CAM241, 243 & 245

Handbook & Instructions

Stylish **Hi-Res NiteDevil™** Traditional Camera with Wide Dynamic Range & On Screen Display

XCAM241

Introduction

- 700TVL Col / 800TVL B&W
- Wide Dynamic Range
- Choice of 12V, Dual Voltage, 240V AC
- 0.00019 Lux (Sens Up)
- Mirror / Privacy Function
- Motion Detect
- Lens Options Available
- Up the Co-Ax and Menu Control
- True Day Night

A stylish high performance NiteDevil camera in a traditional style features up the Co-ax telemetry, True Day-Night, Wide Dynamic Range and an OSD Menu for mirror, privacy & motion detect functions.

Offering superb results even at night, this camera can recognize a car number plate using its built-in high sensitivity backlight compensation.

Powering The Camera

CAM241 - 12V DC

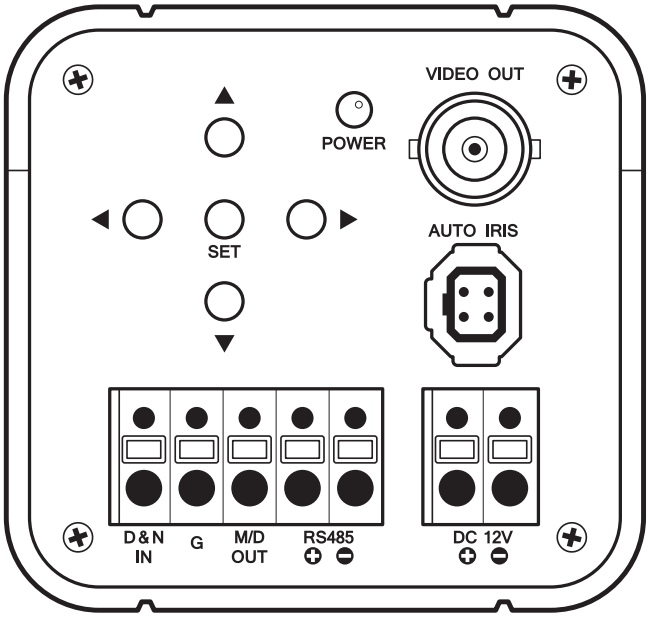
The CAM241 requires a 12V DC regulated power supply providing a minimum of 140mA per camera (200mA recommended). you should always allow extra headroom to be on the safe side, especially taking into account any extra load created by adding an auto-iris lens (typically 10mA). When connecting to any 12V DC power supply always use a regulated supply.

The camera has a terminal connection which is polarity sensitive, so ensure that the positive and negative connections are correct. Incorrectly connecting the power may damage the camera.

Powering The Camera

If you're PSU has a 2.1mm DC plug the easiest way to connect the power is with one of our Zulug converters. Our **CON371** connectors have a 2.1mm DC socket input with a terminal strip output. Without a CON371 connector you will need to cut the 2.1mm jack off your PSU and use the bare wires. The 12V positive is the wire that was connected to the centre pin of the jack plug and the 0V wire was connected to the outer case.

We offer no technical support or warranty with the camera if you use a 13.8V intruder alarm PSU.



Model CAM241 12V DC

Powering The Camera

CAM243 - 12V DC/24V AC

The CAM243 is a dual voltage camera allowing connection of 12V DC or a 24V AC power supply. This camera is not polarity sensitive so the positive and negative wires can be connected either way round.

If you choose to use a 12V DC supply, it must be a regulated power supply providing a minimum of 140mA per camera (200mA recommended). It is recommended that you allow headroom per camera to be on the safe side, especially taking into account any extra load created by adding an auto-iris lens (typically 10mA).

Powering The Camera

If you're PSU has a 2.1mm DC plug the easiest way to connect the power is with one of our Zulug converters. Our **CON371** connectors have a 2.1mm DC socket input with a terminal strip output. Without a CON371 connector you will need to cut the 2.1mm jack off your PSU and use the bare wires. The 12V positive is the wire that was connected to the centre pin of the jack plug and the 0V wire was connected to the outer case.

