SECURITY AND CCTV
2016 PRODUCT RANGE

DOSS® SECURITY

Smart Security Solutions

- IP CCTV
- HD-SDI CCTV
- AHD CCTV
- DIY/Custom cameras
- Analogue CCTV
- CCTV Accessories
- Power & Cables
- AV Intercoms

VISIT **DOSS.COM.AU** OR CALL **1800 337 366** FOR INFORMATION

RADIO PARTS

Welcome

Be in the know!

Watch informative videos and get the low down on Doss Security products.

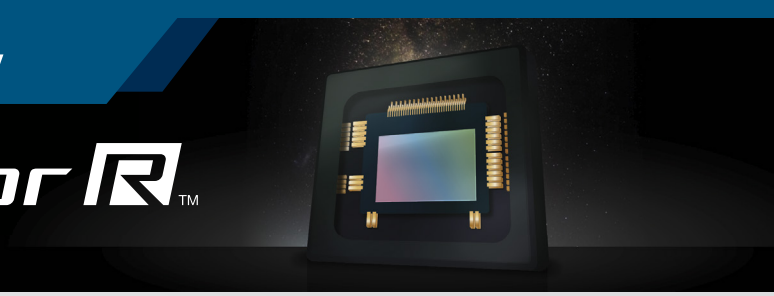
DOSS SECURITY AND CCTV 2016 EDITION

CONTENTS

DOSS CMOS Technology

SONY Exmor R™

About Sony's CMOS Sensors



Doss has always focused on providing our customers with a quality product, and as part of this ethos, has endeavoured to bring you quality, industry brand-name chipsets. So why all this talk about CMOS and CCD. Well, Doss' range of CCTV cameras is moving toward Full HD formats which require the higher data handling capabilities CMOS offers. And Sony has come to the party with their sensor technology.

CCD versus CMOS—the age-old question

CCD technology lends itself to analogue video in the way it scans out the analogue light levels for processing off chip, just as analogue video signals are essentially clocked out pixel intensities. This advantage turns to a disadvantage today, as analogue scan frequencies become the bottleneck.

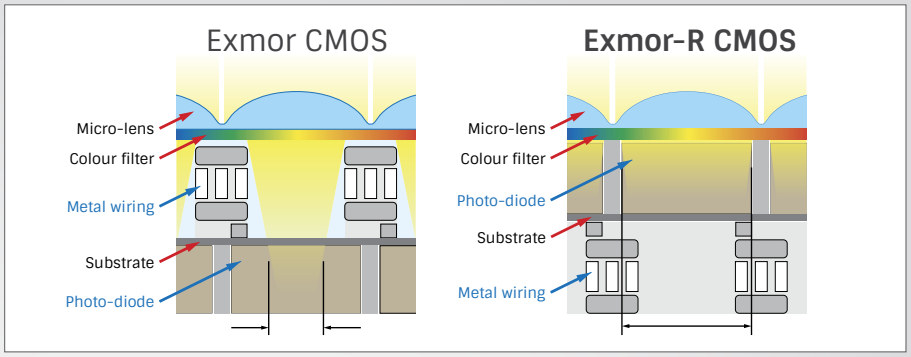
The way CMOS functions is best suited to digital image streams, where you need the entire frame to be buffered before encoding & transmitting. This, combined with lower power consumption, is why these sensors are most common in digital cameras and mobile phones. In the past, the down-side was manufacturing processes were more demanding & costly. But, with all the promises CMOS offered—lower power, higher data rates & higher pixel densities—much effort has gone into developing fabrication techniques.

This has given rise to affordable CMOS devices that are now competitive enough to enter the CCTV market. New digital transports like HD-SDI and IP allow for much higher data-rates—and therefore better image quality—than analogue can.

Multi-tasking gets more done

Sony's latest developments in the CMOS sensor arena has resulted in the Exmor and Exmor-R sensor ranges. These are a massive shake-up in the way CMOS is structured, building off past strengths, and fixing some of the remaining flaws.

Previously, CMOS chips operated with each column register being read-out through its own analogue noise-elimination circuit before joining the queue to go through the Analogue to Digital Converter. In other words, there was only one ADC circuit through which each pixel had to pass. Now with the release of Exmor architecture, each column has its own ADC circuit, meaning each column can be processed at the same time—in parallel—before heading off chip, physically reducing the distances analogue signals had to travel. This improves the data rate dramatically, opening the door for new wide dynamic range algorithms and higher frame rates. We see this being leveraged as slow-motion features in new compact digital cameras. For CCTV however, we can take several different exposure images to create an HDR image at useful frame-rates, increasing detail in dark and bright spots in the image.



Exmor-R structure doubles the light passed to the sensor over previous CMOS devices by moving the wiring layer to the bottom of the stack

If this wasn't ground breaking enough, Sony then released its updated Exmor-R range. You may have heard the term "back-illuminated" sensor, but you may not know what that really means. No, the sensor does not have a back-light like an LCD TV.

Revolutionary Rear Illumination

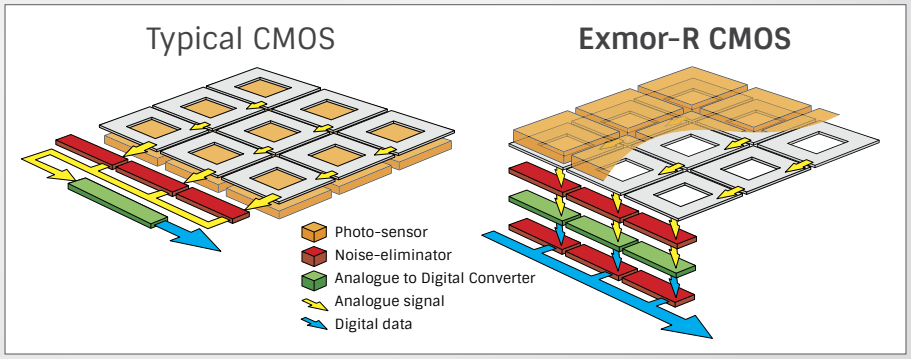
In a typical CMOS sensor, the light first hits the micro-lens layer, passes through the colour filter, before travelling through a layer that contains the pixel and column wiring, before finally arriving at the light sensitive detector. The wiring layer does its best to let light through, but the metal wires do still block and scatter light.

Sony has literally revolved the architecture, flipping the layers, and placing the micro-lens and colour filter on the "back" of the sensor, effectively moving the photo-sensor to the top of the stack. This, in most models, more than doubles the amount of light reaching the photo sensor.

Now with the wiring relegated to the dark, bottom of the stack, we can do more things:

- Circuitry can be more compact—pixel density can increase and edges of chip are no longer taken up with extra circuitry
- Wiring can be optimised for efficiency and noise reduction—rather than convoluted paths getting out of the way of photons
- More layers of circuitry can be added—allowing more complex switching, buffering & processing without increase the chip size

Sony's Exmor chips can be found in all of our AHD cameras, and Exmor-R is solely used in all our IP cameras offering you the latest and greatest in imaging sensor technology! Even better night images, lower noise, and high resolution.



Exmor-R devices feature ADCs (green) for each pixel column—processing in parallel—and eliminates noise in both analogue and digital domains (red).

