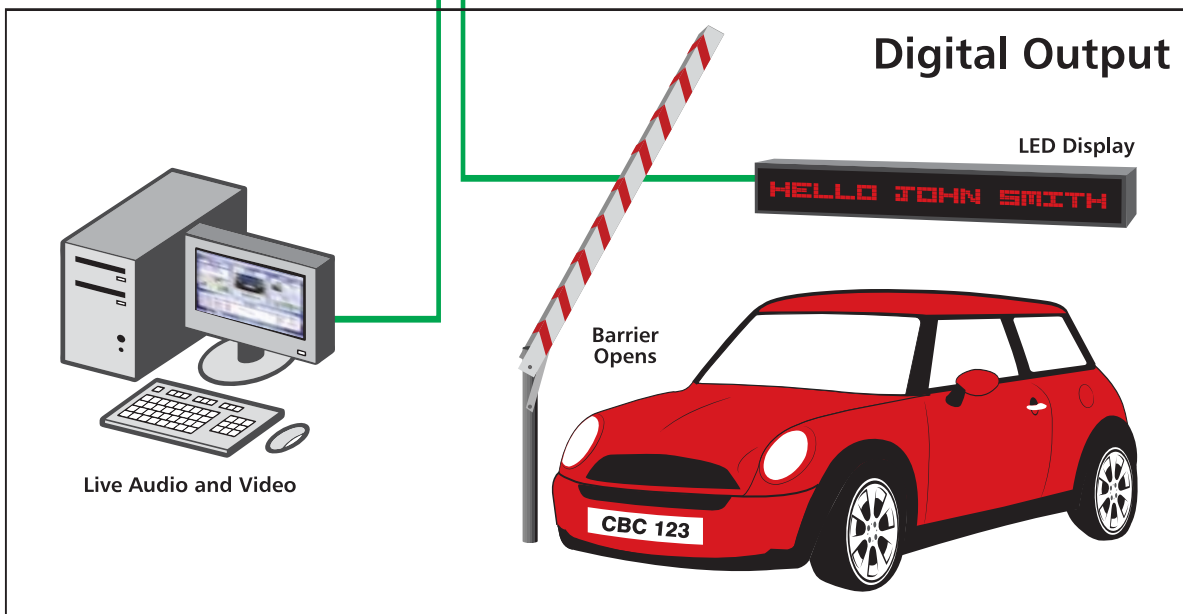
## Before Entry



**Ganz Roadstar ANPR System**



## On Entry



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| Lenses | Cameras | Hardware | Control Room | IP Transmission | Mobile | Comms | Rapid Deployment | Radar Detection | System Accessories | Technical |



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C-D1i-MC .....	41	D-PLEX 16 ECO .....	70	M5018-MP .....	6
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C-D1i-WB .....	41	EX1.5CS .....	10, 103	MDC-60-III .....	19
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C-DN1X-PM .....	41	GFYHW702P3Z .....	33	MISW 12/14 .....	46
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C-DVH-39 .....	18	GH-B12/24 .....	53	MM212 series .....	20
C-DVNH-39 .....	18	GH-CM .....	53	MMH212 series .....	20
C-DVRB .....	105	GH-FWC12/24 .....	50	MTC-36P .....	20
CEM-09A/12A/15A/20A .....	79	GH-FWC230 .....	50	MTC-EX39V .....	22
C-GLI .....	105	GHNH2583Z .....	32	MTC-EX4 .....	22
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Lenses | Cameras | Hardware | Control Room | IP Transmission | Mobile | Comms | Rapid Deployment | Radar Detection | System Accessories | Technical

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# TERMS & CONDITIONS

## 1. Application

These conditions apply to all sales of goods by CBC (Europe) Ltd., ("CBC") to any purchaser ("the Buyer") and shall apply in place of and prevail over any terms and or conditions contained or referred to in the Buyer's order or in correspondence or elsewhere or implied by trade custom practice or course of dealing unless specifically agreed to in writing by CBC and any purported provisions to be contrary are hereby excluded or extinguished.