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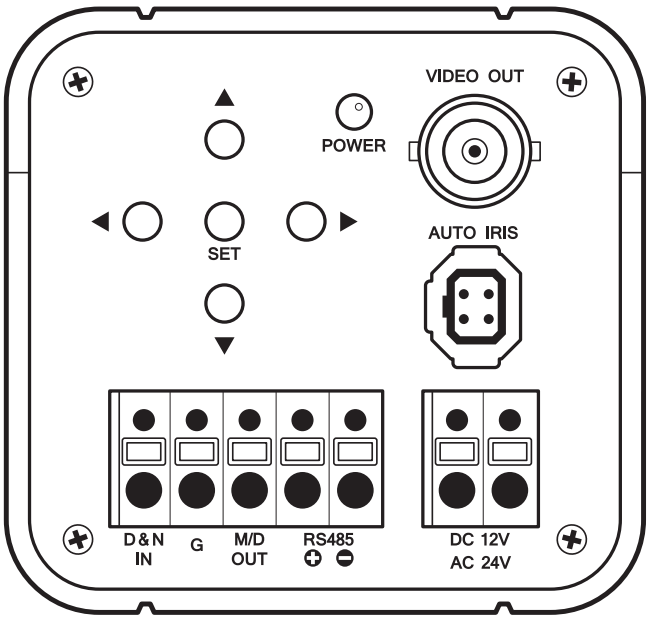
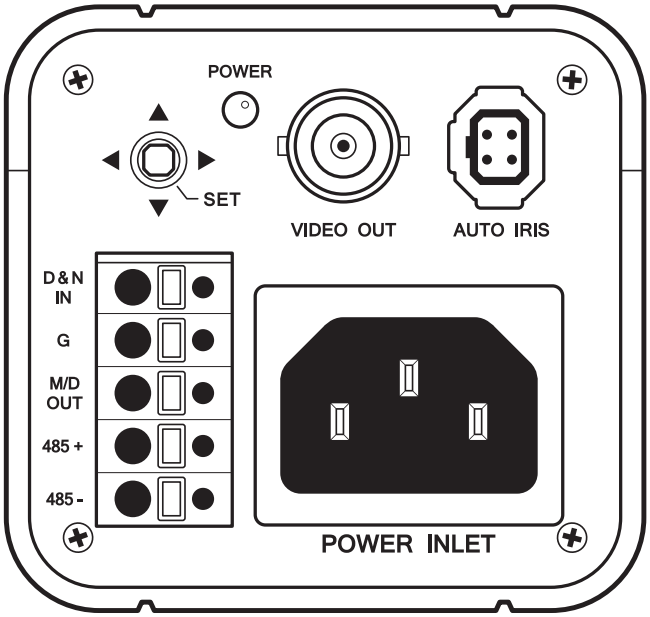


Model CAM243 12V DC/24V AC Dual Voltage

Powering The Camera

CAM245 - 240V AC

The CAM245 is a mains 240V AC controlled camera and an IEC 13 mains power cable is required.

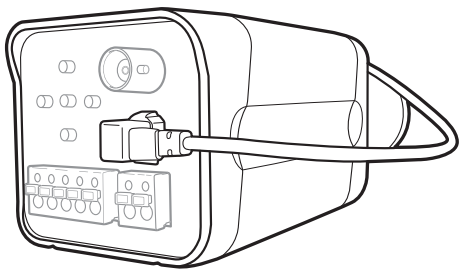


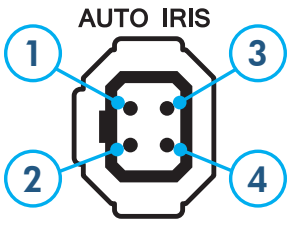
Model CAM245 240V AC

Fitting the Camera Lens

Auto-Iris Direct Drive Connections

Auto Iris type lenses require the 4-pin connector to be attached to the camera. It is important that this connector is wired correctly. If you bought a NiteDevil camera and it's a direct drive lens, this will usually be pre-wired and you can simply plug the lens into the camera.





1. DAMPING-
2. DAMPING+
3. DRIVE
4. GND

C or CS Mount Lenses

Most lenses are available in 2 different mounting options - C mount and CS mount.

CS mount lenses are now the most popular size as they are shorter and more compact than C mount lenses. Most cameras are now manufactured to accept CS mount lenses. Before fitting the lens you need to verify that you are using a CS mount lens with the camera. You can confirm this with your lens supplier or the literature that came with your lens, check the instructions or packaging to see if your lens is a C or a CS mount version.

If your lens is a C mount type you can still fit it to the camera. Please see the on-line Tip 323 at www.nitedevil.com.

Using a CS Mount lens

If you are using a standard CS mount lens you can screw the lens straight into the camera without the need for the C-CS adapter ring (supplied).

Adjusting the inner focus ring

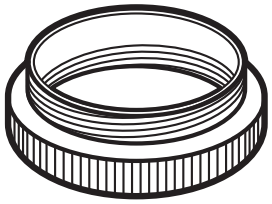
Once you have fitted the lens, if you have a picture on the monitor but cannot correctly focus the lens by the fine focal adjust on the

Fitting the Camera Lens

lens itself, you may need to alter the inner adjusting ring that is screwed into the end of the camera. To do this you will need a small Allen key. This ring enables the lens to either "sit" a little closer or a little further away from the camera to get a sharp focused image when using lenses from different manufacturers.

To adjust the inner focus ring you will need to slacken the ring by loosening the grub screw(s) with an Allen key. This is a trial and error process by moving the ring in or out say ½ turn then locking it again and trying to refocus the lens. It is possible (with common sense!) to work out whether the lens needs to be nearer or further away from the camera by watching for improvements in focus at each attempt.