IP Cameras & NVRs

	DMW15IP ○ 43160002	DMM15IP ○ 43160006	DM30IP v2 ○ 43160027 ● 43160028	IN30IP v2 ○ 43160116 ● 43160118	IN50IP ○ 43160127 ● 43160125	DMZ50IPW 43160140
Sensor	**1/2.8" Sony Exmor-R IMX322** 2.43MP CMOS					**1/2" Sony Exmor-R IMX222**
Output	**Full HD 1080P (H.264 8000kbps max)**					
Onvif compliance	Yes / Onvif Profile S (v2.2)					
PoE **(Power over Ethernet)**	Yes (802.3af / 48V)					
CVBS output	Yes					
Lens	2.8mm	3.6mm	2.8-12mm	2.8-12mm	2.8-12mm	4.7~47mm (10x zoom)
IR Range **(LEDs)**	10~15m	10~15m	20~30m	20~30m	40~50m	50-80m
Power consumption **(with IR on)**	<6W	<6W	<7W	<6W	<9W	25W max
Weight	0.4kg	0.4kg	0.8kg	0.8kg	0.8kg	2.7kg
Other Features	IP65 rated	IP65 rated	IP65 rated	IP66 rated	IP66 rated	IP66 rated 360° continuous pan/90° tilt Supports 64GB MicroSD card

Network Video Recorders

Configure, view and record multiple IP cameras at once! The DOSS NVRs are able to provide you with a familiar DVR experience over IP. Connect your cameras directly to the PoE enabled NVRs to power them or, if they are remotely powered, connect your NVR to your existing network.

- Latest Goolink P2P technology allows viewing from anywhere in the world with zero config—no port forwarding, no dynamic DNS servers
- Supports ONVIF, industry standard protocol—connect IP cameras regardless of brand
- Remote viewing via web-browser, smartphone app (iOS + Android) and PC Client
- Supports Dynamic DNS services
- VGA/HDMI synchronised output—up to 1080P/Full HD output

ONVIF — COMPLIANT —

NVR/DVR Storage Calculator

Determine what storage size you require or how many days you can fit!

a.pro2.com.au/70

	NVR4CH 43172005	NVR8CHECOV2 43172018	NVR8CH 43172015	NVR16CH 43172025
Video Input	**4CH @ 1080P** 4CH @ 960P	**8CH @ 1080P** **8CH @ 960P**	**8CH @ 1080P** 8CH @ 960P	4CH @ 3-5MP **16CH @ 1080P** 25CH @ 720P
Encoding	H.264 (up to 8000kbps)			
PoE **(Power over Ethernet)**	4x (802.3af / 48V)	4x (802.3af / 48V)	8x (802.3af / 48V)	none
Internal Storage	Up to 8TB (2x SATA; 4TB max)	Up to 12TB (2x SATA; 6TB max)	Up to 12TB (2x SATA; 6TB max)	Up to 8TB (2x SATA; 4TB max)
Alarm In/Out	2/1	2/1	2/1	4/1
RS-485	Yes			
Network interface	10/100/1000Mb			

PoE: Power Over Ethernet Switches

	POE04060 09051380	POE08260 09051386	POE16260 09051389	POE24420 09051392
Switched ports	**4 x 10/100 Mbps**	**8 x 10/100/1000 Mbps**	**16 x 10/100/1000 Mbps**	**24 x 10/100/1000 Mbps**
Ports with PoE	**4**	**8**	**16**	**24**
Max Total power	**60W**	**260W**	**260W**	**420W**
Max Port power	30W	30W	30W	30W
Uplink	2x 10/100 Mbps	2x 10/100/1000 Mbps	2x 10/100/1000Mbps + 2x SFP	2x 10/100/1000Mbps + 2x SFP
Broadcast storm protection	Yes (PoE Port Isolation only)		Yes (Powerful chipset will not be overwhelmed by traffic)	
PoE standards	802.3af / 802.3at			
Other			LCD with real-time port power status	

The Basics

Power over Ethernet allows you to simply and robustly implement power distribution in network installations. But just about every brand has, at some point, had their own version of PoE. No wonder it's confusing, not to mention dangerous. If you buy a device that requires it's own proprietary PoE solution and use the wrong PoE solution, you could damage them!

Wouldn't it be nice if there were a standard so you only needed to know one number: the power capacity or consumption. Conveniently there are two IEEE PoE standards that address both safety, and confusion: 802.3**af** (PoE) for up to 13W per cable and 802.3**at** (PoE+) for up to 25W per cable. The muddy waters of voltage problems and mismatches occur only when you stray away from these IEEE standards.

When choosing a PoE power sourcing switch, you need to make sure that 1) the total power capacity is enough to power all of your devices and 2) that the power supplied by a single port is enough for the device it's connected to. Remember, just like any power supply, the powered device decides how much power it takes, not the switch. Your device will draw only as much as it needs.

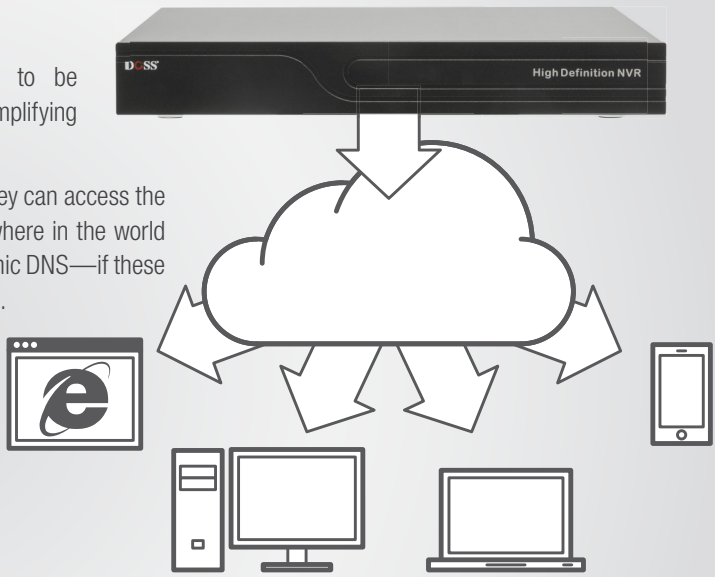
Why use a PoE switch?

To answer this question, let's look at the alternatives. Not using PoE at all requires a power adaptor, which invariably means a power point is required very near to your device. Undesirable for applications such as IP security cameras. The other alternative is to use a PoE injector. This does allow the power adaptor to be located in a central location but you now have a mess of wires, adaptors and injectors. With our PoE switches, you only require the one power point to power up to 24 devices! They mount neatly in a rack or on a desk, reducing clutter. Doss' PoE switches also feature VLAN capabilities, allowing you to filter out or restrict broadcast traffic, so IP cameras' multi-casting packets aren't going to flood the rest of your network.

P2P is so easy.

P2P—peer-to-peer—streaming/forwarding services enable IP devices to be accessible anywhere in the world with virtually plug-and-play configuration, simplifying the installation process.

DOSS' DVRs, NVRs and some IP Cameras are P2P compatible, as long as they can access the internet (via wired cable or Wi-Fi), users can access the devices from anywhere in the world without any complex network configuration such as Port Forwarding or Dynamic DNS—if these concepts scare you, then great! P2P compatible products are perfect for you.