## 2. Quotations

A quotation by CBC does not constitute an offer and CBC reserves the right to withdraw or revise such quotations at any time prior to its acceptance of the Buyer's order.

## 3. Prices

Prices quoted are exclusive of Value Added Tax. Suggested Retail Prices (SRP) on the current price list are provided only as a guide to assist Dealers. Prices charged shall be those ruling at date of invoice. Quantity rates shall apply only to each individual order placed for one delivery. Successive orders cannot be added to gain improved quantity rates, unless otherwise agreed. CBC shall have the right at any time to withdraw any discount from its normal prices and/or to revise prices to take into account increases in costs.

## 4. Delivery

(a) Delivery dates mentioned in any quotation acknowledgement of order or elsewhere are approximate only and not of any contractual effect and CBC shall not be under any liability to the Buyer in respect of any failure to deliver on a particular date or dates.

(b) Delivery shall be made by the method of CBC choice as stated on the face of CBC's quotations. CBC may charge for delivery other than at its premises.

(c) The Buyer shall inspect the goods on delivery for any obvious damage or shortage.

(d) If the Buyer refuses or fails to take delivery of the goods tendered in accordance with the contract or fails to take any action necessary on its part for delivery and/or shipment of the goods, CBC shall be entitled to terminate the contract with immediate effect, to dispose of the goods as CBC determines, and to recover from the Buyer any loss and additional costs incurred as a result of such refusal or failure.

(e) Unless otherwise expressly agreed CBC may effect delivery in one or more installments. Where delivery is effected by installment, each installment shall be treated as a separate contract.

## 5. Payment

All invoices are strictly net and are payable in full by the due date as shown on the invoice. Any extension of credit allowed to the Buyer may be charged or withdrawn at any time. Interest on overdue amounts shall be payable at the rate of [3]% over Barclays Bank PLC base rate to run from the due date for payment until receipt of the full amount.

## 6. Title of Goods

All goods are supplied to the Buyer by CBC on the following terms:

(a) until CBC has been paid in full for goods contained in the order and any other sale contract between CBC and the Buyer the products comprised in the order shall remain CBC's sole property as legal and equitable owner (although the risk therein shall pass to the Buyer immediately upon delivery of the goods).

(b) until such payment as aforesaid the Buyer shall hold the goods solely as bailee for CBC and in fiduciary capacity and shall keep them clearly identified as the property of CBC.

(c) until such payment as aforesaid CBC reserves the right to repossess re-sell or trace the products at any time from the Buyer. CBC its servants and agents are hereby granted an irrevocable right and license to enter the Buyer's premises during normal business hours. This right shall continue to subsist notwithstanding the termination of the contract for any reason.

(d) subject to the terms of this contract, until payment as aforesaid the Buyer is licensed by CBC to process the goods in fashion as it may wish and/or to incorporate them in or with any other product or products subject to the express condition that the new product or products or any other chattel whatsoever containing any part of the said goods shall become the sole and exclusive property of CBC and shall be separately stored and marked so as to be identifiable as being made from or with the goods which are CBC's property.

(e) until payment as aforesaid should the Buyer have passed the product to a third party (or have incorporated them in work for a third party) this will be deemed to have been done as CBC's agents only and any sums received by the Buyer in respect of such products or such work shall be held in trust for CBC until all sums due to CBC are discharged.

(f) all costs occasioned in the recovery of product pursuant to this Condition shall be paid by the Buyer.

## 7. Guarantee

Where the products are covered by guarantee, the terms of such guarantee shall be deemed to be part of these conditions. CBC's guarantee applies only to the first customer purchase from CBC or its dealers. In particular but without prejudice to the general provisions of this condition no responsibility is assumed for consequential damage whether under such guarantee express or implied.

## 8. Returns

No returns are permitted without CBC's prior consent, in the case of CBC's accepting the return in writing of the products, the products must be returned to CBC within fourteen (14) days of invoice date, stating relevant invoice number. Re-stocking charge of 10% of the invoice value of the product will apply but a higher rate will apply if re-packing or re-cartoning is necessary.