NOTE If it appears that the lens will never be in focus then it is possible that you are trying to fit a **C-mount** lens on the camera, not a **CS-mount** lens. If this is the case you will have to add the spacer ring to the lens that was provided free with the camera. The spacer ring looks like this:



C-mount to CS-mount spacer ring

Fitting the Camera Lens

Setting Up An Auto Iris Direct Drive Lens For different Light Levels

The brightness setting in the menu determines when the IRIS of the lens opens and closes. It is important to set this correctly as if the brightness level is set too low, you may get satisfactory pictures during the day but at night not enough light can enter the camera giving poor quality pictures. The trick to setting up the brightness level is to set it up in the brightest possible conditions, i.e. midday on a sunny day and keep the IRIS open to its maximum without a too bright picture. This means at night in low light, the IRIS will be open as much as possible and give the best results.

To do this, follow these steps:

With the camera in the brightest light conditions that it will be expected to work,

1. Enter the **LENS** menu and set to **MANUAL**. Then enter EXPOSURE menu, increase to 100% and then reduce level until the picture is okay. Do not adjust further. This will ensure that the iris is set to its widest setting.

2. Return to the **LENS** menu and select **DC**. Then exit the menu. Once you have done the above the lens will restrict the light sufficiently in bright sunlight but open up to its maximum in low light giving the best night time performance.

Further details on the menu setup and operation are covered on pg11-14.

Connecting The Camera

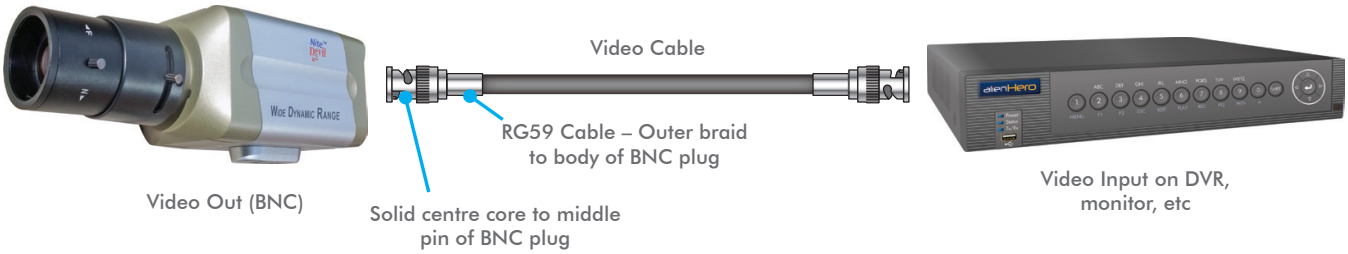
The video out from the camera is provided from the BNC connector located at the rear of the camera. The camera's video signal is carried by a suitable cable (usually RG59 or similar) to the monitor or other video input, ie, of a switcher, quad, DVR etc.

Remember that the Video out from the camera is like any other electrical circuit and requires two wires to complete the circuit. When using a co-ax type cable such as RG59 or similar, the outer braid of the co-ax provides the "0V GROUND" connection and the inner core provides the "Video" connection. A typical connection is shown below:

There are three ways to setup the camera which are covered on the next page.

Thanks to the cameras RS485 and up the co-ax technology, you can setup the camera at the monitor end of the installation. Obviously whilst you are setting up the camera, it does need to be powered!

Alternatively you can change the menu settings using the menu control buttons on the rear of the camera.



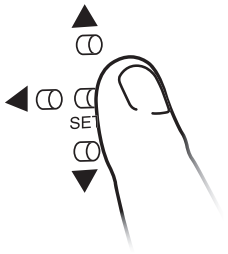
Accessing The Menus

You can access the menus in the camera by three means:

1. **Menu control buttons on the rear of the camera.**
2. **REM088 Up the co-ax telemetry control.** (Optional extra)
3. **RS485 control using a keyboard, DVR, or CCTVMate test monitor.**

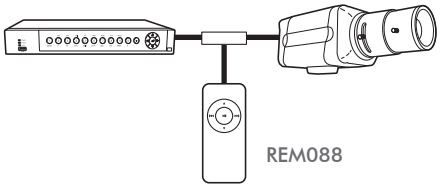
Menu Control Buttons

To access the menus using the Menu control buttons simply press the SET button down and the menu will pop up on the camera's image. Use the arrow keys to navigate through the menus. Selection is made by pressing the set button.



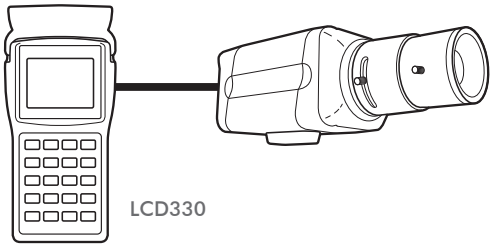
REM088

The REM088 simply connects "in-line" with the camera and the DVR or monitor as shown (Top, right). It's a very convenient way to access the camera's menu system as you can do this after the camera is installed and fine tune the camera whilst sitting comfortably next to the DVR. It sends the control signals through the video co-ax so you don't need any additional cables. REM088 will not work through Baluns or CAT5.