- **PORT** FORWARDING
- **NAT** CONFIGURATION
- **DDNS** SERVICES

IP Camera Accessories

Domestic IP Pan/Tilt Cameras

MJPEG WIRELESS IP CAMERA

PT10QRECO | 43160500

- MJPEG compression
- Simple connection via QR code
- Remote pan & tilt
- Built-in microphone
- Dual networking: both Ethernet & Wi-Fi connections possible

720P WIRELESS IP CAMERA

PT10QRW | 43160535

- 720p HD Video recording
- Simple connection via QR code
- Remote pan & tilt
- Motion detection
- Two-way audio
- Dual networking: both Ethernet & Wi-Fi connections possible

Extenders

IP OVER COAX EXTENDER

IPOC200 | 43151235

- Transmit an IP camera signal over Coax up to 200m!
- Passive device, no power required
- Built-in Surge Protection

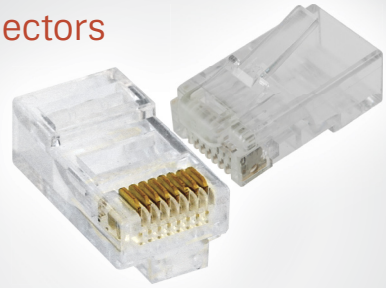
Cable & Cable Accessories

Category 6: Indoor Cable

4PRCAT6WHT-1M 05062838	4PRCAT6BLU-1M 05062825	4PRCAT6GRY-1M 05062829	
4PRCAT6RED-1M 05062832	4PRCAT6YEL-1M 05062835	4PRCAT6BLK-1M 05062842	4PRCAT6GRN-1M 05062827

- PVC spline maintains cable geometry and separation between pairs
- 23AWG solid copper cores
- Flame Test Meets AS/ACIF S008:2001
- Available by the metre and as a durable 305m 5-ply pull-boxes with count-down metre-marking

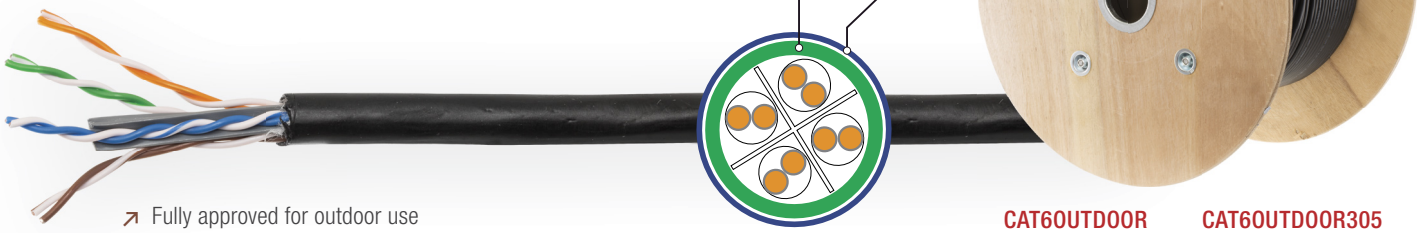
Connectors



PK3930 | 30633930

- Suits solid-core cables
- For CAT6 applications

Category 6: Outdoor Cable



- Fully approved for outdoor use
- Water block tape technology—less messy compared to old jelly filled outdoor cables

CAT6OUTDOOR	CAT6OUTDOOR305
05062702	05062703
per metre	305m roll

ECONOMY CAT5E CABLE [UNAPPROVED]

UNA4PRX7BLK-1MT
05062705

- Copper-clad Aluminium core for economical cost
- Higher conductivity (lower voltage losses)
- Designed specifically for CCTV applications

CAT5E SOLID CABLE [BLACK]

4PRX7BLK-1MT
05062804

- For high speed data applications
- 24 AWG Solid copper conductor cores
- Supplied by the metre or roll

AHD: What is it?

Analogue CCTV has held on despite digital technologies entering the market and becoming affordable. This is most likely due to how simple analogue cameras are to install and setup—they don't need expert knowledge of networking and don't need infrastructure to be upgraded or newly installed. They also do not suffer from latency issues which make them ideal for real-time monitoring of sites.

Perhaps, with these factors in mind, it's no wonder that the CCTV boffins have figured out a way to bring industry standard, Full HD resolution video using analogue technology! Yes, you can get 1080P Full HD video using your Analogue CCTV infrastructure. The only hardware you require upgrading is your DVR.

AHD offers uncompressed, real-time transmission over low cost cabling, at distances up to 500 metres! It is designed to be cable agnostic utilising a variety of coaxial cables.

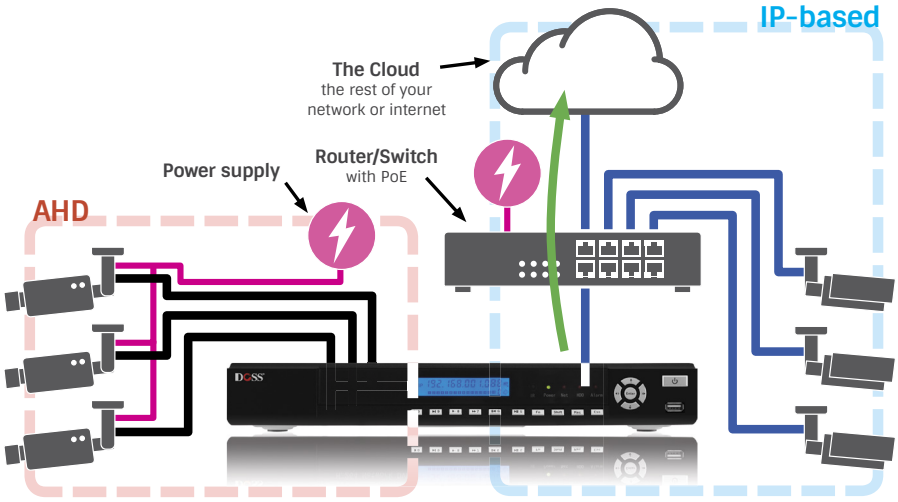
AHD—1080P Full HD Typical 700TVL

Even if you choose not to upgrade your DVR, upgrading your cameras to our DOSS AHD Cameras provides you with the highest quality CVBS image—800TVL resolution.

Bridging the divide

Doss' Hybrid DVRs allow you to connect Analogue cameras—up to AHD resolutions—and IP cameras, all in one place!

HBD4DVR	HBD8DVR	HBD16DVR
43171110	43171120	43171130
4CH	**8CH**	**16CH**
up to 4x IP cameras	up to 4x IP cameras	up to 16x IP cameras



OK, so AHD is great, but you may still want to move to IP-based CCTV as cost effectively as possible. DOSS has a range of Hybrid NVRs that support analogue inputs—up to AHD formats, including 960H—as well as IP Cameras!

This means you can still use your existing cameras and infrastructure, while installing IP Cameras in new installations. You can then take your time upgrading your standard Analogue cameras to 960H or AHD.

This is a perfect solution to take advantage of the latest technology without making your entire existing system redundant!

2TB AHD DVR & Camera Kit

AHD4DMK
43171200

Everything you need for a home or small business Full HD CCTV system!

- Full HD Hybrid AHD DVR with 2TB WD Purple HDD installed!
- 4x DM30AHDB dome cameras
- 4x 20m BNC + Power cables
- 1x Camera power supply
- 1x DC splitter lead
- 1x 1m HDMI cable
- 1x 1m CAT6 patch lead
- 2x CCTV warning signs

AHD—Analogue HD CCTV




	DMW15AHDW 43150240	DMM15AHDW 43150250	○ DM30AHDW 43150230	● DM30AHDB 43150231	IN30AHDB 43150260	IN50AHDB 43150270
Sensor	**1/2.8" Sony Exmor** 2.43MP CMOS					
AHD Output	**Full HD (1080P)**					
CVBS Resolution	800TVL					
Lens	2.8mm M12 Fixed	3.6mm M12 Fixed	2.8~12mm M12 Vari-focal			
IR Range (LEDs)	10~15m (12x Ø5.0mm)	10~15m (24x Ø5.0mm)	20~30m (36x Ø5.0mm)		20~30m (36x Ø5.0mm)	40~50m (48x Ø5.0mm)
Dimensions (ØxH/L)	Ø70 x 70mm	Ø93 x 75mm	Ø120 x 100mm		240 x 130 x 80mm (LxHxW)	240 x 130 x 80mm (LxHxW)
Power consumption (with IR on)	280mA	280mA	280mA		280mA	280mA
Weight	280g	400g	800g		1.1kg	1.3kg

UTP Passive AHD Video Baluns

HD VIDEO BALUN

BVB4201PLHD | 43151308

- Transmits 1080P AHD up to 220m over UTP cable
- Compatible with HD-TVI, HD-CVI, AHD and CVBS

HD VIDEO BALUN
WITH POWER

VPB45HD | 43151312

- Same great features as the BVB4201PLHD
- Transmits power and video over a single UTP patch lead

HD VIDEO BALUN
WITH POWER CONVERTER

VPB45PCDHD | 43151320

- Incorporates all the features of the VPB45HD baluns
- Regulated 12VDC / 0.5A power output

HD VIDEO BALUN
WITH POWER + PTZ

VPPB45HD | 43151330

- Transmit HD video, as well as power and PTZ/RS-485 data

AHD, HD-CVI, & HD-TVI

What the?