## 9. Claims

(a) CBC shall not be liable to the Buyer:

(i) for shortages in quantity delivered or non-delivery unless the Buyer notifies CBC of any claim for short or non delivery within (5 or 10) days of the invoice date respectively.

(ii) for damage to or loss of the goods or any part thereof in transit (where the goods are carried by CBC's own transport or by a carrier on behalf of CBC) unless the Buyer shall notify CBC any such claim within five days of invoice date of the goods or the scheduled date of delivery whichever shall be the earlier.

(iii) for defects in the goods caused by fair wear and tear, abnormal conditions of storage or use or any act neglect of default of the Buyer or any third party.

(iv) for other defects in the goods unless notified to CBC within (1) month of receipt of the goods by the Buyer or where the defect would not be apparent on reasonable inspection within (12) months of delivery.

(b) (i) where liability is accepted by CBC under paragraph (A) above CBC's only obligation shall be at its option to make good any shortage or non delivery and/or as appropriate to replace or repair any goods found to be damaged or defective and/or to refund the costs of such goods to the Buyer.

(ii) CBC's aggregate liability to the Buyer whether for negligence, breach of contract, misrepresentation or otherwise shall in no circumstances exceed (the cost of the defective, damaged or undelivered goods which give rise to such liability as determined by net price invoiced to the Buyer) in respect of any occurrence or series of occurrences.

(c) If the Buyer fails to give notice or to report in accordance with this condition or shall deal with the goods in any manner or if there shall be any conduct by the Buyer inconsistent with the rejection of the goods then the goods of the quality and quantity specified in the contract shall be deemed to have been delivered to the Buyer.

(d) Subject to the foregoing all conditions, warranties and representations expressed or implied by statute common law or otherwise in relation to the goods are hereby excluded and CBC shall be under no liability to the Buyer for any loss, damage or injury direct or indirect resulting from defective material faulty workmanship or otherwise howsoever arising or whether or not caused by the negligence of CBC its employees or agents PROVIDED THAT CBC shall accept liability for death or personal injury caused by its negligence.

(e) CBC's prices are determined on the basis of the limits of liability set out in this condition. The Buyer may by written notice to CBC request it to agree a higher limit of liability provided insurance cover can be obtained therefore. CBC shall effect insurance up to such limit and the Buyer shall pay upon demand the amount of any or all premiums. In no case shall the Buyer be entitled to recover from CBC more than the amount received from the insurers.

(f) No claim or rejection properly made pursuant to these conditions of Sale in respect of any part delivery of Products shall be grounds for cancellation of the remainder of the contract or order.

## 10. Right of Cancellation/Insolvency And Default

Should the Buyer fail to meet his obligations or if the Buyer enters into a deed of arrangement or commits an act of bankruptcy or compounds with his creditors or if a receiving order is made against him or if (being a company) an order is made or a resolution is passed for the winding up of the Buyer (otherwise than for the purposes of amalgamation or reconstruction previously approved in writing by CBC) or if a receiver is appointed to any of the Buyer's assets or undertaking or if circumstances arise which entitle the court or a creditor to appoint a receiver or manager or which entitles the court to make a winding up order or if the Buyer takes or suffers any similar analogous action in consequence of debt or commits any breach of this or any other contract between CBC and the Buyer, CBC may without prejudice to any of its other rights stop any goods in transit and/or suspend further deliveries and/or by notice in writing to the Buyer terminate the contract.

## 11. Waiver

Failure by CBC to exercise or enforce any rights hereunder shall not be deemed to be a waiver of any such right nor operate so as to bar the exercise or enforcement thereof at any time or times thereafter.

## 12. Notices

Any notice hereunder shall be deemed to have been duly given if sent by pre-paid first class post, telex, fax or telegraph to the party concerned at its last known address. Notices sent first class post shall be deemed to have been given (7) days after despatch and notices sent by telex, fax or telegraph shall be deemed to have been given on the date of despatch.

## 13. Law of Contract

All contracts between the Buyer and CBC shall be governed and construed in accordance with the laws of England and the parties hereby submit to the jurisdiction of the English Courts.