RS485

The CAM240 range also has traditional RS485 Pelco-D control and has two terminals to connect the RS485 control device to. PTZ keyboards, some DVRs or the CCTVMate test monitor all have RS485 control outputs that can control the camera. This method can be useful to adjust cameras remotely that are connected to DVRs.



Main Menu

MAIN MENU	DEFAULT SETTINGS	SUB MENU		
1. LENS	DC		DC / VIDEO / MANUAL	
		DC:	1. BRIGHTNESS: 1 ~ 100 2. IRIS SPEED: 1 ~ 5	3. RETURN
		MANUAL:	1. BRIGHTNESS: 1 ~ 100	2. RETURN
2. EXPOSURE	1. SHUTTER: NTSC 1/60, PAL 1/50		1/50, 60 / AUTO / FLK / MANUAL	
		AUTO:	1. SHUT. MIN: 1/50, 1/60 2. SHUT. MAX: FLK ~ 100000	3. RETURN
		MANUAL:	1. LEVEL: x2 ~ x256 ~ 1/50, 60 ~100000	2. RETURN
	2. AGC: HIGH		OFF (DAY & NIGHT COLOUR) / LOW / MIDDLE / HIGH	
	3. SENSUP: AUTO (x8)		OFF / AUTO	
		AUTO:	1. SENSUP: x2 ~ x256	2. RETURN
3. BACKLIGHT	OFF		OFF / DWDR / BLC / HSBLC	
		DWDR:	1. LOW LEVEL: 0 ~ 5 2. HIGH LEVEL: 0 ~ 15	3. RETURN
		BLC:	1. VALUE: LOW / MIDDLE / HIGH 2. AREA: SINGLE / DOUBLE (POSITION, SIZE)	3. DEFAULT 4. RETURN
		HSBLC:	1. GAIN: 0 ~ 100 2. MODE: NIGHT ONLY / ALL DAY 3. MASK LEVEL: 0 ~ 100	4. DEFAULT 5. M.SKIP AREA: ON / OFF (ON: POSITION, SIZE) 6. RETURN

Main Menu

MAIN MENU	DEFAULT SETTINGS	SUB MENU		
4. WHITE BAL	ATW		ATW / AWB / AWC → SET / MANUAL (BLUE, RED)	
		MANUAL:	1. BLUE: 0 ~ 100 2. RED: 0 ~ 100	3. RETURN
5. DAY & NIGHT	AUTO		AUTO / EXT / B/W / COLOUR	
		AUTO:	1. DELAY: 0 ~ 15 2. D → N (AGC): 16 ~ 255	3. N → D (AGC): 0 ~ 239 4. RETURN
		EXT:	1. DELAY: 0 ~ 15	2. RETURN
		B/W:	1. BURST: ON / OFF 2. IR SMART: ON / OFF	3. IR LED: ON 4. RETURN
6. SMART 3D NR	ON		ON / OFF	
		ON:	1. VALUE: 1~ 200 2. SMART NR: ON / OFF 3. SMART LEVEL: 1 ~ 200	4. SENSITIVITY: 0 ~ 100 5. RETURN
7. F-DNR	OFF		OFF / MANUAL / AUTO	
		MANUAL:	1. LEVEL: 0 ~ 31 2. COLOUR GAIN: 0 ~ 10 3. EDGE GAIN: 0 ~ 10	4. GAMMA: USER ~ 0.05 ~ 1.00 5. RETURN
		AUTO:	1. DETECT LEVEL: 0 ~ 5	2. RETURN
8. FUNCTION	For the Function Menu see opposite page			
9. EXIT	SAVE		SAVE / RESET / CANCEL	

Function Menu

MAIN MENU	DEFAULT SETTINGS	SUB MENU		
1. MOTION	OFF		ON / OFF	
		ON:	1. AREA: 1 ~ 4 2. AREA DISPLAY: ON / OFF (ON: POSITION, SIZE)	3. VALUE: 0 ~ 100 4. MOTION VIEW: ON / OFF 5. RETURN
2. PRIVACY	OFF		ON / OFF	
		ON:	1. AREA: 1 ~ 8 2. AREA DISPLAY: ON / OFF (ON: TOP LEFT, TOP RIGHT, BTM LEFT, BTM RIGHT, POSITION)	3. COLOUR: 0 ~ 15 4. TRANSPAR: 0 ~ 3 5. RETURN
3. D-EFFECT	1. D-ZOOM: OFF		ON / OFF	
		ON:	1. RANGE: x1.0 ~ x32.0 2. PAN: -100 ~ 100	3. TILT: -100 ~ 100 4. RETURN
	2. SMART D-ZOOM: OFF		ON / OFF	
		ON:	1. RANGE: x2.0 ~ x5.0 2. POSITION: POSITION 3. SENSITIVITY: 0 ~ 100	4. TIME: 0 ~ 15 5. RETURN
	3. DIS: OFF		ON / OFF	
	4. FREEZE: OFF		ON / OFF	
	5. MIRROR: OFF		OFF / MIRROR / V-FLIP / ROTATE	
	6. NEG. IMAGE: OFF		ON / OFF	
4. IMAGE ADJ	1. SHARPNESS: 20		0 ~ 31	