So we've been talking a lot about AHD, but there are actually two other competing Analogue HD formats on the market: HD-CVI and HD-TVI. Each of the three have their own benefits and problems.

They were all developed to provide real-time, progressive scan, analogue HD video, using existing analogue CCTV infrastructure. So in this sense, there is very little between them.

The Chinese owned, Dahua brought us HD-CVI, with transmission distances up to 500m. HD-CVI was adopted as the standard format of the HDcctv Alliance and is an off-shoot of HD-SDI technology. It is also proprietary technology and is only produced by one camera manufacturer. This means it could easily go the way of Betamax and HD-DVD.

HD-TVI is backwards compatible with analogue cameras meaning if your DVR is HD-TVI compatible, you will be able to use your old analogue cameras until you want to upgrade them—something HD-CVI cannot do. HD-TVI chipsets are manufactured by Techpoint (USA) and many big name hardware producers have adopted HD-TVI including Samsung and Hikvision.

AHD is an open format like HD-TVI, but is produced by many chipset manufacturers. Also like HD-TVI it is backwards compatible with analogue cameras, reducing upgrade costs. In fact, AHD cameras will still work with your old CVBS DVRs via simple configuration.

So which format do you choose? It seems AHD and HD-TVI are going to battle it out, but in the meantime, you can be confident buying Doss. All new stock of our AHD camera range will work with all four format DVRs: CVBS, CVI, TVI, & AHD!

HD-SDI DVR & Cameras

4CH HD-SDI DVR 2RU

UP TO 24TB INTERNAL STORAGE + 1080P H.264 RECORDING

RPDVR4SDI2U | 43170902

- 4CH HD-SDI 1080P video input
- High resolution, dual-stream recording:
  - Stream 1: 1080p / 720p / D1
  - Stream 2: D1 / CIF / QCIF
- Embedded Linux operating system
- 8x Internal SATA HDD Ports; 1x eSATA Port
- Maximum 3TB per HDD
- Maximum total internal storage: 24TB
- Supports network video preview, storage and playback
- HDMI and VGA video output—resolutions up to 1920x1080
- Supports Dynamic DNS, Email Notification, Alarm Inputs and Outputs, Two-way Talkback
- Supports Web browser interface, Mobile and Desktop clients, CMS monitoring

FULL HD-SDI CMOS CAMERA

1080P OVER COAX

FHDDOME | 43150105

FHDBODY | 43150050

Capable of capturing 2.1 Megapixels and viewing at 1080p real-time.

- Includes 6mm F1.4 CS lens (FHDBODY)
- SDI 1080P full real time transmission
- Transmit over 300m at 1.485Gb/s
- High resolution 64X digital zoom (D-ZOOM)
- DWDR, HLC, Electronic shutter adjustable, 3DNR, anti-flicker, Defog
- OSD menu, Lightning-proof, Back focus adjustable

HDMI/SDI Conversion

Whether it's simply hooking up your SDI CCTV system to your home TV or distributing HDMI around your home on economical coax cables, DOSS' HDMI↔SDI converters fit the bill.

SDI TO HDMI CONVERTER

SDI2HDMI | 64550065

- Equalized Loop SDI/HD-SDI output
- HDCP Compliant

HDMI TO SDI CONVERTER

HDMI2SDI | 64550075

- Full HDMI support including embedded audio
- Distributes 1x HDMI source to 2x SDI output simultaneously

FHDDOME FLUSH MOUNT BRACKET

J57 | 43156110

- Mount the FHDDOME and DOME15PRO cameras flush to any ceiling

FHDDOME MOUNTING BOX

P10 | 43156115

- Mount the FHDDOME and DOME15PRO cameras to any solid wall or ceiling

SDIxSP Series Splitters

For splitting high definition digital signals, the DOSS SDIxSP series is ideal. Being active splitters, they are also capable of extending HD-SDI signals up to 120m on each output.

Features:

- Supports SD-SDI, HD-SDI & 3G-SDI
- Full HD video format
- Built-in cable equalizer, re-clocker & cable driver
- Distance (Max): SD-SDI 200m, HD-SDI 120m
- Excellent SDI signal jitter suppression function
- Power supply and SDI signal format indicator
- Embedded ESD to protect the circuit
- +12~24V DC Supply range

1-IN 2-OUT SDI AMPLIFIER

SDI2SP | 43151166

- Split HD-SDI signals to two outputs without loss of data/resolution

1-IN-4-OUT SDI AMPLIFIER

SDI4SP | 43151176

- Split HD-SDI signals to four outputs without loss of data/resolution

Build Your Own Camera

FULL HD-SDI CMOS CAMERA

FHDBODY | 43150050

- SDI 1080P full real time transmission
- DWDR, HLC, Electronic shutter adjustable, 3DNR, anti-flicker, Defog
- CS mount

3.5MM-8MM VARI-FOCAL

SSVO358G | 43150855

- C or CS mount
- Auto-Iris Lens
- Length: 48mm
- Wide range zoom
- Aperture: f/1.4

6MM-15MM VARI-FOCAL

SSVO615G | 43150860

- C or CS mount
- Auto-Iris Lens
- Length: 61mm
- Mid-range zoom
- f/1.4

6MM-60MM VARI-FOCAL

SSVO660G | 43150854

- C or CS mount
- Auto-Iris Lens
- Aperture: f/1.6
- Designed in Japan
- Telephoto range zoom
- Length: 70mm

ALUMINIUM CAMERA HOUSING

AH24 | 43150942

- Slide off top
- Built-in blower (On: >40°C Off: <30°C)
- Max camera: 215x105x80mm (LxWxH)
- 3mm glass window

ALUMINIUM CAMERA HOUSING

OH335 | 43150940

- Slide off top
- 3mm thick glass window
- Max camera: 270x85x70mm (LxWxH)
- Cable glands seal out moisture

ALUMINIUM CAMERA HOUSING

AH20 | 43150938

- Slide off top
- 3mm thick glass window
- Max camera: 140x85x70mm (LxWxH)
- Cable glands seal out moisture

CAMERA BRACKET MAX 3KG

CBP001 | 43156005

- Ball and socket joint – mount camera in any position!

CAMERA HOUSING BRACKET

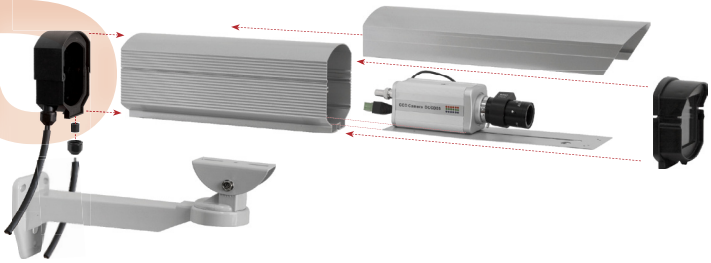
DCMB10 | 43157991

- Constructed of cast metal
- Suitable for large camera housings

ALUMINIUM CAMERA BRACKET

CBA005 | 43156060

- Made from durable aluminium
- Suitable for large camera housings



Assemble!

Tips for building your own camera:

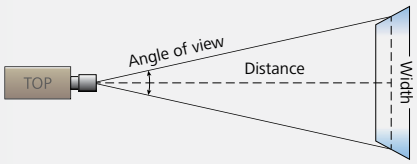
- Make sure your camera + lens fits the housing: This also includes any plugs, adapters and leads that may be required, so take them into account when measuring up
- Consider the detail that you require to be recorded and choose a lens that will give you the zoom/view you require to obtain that detail.
- Camera housings generally **do not** come with mounting brackets to allow customers to decide on a mounting solution suitable for their own situation

How To Choose A Lens

Lens zoom or area of view is dependent on several factors – these include the camera's sensor size (eg 1/4" or 1/3"), and the focal length of the lens. This means when choosing a lens, you must first choose a camera.

The following table can be used as an estimate for working out:–

- The angle of view,
- the horizontal width of view and,
- the distance of view.



*Width of view is based on a camera distance of 10m from target area
†Distance based on a camera width of view of 5m

FOCAL LENGTH	1/4" SENSOR			1/3" SENSOR		
	Deg	Width*	Dist†	Deg	Width*	Dist†
2.0mm	84.0°	18.0m	2.8m	100.4°	24.0m	2.1m
2.8mm	65.5°	12.9m	3.9m	81.2°	17.1m	2.9m
3.5mm	54.4°	10.3m	4.9m	68.9°	13.7m	3.6m
6.0mm	33.4°	6.0m	8.3m	43.6°	8.0m	6.3m
8.0mm	25.4°	4.5m	11.1m	33.4°	6.0m	8.3m
15.0mm	13.7°	2.4m	20.8m	18.2°	3.2m	15.6m
20.0mm	10.3°	1.8m	27.8m	13.7°	2.4m	20.8m
25.0mm	8.2°	1.4m	34.7m	11.0°	1.9m	26.0m
40.0mm	5.2°	0.9m	55.6m	6.9°	1.2m	41.7m
50.0mm	4.1°	0.7m	69.4m	5.5°	1.0m	52.1m
60.0mm	3.4°	0.6m	83.3m	4.6°	0.8m	62.5m

CCTV Camera Factory Quality Control

Here at Doss, we strive to provide our customers the best quality products at reasonable prices. As such, our factories adopt manufacturing techniques and strategies that ensure our products meet the highest standards. An inspection to our camera factory showed us just what lengths they go to, to ensure a reliable product.

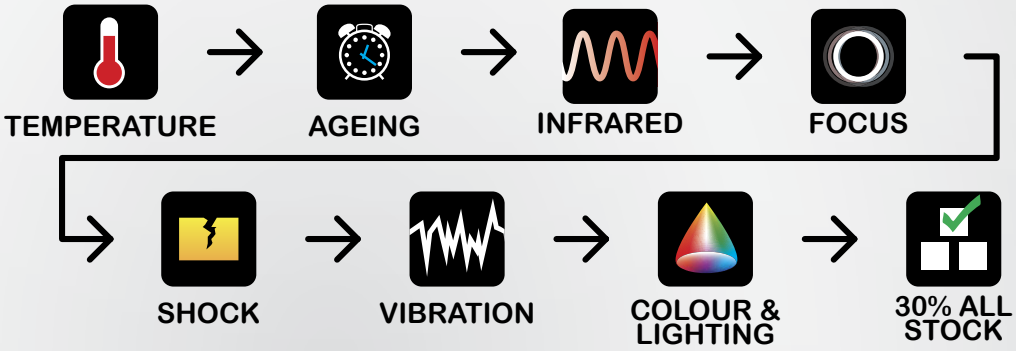
Unlike some factories, all PCBs are produced and assembled in-house and tested thoroughly before assembly. Any defective circuit boards are able to be diagnosed at chip level and, if possible are repaired.

Once assembled, every camera is tested to ensure they operate over their specified minimum and maximum temperature range in a large oven-like machine, and aged for a full 7 days straight before the rest of the testing.

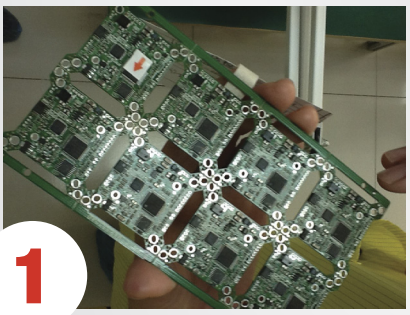
First their infrared capabilities are tested to ensure a quality image in 0 Lux (ie using only the cameras' built-in IR LED lighting). Next the focus is checked using charts. The cameras are then subjected to impact shock and vibrations and rechecked to make sure camera construction is solid. The cameras are then put through their paces in a number of lighting conditions and scenarios, and only those that meet the high standard make it through.

As if that wasn't enough, after all testing is completed, 30% of all cameras in storage awaiting shipping are picked at random, and retested using this method. So you can be confident when you buy a Doss CCTV camera, you are receiving a quality camera!

1. Faulty component identified on PCB to be repaired or replaced.
2. Device used to test products' temperature ranges – like a combination fridge-oven!
3. PTZ controls and Dome cameras half way through their 7-day ageing stage.
4. Factory worker testing camera in completely dark environment. His hand is behind a curtain holding the camera.
5. Staff select at random 30% of all completed stock and unpacks them for repeat testing.



Factory tour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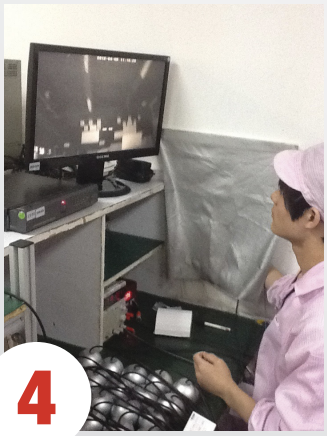
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5

Analogue CCTV Cameras

	MINIDOME	WIDEDOME	STEALTHDOME	DOME15ECO	DOME15PRO	DOME30	DOME30PRO
	○ 43150087	○ 43150082	○ 43150084	○ 43150080	○ 43150070	● 43150088 ○ 43150089	● 43150090
Sensor	1/3" Sony Super HAD CCD II			1/3" Pixelplus CMOS	1/3" Sony Super HAD CCD II		
DSP	EffioE	NEXTCHIP 2040	EffioS	Pixelplus PC1089	EffioV	EffioE	EffioV
Resolution	700 TVL	700 TVL	700 TVL	600 TVL	700 TVL	700 TVL	700 TVL
OSD	-	-	✓	-	✓	✓	✓
Lens	3.6mm	2.8mm	4-9mm	3.6mm	2.8-11mm	4-9mm	4-9mm
IR Distance	10-15m	5-10m	n/a	10-15m	10-15m	20-30m	20-30m
LEDs	24 x Ø5mm	6 x Ø5mm	n/a	24x Ø5mm	24x Ø5mm	36 x Ø5mm	36 x Ø5mm
Horizontal view	90°	150°	98-38°	90°	30-124°	98-38°	98-38°
Privacy Function	4 zones	8 zones	4 zones	-	15 zones	4 zones	8 zones