Function Menu

MAIN MENU	DEFAULT SETTINGS	SUB MENU		
4. IMAGE ADJ *(cont)*	2. MONITOR: CRT		CRT / LCD	
		CRT	1. PED LEVEL: 0 ~ 63 2. COLOUR GAIN: 0 ~ 255	3. RETURN
		LCD	1. GAMMA: USER ~ 0.05 ~ 1.00 2. PED LEVEL: 0 ~ 63	3. COLOUR GAIN: 0 ~ 255 4. RETURN
	3. LENS SHADING: OFF		ON / OFF	
		ON	1. LEVEL: 0 ~ 60 2. H-CENTER: 0 ~ 255	3. V-CENTER: 0 ~ 255 4. RETURN
	4. DEFECT		1. SENSUP: x4 ~ x128 2. DIFF: 0 ~ 3 3. THRESHOLD: 0 ~ 4	4. START 5. RETURN
5. COMM ADJ	1. CAM TITLE: OFF		ON / OFF	
		ON :	CAM TITLE	
	2. PROTOCOL: PELCO-D		PELCO-D / PELCO-P / SPD-S / DONG YANG / NIC P	
	3. RS485		1. CAM ID: 1 ~ 255 2. ID DISPLAY: ON / OFF	3. BAUD RATE: 2400 ~ 57600 4. RETURN
6. SYNC	INT		INT / L/L	
		L/L:	0 ~ 360	
7. LANGUAGE	ENGLISH		English / Korean / Japanese / Chinese / Russian / French / Spanish / Italian / Portuguese / Dutch / German / Polish / Turkish / Hebrew / Arabic	

The NiteDevil range has a comprehensive menu system that allows you to set up the camera to get the most out of it in different demanding situations, below is a guide to some of the key functions:

Exposure

In the exposure settings you are able to adjust the shutter speed and sensitivity of the CCD to control how much light is collected by the camera. This allows you to configure the camera to achieve the best image possible based on the environment in which it is situated.

Shutter

Controls how long the CCD is exposed to light. A slow shutter (opened for longer periods of time) makes the image brighter but any movement may appear blurred.

The shutter speed can be set to auto so that it automatically adjusts to changes in light levels producing bright images all the time. You can also manually set the shutter speed so that it is tailored to the environment in which it is installed.

AGC (Automatic Gain Control)

AGC automatically adjusts the Video amplitude under various lighting conditions to maintain a bright image. You can choose the level of amplitude however setting it too high could produce a noisy image in low light conditions.

Sens-Up

Sens-up technology makes the camera more sensitive to light giving better quality images in low light situations. You can set by how much the camera's sensitivity to light is intensified.

Backlight

Generally there are 3 backlight modes, WDR (Wide Dynamic Range), BLC (Backlight Compensation) and HSBLC (High Suppression Backlight Compensation). All 3 modes are included on all camera models featured in this book. Each mode is designed to correct the brightness of the image in different environments as described below:

WDR Digitally adjusts the exposure in different parts of the image to maintain optimum levels in both the dark and the bright areas.

The strength of the WDR filter can be set to Low, Middle or High depending on the difference between the bright and dark areas of the image.

BLC Adjusts the exposure of the entire image to properly

expose a subject in the foreground when a bright light source, such as a window, is situated behind it.

You can choose the level of compensation for a bright background between Low, Middle and High as well setting the area of the camera's image for which to compensate.

HSBLC Masks areas of intense light to properly expose other areas of the image. For example a car's headlights would be masked reducing glare making the number plate visible.

When HSBLC is enabled the camera will automatically mask bright areas of the camera's image. Additionally you can manually set the size, position and strength of up to 4 masking areas.

White Balance

White balance is configured so that objects appear a natural colour. There are various ways this can be achieved as explained below.

ATW (Auto Tracking White Balance)

The white balance is continuously adjusted according to the colour temperature of the image.

AWC

Automatically sets the white balance by holding a white object such as a piece of paper or card in-front of the camera and pressing set.

Indoor

Makes allowances for artificial light sources and adjusts the image's colour accordingly.

Outdoor

Makes allowances for natural light sources and adjusts the image's colour accordingly.

Manual

Allows you to manually fine tune the white balance of the image.

Day & Night

In the day & night settings you can control if or when the camera switches between a colour and a black & white image.

NiteDevil technology can still produce a colour image in low light situations, however, in extremely low light situations

switching to a black & white image could produce a better quality image.

Auto

Auto is the most commonly used option. The camera will automatically switch to a black & white image when it detects light levels have dropped below a usable level.

A delay can be set of up to 60 seconds which will instruct the camera to wait for the set length of time before switching. This accommodates for any temporary drops in light such as passing clouds.

The gain can also be telling the camera to increase or decrease the video amplitude when switching from day to night and night to day.

Colour

The camera is forced to permanently produce a colour image. This is great in environments where there is constant light but could result in poor quality images in low light situations. As long as the camera is in colour mode the IR LEDs will not turn on.