	IN15ECO	IN15	IN30	IN30PRO	IN50	IN50PRO	IN100
	○ 43150004	● 43150008	● 43150012	● 43150013	● 43150016	● 43150017	● 43150030
Sensor	1/3" Sony Super HAD II CCD	1/3" Sony EXview HAD II CCD	1/3" Sony EXview HAD II CCD	1/3" Sony Super HAD II CCD	1/3" Sony EXview HAD II CCD	1/3" Sony Super HAD II CCD	1/3" SONY EXview HAD II CCD
DSP	NEXTCHIP 2030	EffioE	EffioE	EffioV	EffioE	EffioV	EffioE
Resolution	600 TVL	700 TVL	700 TVL	700 TVL	700 TVL	700 TVL	700 TVL
OSD	-	-	-	-	✓	✓	✓
Lens	3.6mm M12	3.6mm M12	6mm M12	4 - 9mm Manual	4 - 9mm Manual	4 - 9mm Manual	3.6 - 16mm
IR Distance	10 - 15m	10 - 15m	20 - 30m	20 - 30m	40 - 50m	40 - 50m	80 - 100m
LEDs	24 x Ø5mm	24 x Ø5mm	36 x Ø5mm	36 x Ø5mm	48 x Ø5mm	48 x Ø5mm	48 x Ø5mm + 2 Hi-Lux IR spots
Privacy Function	-					4 zones	

Camera Mounting

DOME30 WALL BRACKET

J38 | 43150930

- Allows you to mount the DOME30 to a wall

DOME30 CEILING BRACKET

J41 | 43150931

- Modify the viewing height of your DOME30

DOME30 MOUNTING BRACKET

P06G | 43156105

- Also in **White**
- Neatly mount the DOME30 to any solid wall or ceiling

Specialist Camera

600TVL PINHOLE CAMERA

PHCAM | 43150682

A great discreet camera for security where obvious surveillance equipment is undesirable. At just over a few centimetres wide, this camera can be installed in just about any location

- 1/3" SONY Super HAD II CCD
- 600TVL

Common Image Issues

High Frequency Interference

This occurs when cables pick up high frequency EMI – this can even be RF. High frequency sources can also be light switches/dimmers, fluorescent lighting, TVs or CRT monitors, or any other device that switches power quickly.

It can cause symptoms that range from rolling coloured bands, to wavy, dynamic patterns over the image.

Using twisted pair or balanced cabling is usually the best way to combat such interference.

Recommended Product:
Doss Passive UTP Video Baluns

Ground loops

Ground loops occur when two points, assumed to be the same voltage potential (ie. ground), are in fact different. It generally happens when the camera is not grounded at the monitoring/recording equipment, but at the point it is mounted (or even both locations).

This can result in "hum bars", picture tearing, cross-talk (or ghosting) and image rolling. Fitting a Ground Loop Isolator or rectifying incorrect grounding will fix most issues.

Recommended Product:
GLI02 Ground Loop Isolator

Tips for a great picture

- Ground signal cables/equipment only at one point – ie the recording system / monitoring end. This also means not grounding the camera bodies or brackets.
- Keep runs of cable as short as possible and away from interference sources such as high voltage lines.
- Use quality connectors and cables with correct specifications.
- Use twisted pair baluns and cabling – this will massively resist electromagnetic interference.

BNC Accessories

1	PA6113	30256113	PLUG TO RCA SOCKET
2	PA5720	30255720	SOCKET TO RCA SOCKET
3	PA5701	30255701	SOCKET TO RCA PLUG
4	PA6001	30256001	PLUG TO BNC
5	PA5990	30255990	PLUG TO 'F' SOCKET
6	PG1038	30521038	CRIMP PLUG TO SUIT RG59U
7	PA6117	30256117	PLUG TO RIGHT-ANGLE SOCKET
8	PG1092	30521092	COMPRESSION PLUG TO SUIT RG59
9	PG1001	30521001	RIGHT-ANGLE PLUG SCREW-TERMINATED

CAMERA EXTENSION LEAD

CEL5M	43158110	5M
CEL10M	43158115	10M
CEL20M	43158125	20M
CEL30M	43158130	30M

- Weather Resistant
- High Quality Connectors
- Package includes Gender Changers

GROUND LOOP ISOLATOR

GLI02 | 43151075

- Reduce picture rolling, tearing and noise
- Weather-proof design
- No power required
- Solve ground loop issues without tracing inaccessible cables

COAXIAL VIDEO SURGE PROTECTOR

VSP01 | 43151078

- Lower insertion loss and quicker response time
- Large through-flow capacity, long life
- Easy installation and convenient maintenance

CCTV UTP Passive BNC Baluns

MINI PASSIVE BNC VIDEO

BVB4200WP | 43151090

- Waterproof mini-balun
- No power required
- Bare leads to allow soldering and waterproofing

PASSIVE VIDEO BALUN

BVB4102S	43151094	SCREW
BVB4100P	43151096	PUSH-PIN

- Transmit video up to 400m over CAT5e UTP cable
- Mounts directly to camera
- No bulky expensive coax cables

UTP Passive RCA Baluns

RCA ANALOGUE AUDIO

AAB1001 | 43151100

- Send analogue audio over Unshielded Twisted Pair (UTP) up to 1500m
- Screw terminal connection
- Compact size

RCA COMPOSITE VIDEO

CVB1001 | 43151105

- Send Composite (1 pair) or Component (3 pairs) video over Unshielded Twisted Pair (UTP) up to 300m
- Gold plated RCA Plug

Balun Factory & Quality Control

Finding a Factory

Doss knows how important reliability is when it comes to security systems. We know that installations are often complex, and replacing faulty components once installed can often be a nightmare. And we frankly don't like replacing faulty products!

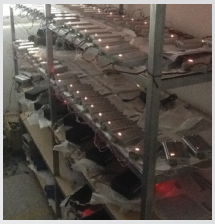
Not only is reliability an important factor when sourcing products, but so are the features of the products. We want to be proud of the products we sell – so we look for products that give our customers real value for money. Value to us means features and reliability that save you time and money. For this reason we search for factories with the same ethics and take true pride in their products.

That's why we source our products from only the best factories we can find. Doss only chooses factories that have a strong focus on producing a high-quality product our customers can rely on.

Our range of CCTV Video Baluns have been specially sourced for their quality and reliability. The factory goes through a stringent quality control process to ensure this:

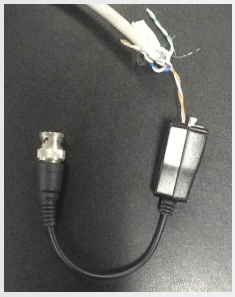
1. The balun balance coils are actually manufactured in house to ensure the components meet the engineers' specifications completely.
2. Only the best materials are used. For example, only **100% copper** is used in the manufacture of the balun coils. Not only the quality of the material is important, but more windings are added to the balun coils than typical balun coils, to reduce variation in signal responses.
3. **All** passive components manufactured in house are tested thoroughly to ensure they are not defective and are within the very tight specifications.
4. Every active device produced is worn-in for at least 72 hours before passing testing, resulting in a product you can be sure works out of the box.

In-house manufacture of balun coils means all parts meet high standards. 100% copper is used to ensure minimal imperfections and impurities, reducing variation in signal quality.



All products produced in-house are tested thoroughly. Every passive component is tested to ensure specifications are met. All active products are aged for a minimum of 3-days.

Balun Design Decisions



Strong durable push-pin terminals can hold up to 10kg of weight – the copper conductor is not sandwiched by flat metal terminals, rather the terminal grips onto the conductor tighter when it's pulled!

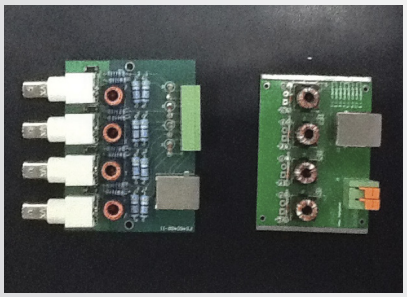
An internal shot of one of our passive video baluns: it may be small but there's a lot in even our basic model. It features a 100% copper balance coil that has finer wire, but more winds for a more uniform winding (helps reduce eddy-currents and therefore improves signal quality).

Our power hubs feature exactly the same components and features as the individual baluns – only possible when a factory produces all their products in-house.

This ensures compatibility between all devices and that they all work together with-in specification.

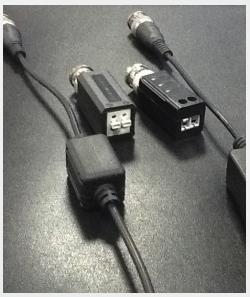
Our baluns (left x2) may look like other baluns (right) but there are some massive differences that you can't see.

The conductor pin in our BNC plugs and sockets are 100% copper which improves impedance matching, and reduces signal losses. Our baluns all have built-in surge protection and the balance coils are all specially engineered and tested in-house!

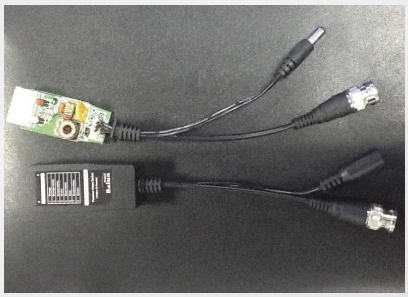


Our Doss passive balun hub (left) vs another brand (right). Components used are over-rated to ensure down-time and maintenance costs are kept low.

You can also see there is simply more copper in our balance coils, and the windings are evenly distributed to ensure a nice, clean signal.



There are several different forms that our baluns come in. Sealed for weather-proof installation, small and compact for direct connection to camera bodies, and several different terminations: screw, push-pin, solder, and also RJ45 socket.



Big features in a small package: PTC self-resettable over-current protection, surge protection, quality balance coils and easy to install RJ45 connection.

The new range of screw terminals and push-pin terminals will be made from harsh-environment tolerant non-recycled plastics.

Video Balun Power Hubs

4CH VIDEO BALUN POWER HUB

BP4CH12V5A | 43151135

- Transmit power up to 250m over CAT5e UTP cable
- Powers up to 4 cameras with built-in 12VDC/5A supply

8CH VIDEO BALUN POWER HUB

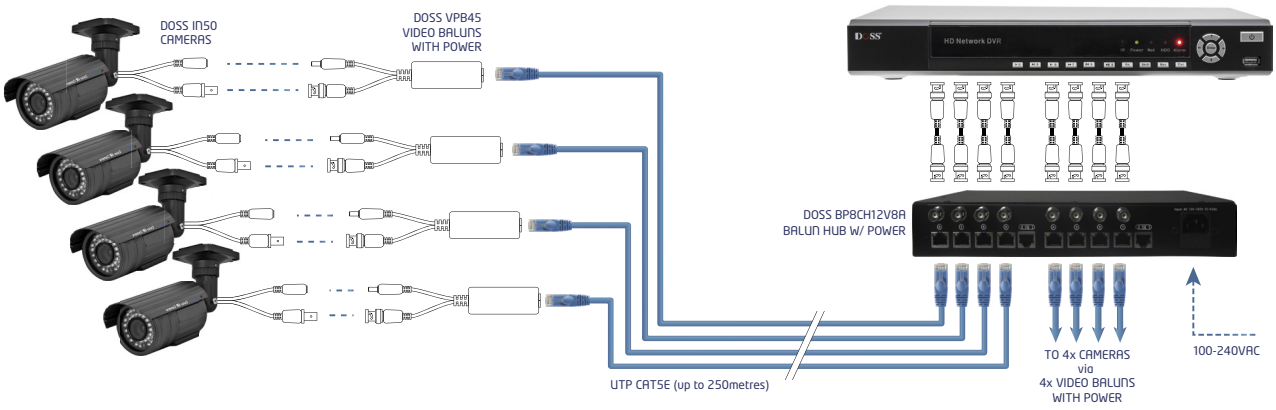
BP8CH12V8A | 43151140

- Powers up to 8 cameras with built-in 12VDC/8Amp supply
- 8x Video outputs
- Works with Doss Video+Power baluns

16CH VIDEO BALUN POWER HUB

BP16CH12V16A | 43151145

- Powers up to 16 cameras with 12VDC/12Amp supply
- Same transmission quality features as Video+Power baluns



UTP Passive Video Baluns with Power+Data

VIDEO + POWER + DATA [PUSH PIN]

VPPBPP | 43151225

- 8-Way Push-pin terminals
- Supports RS485 transmission
- Transmit Video+Power+PTZ up to 200m over CAT5e

VIDEO + POWER + DATA [RJ45]

VPPB45 | 43151220

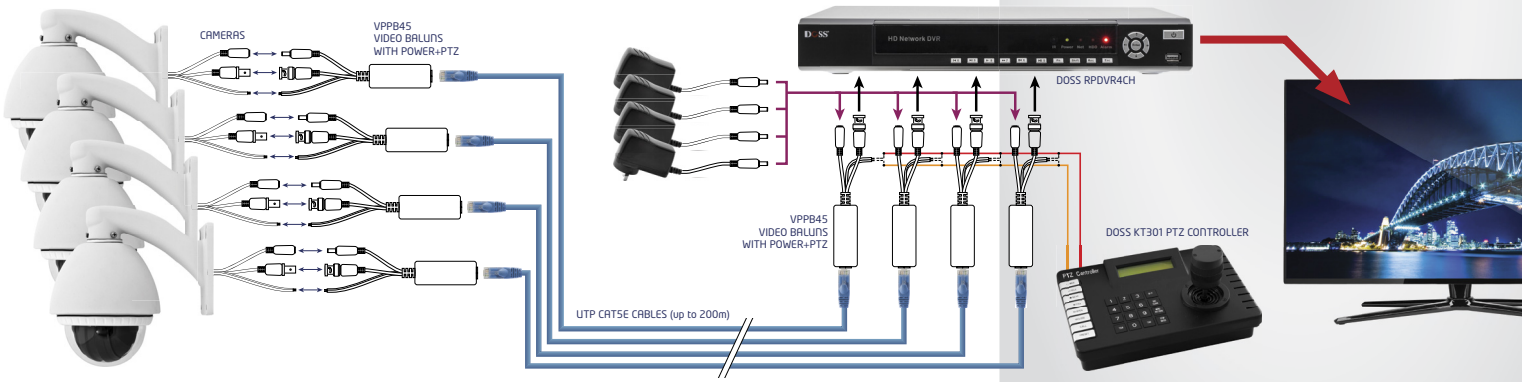
- RJ45 Jack for quick connection CAT5e UTP cable
- Features overload and lightning protection

Why Baluns?

The DOSS Range of UTP Baluns allow you to connect your CCTV system using cheaper, thinner, lighter and more readily available CAT5E cable, rather than expensive and bulky RG59U cable.

The passive (non-amplified) baluns allow transmission of real-time CCTV video signals and power over cost-effective Unshielded Twisted Pair (UTP) cable, without any compression, loss or signal degradation and without the need for extra power supplied to be installed. Sending camera power over the same twisted pair as video means less cabling, and no power supply required to be installed near to the camera. Baseband (composite) signals of any type are supported.

In addition, all DOSS BNC baluns feature built-in surge suppression to protect video equipment against damaging voltage spikes.