B & W (Black & White)

The camera will permanently produce a black & white image. This is only recommended in areas where the light levels are always extremely low.

There are various settings to ensure the camera produces the best B & W image possible. Burst compensates for sudden changes in light levels. IR Smart closes the iris when a subject is close to the camera to darken the image and prevent over saturation. You also have the option to enable and disable the IR LEDs.

Ext (External)

The switch between colour and black & white is controlled by an external trigger such as a photocell.

Again a delay can be set which will instruct the camera to wait for a set length of time before switching. This accommodates for any temporary drops in light

Privacy

Allows the user to "block out" up to 8 areas in the picture so that the installation complies with the Data Protection Act and avoids infringing other people's privacy rights. This could be used to block out windows on a neighbouring property or screens and signs that display sensitive information.

D-Zoom

Enables the user to digitally zoom in on an area of the image if the optical lens is not quite enough. PIP (Picture In Picture) can be enabled so that a small window showing the original size image is overlaid onto the screen when zoomed in.

Smart D-Zoom

Allows the camera to be set up to "automatically" zoom in when it detects movement in a certain area. This can be used to get a closer view of faces or number plates.

The area, sensitivity and level of zoom can all be set.

Movement detected

Automatic Digital Zoom

NR (Noise Reduction)

Noise reduction is the process of applying a filter to the image to reduce noise form the video signal. There are a number of NR options as explained below.

Level

Is a basic filter to reduce small amounts of noise from the foreground of the image.

2DNR

Applies a digital filter to reduce noise from the foreground of the camera's image.

3DNR

Applies a digital filter to reduce noise from both the foreground and the background of the camera's image even in low light conditions.

Setting the level determines how strong a filter is applied and the sensitivity sets the tolerance as to what is considered noise.

Smart NR

Enabled will reduce noise with very little loss of detail.

Other Products To Consider - Accessories

Fixed Iris Lens Kit

4mm, 6mm, 8mm, 12mm & 16mm Fixed Iris Lenses.

Order Code: CCT358

1ch Passive Baluns

Send 1 video signal 100m down CAT5 cable.

Order Code: BAL201 (Pair)

1ch In-line Balun. Send video 100m down CAT5.

Order Code: BAL106 (Pair)

OSD Controller

An easy way to access the camera's menu. Connects "in-line" and sends the control signals through the video co-ax. Comes with a BNC 'T' Piece.

Order Code: REM088

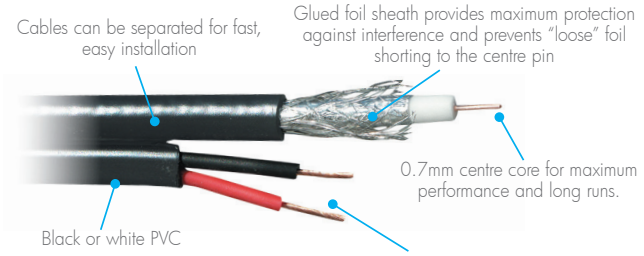
4ch Passive Balun

Send & receive 4 video signals 200m down 1 CAT5 cable.

Order Code: BAL304

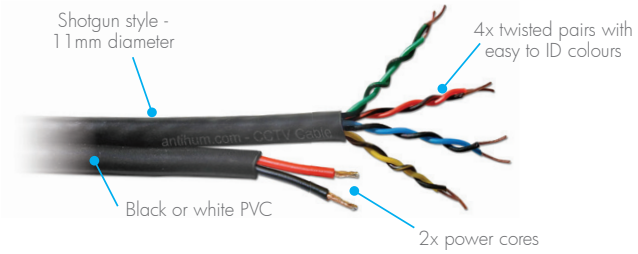
Other Products To Consider - Cable

Antihum RG59+2



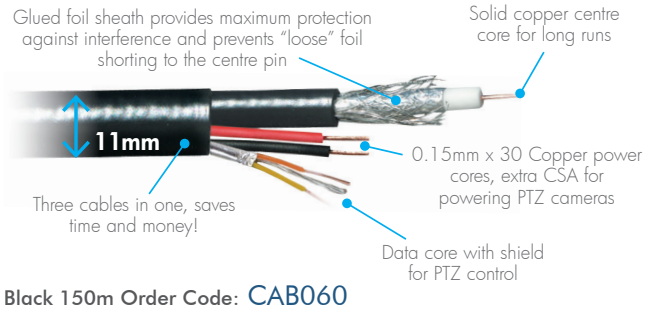
Black 100m Order Code: CAB050
White 100m Order Code: CAB040

Antihum CAT5+2



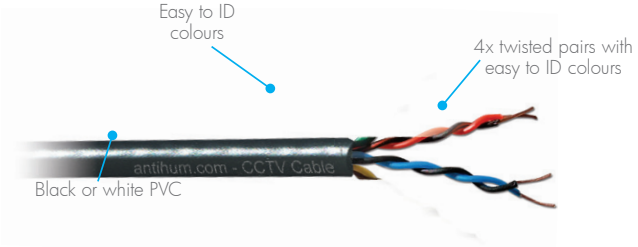
Black 100m Order Code: CAB102
White 100m Order Code: CAB152

Antihum RG59+4



Black 150m Order Code: CAB060

Antihum CAT5



Black 100m Order Code: CAB100
White 100m Order Code: CAB150

Other Products To Consider - AlienDVR

10 Reasons the alienHero DVR is great value for money

alienHero 16ch

1. **Built-in Video Analytics** *(finds evidence instantly!)*
2. **True Realtime D1 Recording** *(even on the 16ch)*
3. **High Definition HDMI Output** *(along with VGA & BNC)*
4. **Easy to Use Interface** *(said to be best in class)*
5. **AutoPort Plug-and-Play** *(for easy internet setup)*
6. **Compact Space Saving Case** *(slim modern design)*
7. **Free Dynamic DNS Setup** *(saves you time)*
8. **Full Alarm Inputs** *(16 on the 16 way) - (triggered how you want)*
9. **Bespoke Software Available** *(you want it, we write it)*
10. **Video Tagging** *(tag recording with keywords such as "theft")*

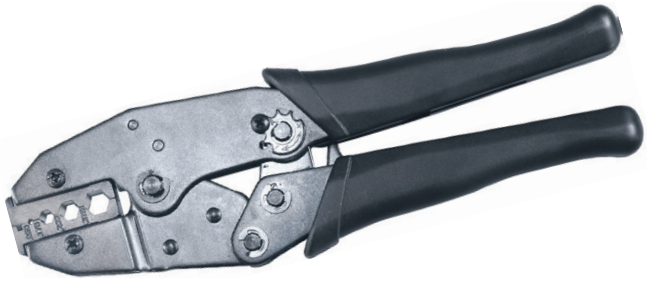
Order Codes

4ch 1TB: ALIEN654K
8ch 1TB: ALIEN658K
16ch 2TB: ALIEN666N

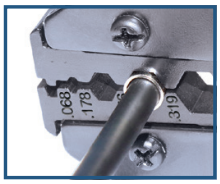
For more information visit www.aliendvr.com

Other Products To Consider - Useful Tools

BNC Ratchet Crimp



Crimps - 2pc✓ 3pc✓ Mini 3pc✓



SEE ONLINE TIP No: 248

Order Code: TOO980

Learn how to crimp a BNC! See online tip 248

CCTV Test Monitor

cctvmate.com

- PTZ Control Testing
- DC/AC Voltage Tester
- RS485 Data Test Function
- 29 Protocols Supported
- Check Video Signal Strength
- 12V Camera Power Function
- Up to 10 Hours Battery Life
- Network Cable Testing
- Monitor Output Testing

Kit includes:

Carry case, DC/AC Voltage probes, RS485 Data test cable, Camera power cable, BNC Lead, Neck strap, Network cable tester & PSU.

Order Code: LCD330

For more info, tips and advice visit nitedevil.com

Other Products To Consider - CCTV Mule

CCTV Mule 4

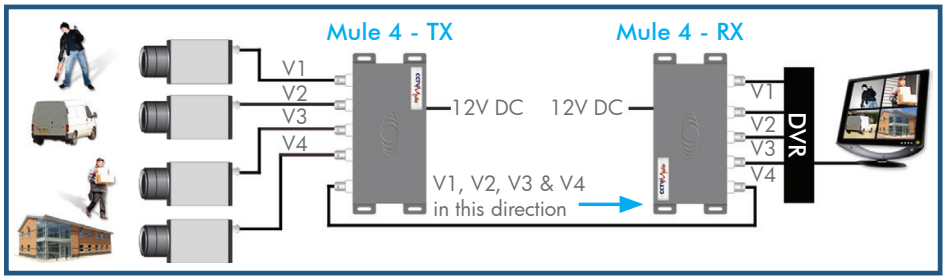
Sends 4 video signals down 1 co-ax

The CCTV Mule makes it easy to add extra cameras to existing installations, you save installation time and reduce the cost of buying and installing more cable.

The Mules work in pairs. One Mule combines the video signals to transmit them down 1 single co-ax, the other Mule then reconstructs the individual video signals at the remote end. A low-cost, easy solution that offers huge installation benefits and opportunities to add extra cameras.

The clever electronics of the CCTV Mule also allow it to carry audio and RS485 data along the same co-ax cable. You can even carry three video signals in one direction and a fourth signal in the other direction!

Order Code: MULE004 (4-Way Pair)
Order Code: MULE002 (2-Way Pair)



Specification

Voltage - 12V DC, Tx 200mA, Rx 350mA
Video inputs - 4, outputs - 1 Tx
Video inputs - 1, outputs - 4 Rx
Video quality - D1 @ 25fps - Every Camera
Gain control for different cable lengths
Operation modes - 5 types
Cable required - RG59 or better
Max Cable length - 200mtrs
Size - 175 x 110 x 30mm

For more information visit www.cctvmule.com

Other Products To Consider - Digital Video Transmission

- ✓ Digital Data Transmission
- ✓ Privacy Pairing Function
- ✓ Reverse IR Transmission
- ✓ Handshake Routine
- ✓ Whisper Mode

The VideoMitters are a breakthrough in the transmission of video signals.

By digitising the video & audio signals, far superior performance can be achieved in transmission distance and received image & audio quality.

The innovative VideoMitters can also transmit IR data in the reverse direction to the transmitted audio and video signals allowing any device that uses a handheld IR remote to be controlled from a different room or location without wires.

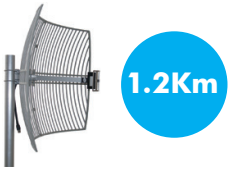
Simple, effective and low cost, the VideoMitter is an installer's dream product saving money on cabling and labour with outstanding results.

Order Code: MITKIT

Includes

Tx and Rx unit with antennas, x2 Phono - BNC Converter
x2 AV cables and x2 IR extension leads

Extend your transmission range*



Order Code: AER540

Order Code: AER537

*As per instructions

For more information visit www.videomitter.com

Fault Finding

The camera is built to the highest standards and every unit is fully tested prior to packing so if you experience an installation problem you need to investigate your cabling, connections, power supply and monitor. If you do fail to get a picture on a monitor you need to check the following things.

Interference on the camera picture

This is usually caused by poor or inadequate cabling, not observing the correct wiring techniques (CAT5 pairs or cores mixed up) and for 12V DC powered cameras the use of unregulated or poorly regulated power supply.

One camera picture overlaid on another using CAT5

Caused by getting camera cores and pairs mixed up.

Can't control via 2 wire RS485

A. RS485 wires crossed over, try swapping around.

B. Wrong protocol and baud rate selected, the default settings are ID -1, BAUD – 9600, PELCO-D.

Can't control via REM088 (Up the co-ax)

Battery flat in REM088 (Check battery voltage with a meter).

No picture

The camera cannot function without the correct working power supply.

Step 1 Test that the camera has the correct voltage supplying it, you must do this with the camera connected so that there is load on the PSU. The camera should have at least 10.5V DC connected to it.

Step 2 Check there is a picture coming out of the Phono test point at the camera. If there is a picture here but not at the DVR it could be one of the following:

A. Video loss in Composite cable as run too long usually you would get a picture up to around 120mtrs (Remedied by fitting a video amp).

B. Ensure that the BNC - BNC lead that you connect between the camera and monitor has no shorts or open circuits. If you are making your own lead, don't forget the lead must have two wires connected to complete the circuit, Video and Ground.

C. No Video signal down CAT5 or CAT5+2. The camera has a Balun built in to it so you need a balun fitting at the remote end. Check you have used the correct terminals in the camera for the balun. Check you have used a "pair of cores" not individual cores from different pairs.

Technical Specifications

FUNCTION	SPECIFICATION
Imaging Sensor	Sony ICX-811
Signal System	PAL 625 lines
Scanning system	2:1 Interface
Scanning Frequency	H:15.625 kHz / V:50 Hz
S/N Ratio	More than 52dB (AGC Off)
Horizontal Resolution	Horizontal: 700 TVL Colour / 800 TVL Black & White
Video Output Level	1.0V p~p (75Ω, Composite)
Lens	No Lens As Standard (2.8-12mm Options Available)
Minimum Illumination	0.00019 (Sens-up 256x)
Sync System	Internal
OSD	Built-in (Multi-language Support)
Electronic Shutter Speed	Auto / FLK PAL: (1/50 sec ~ 1/100,000 sec)
White Balance	AWB / AWC Set / Manual / Indoor / Outdoor / ATW
Backlight Compensation	BLC / HSBLC / Off

FUNCTION	SPECIFICATION
Gain Control	Low / Middle / High / Off
Adjust	Contrast / Sharpness / CB_Gain / CR_Gain (Level Adjustment)
Language	English - (Multiple)
Camera Title	On / Off (Selectable)
Day & Night	Auto / B&W / Colour / EXT (Selectable)
Privacy Masking	On / Off (8 Zone selectable)
3DNR (digital noise reduction)	On / Off (Selectable)
Sens-up (Frame Integration)	On / Off (Selectable limit ~ 256x)
D-Effect	Freeze / Mirror / Gamma / Neg. Image
Supplied voltage	12V DC (CAM241)
	12V DC & 24V AC (CAM243)
	240V AC (CAM245)
Power Consumption	140mA
Dimensions	65 x 65 x 127mm (Excluding Lens)

All specifications are approximate. NiteDevil reserves the right to change any product specifications or features without notice. Whilst every effort is made to ensure that these instructions are complete and accurate, NiteDevil cannot be held responsible in any way for any losses, no matter how they arise, from errors or omissions in these instructions, or the performance or non-performance of the equipment that these instructions refer to.

WEE/CG0783SS

This symbol on the products and/or accompanying documents means that used electronic equipment must not be mixed with general household waste. For treatment, recovery and recycling please return this unit to your trade supplier or local designated collection point as defined by your local council.