Analogue CCTV Testers

2.8" PTZ CCTV SECURITY TESTER

M281PTZ | 43150570

With UTP cable tester, colour-bar signal generator, CCTV camera video input and more, the M281PTZ is a versatile device for CCTV installers.

- Built-in PAL/NTSC Colour Bar Signal Generator—transmits/receives colour signals
- PTZ (RS485) Protocol analysis and identification including address scanning

3.5" PALM/WRIST CCTV LCD MONITOR/TESTER

M035LCD | 43150521

- AV In & Out
- 3.5" TFT LCD monitor
- Wall-mountable (mount not included)
- DC 12V Output; test camera without separate power
- Use it on your desk or attach it to your waist with its versatile kick-stand
- Rechargeable batteries included

Multi-format CCTV Testers

7" MULTIFUNCTION IP CAMERA/CCTV TESTER

M700L | 43150584

IP camera tester with multimeter and HD-SDI input.

- 7" capacitive touch screen
- Test both analogue CCTV and IP cameras
- Display ONVIF IP camera image, ONVIF PTZ controller
- Built-in Wi-Fi to receive network image and data
- Network bandwidth testing
- PoE 24W power supply & measurement to IP cameras
- DC12V 2A power output for cameras
- Supports more than thirty PTZ protocols such as PELCO-P, PELCO-D, SAMSUNG etc.

7" MULTIFUNCTION HD SDI/CCTV TESTER

M700SDI | 43150580
M700HDMI | 43150582 + HDMI INPUT

Offers a wide range of features to simplify CCTV camera installations. Power, focus and aim your cameras locally without a trip back to the control room. The unit's bright screen and easy to use menu are ideal for outdoor use.

- Displays analogue camera image and PTZ Control
- Detect video peak level, SYNC level, colour burst
- IP address search, ping, port flicker network testing and much more!
- HD-SDI video in & out with VGA & BNC in

Warning Signs

LARGE ACRYLIC SIGN

SNA4 | 01304704

Prominent warning sign for CCTV or dummy surveillance applications

- Made of acrylic
- 210x280mm
- Easy installation and maintenance

SQUARE ACRYLIC SIGN

SN120 | 01304703

- Dimensions: 120 x 120mm
- Supplied with self-adhesive strips

Wall Mount Power Supplies

The Doss range power supply boxes also knows as a power distribution boxes offer a great power solution for CCTV system as well as other system powered by DC 12V. It enables surveillance system installers to easily manage the power to multiple CCTV cameras at a central point and allows your camera installation to be neat and secure. The DOSS power supply boxes are very simple to install, simply screw each camera's power cable into the power supply terminal inside the power supply box.

	PW0412B05 ● 33774960	PW0812B10 ● 33774965	PW1612B16 ● 33774990	PWU0412W05 ○ 33775000	PWU0812W10 ○ 33775005	PWU1612W16 ○ 33775015
Outputs	4-Way	8-Way	16-Way	4-Way	8-Way	16-Way
Rating (Total)	12VDC / 5A	12VDC / 10A	12VC / 16A	12VDC / 5A	12VDC / 10A	12VC / 16A
5kA surge protection	✓	✓	✓	✓	✓	✓
Individually PTC protected outputs	✓	✓	✓	✓	✓	✓
Battery Backup / UPS				✓*	✓*	✓*

* Battery not included

1-IN 9-OUT POWER DISTRIBUTOR

PD009 | 33774935

- Individually PTC self-resetting protected outputs: 1.1A
- Individual status LEDs
- Supports up to 30VAC/VDC

Why are PTC resettable fuses so common in Doss products?

For over-current protection and power recovery, PTC fuses are a great solution. If the manufacturer pays a little extra and uses PTCs, the system will require less maintenance and downtime is reduced. They provide protection like a fuse, but are capable of self-resetting, so no maintenance or repair is required when something goes wrong.

16 PORT 12VDC REGULATED PSU

PR816-12R | 33774940

- 12VDC/8Amp power supply
- 16x 0.5Amp outputs
- Individual PTC self-resetting protection on each output

DC POWER SUPPLY – 12V/4AMP

SM1240 | 33771335

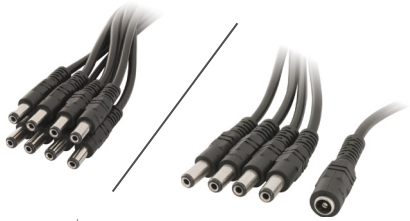
- Regulated output, 4.0A max
- Short-circuit protection
- Switchmode with MEPS class IV efficiency
- Auto reset
- 2.5mm DC plug
- Mains Cable supplied

DC POWER SUPPLY – 15V/4AMP

SM1540 | 33774436

- Regulated output, 15V 4.0A max
- Short-circuit protection
- Switchmode with MEPS class IV efficiency
- Auto reset
- 2.1mm DC plug
- Mains Cable supplied

2.1MM TO 4X 2.1MM PLUGS



PW8204 | 30978204 4-way
PW8208 | 30978208 8-way

- 2.1mm DC Power Socket 20cm Lead
- 2.1mm DC Power Plugs with 28cm Lead

DC POWER SUPPLY – 12V/5AMP

SM1250 | 33771340

- Switchmode with MEPS class IV efficiency
- Short-circuit protection
- Auto reset
- 12VDC / 5.0Amp
- 2.1mm Plug
- Mains Cable supplied

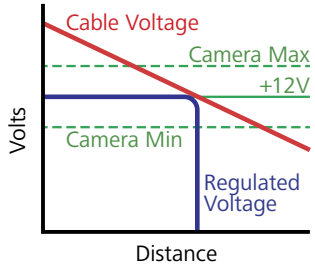
DC POWER SUPPLY – 12V/6.5AMP

SM1265 | 33771345 12VDC / 6.5AMP

- Switchmode with MEPS class IV efficiency
- Short-circuit protection
- Auto reset
- 12VDC / 6.5Amp
- 2.1mm Plug
- Mains Cable supplied

Why do I need a voltage converter?

There are two common applications – Stepping down higher voltage DC power and secondly, converting from 24V AC power down to 12V DC.



For Doss CCTV, we test cabling and cameras at 100m distance. The biggest limitation to the distance is the voltage drop in the cabling – if you feed 12V into the system, 100m later, you might be left with, say, 11V. If it is a 200m or 300m run, at some point the voltage will be too low to operate the cameras.

One solution is to input say 24V DC. In this case you can afford to lose a whole 12V – a voltage converter ensures the supply to the camera is regulated at a safe 12V DC level. 24V AC is also commonly used in security installations. Since all Doss cameras operate on 12V DC, you'll need a voltage converter behind the camera to fit your camera into an existing 24V AC System.

DC/AC TO 12VDC CONVERTER

PC500 | 33774925

- 2.1mm DC plug
- Regulated output, 500mA max
- Convert AC: 14-24VAC or DC: 15-30VDC to 12VDC

DC/AC TO 12VDC CONVERTER

PC1A | 33774930

- Screw Terminals
- Input: AC18~26V; DC18~28V
- Output: DC12V regulated
- 1000mA Max.

2.5MM SOCKET TO 2.1MM PLUG

PW8019 | 30978019

- 2.5mm Socket to 2.1mm Plug
- Great for converting plug sizes of power supplies for use with 2.1mm DC extension and splitter leads

SCREW TERMINATED DC PLUG

PW8018 | 30978018

- 2.1mm DC plug to screw terminals

SCREW TERMINATED DC SOCKET

PW8050 | 30978050

- 2.1mm DC socket to screw terminals

RG59U SOLID CORE COAX CABLE

RG59U-1M | 05052023

- 1/Ø0.65mm Copper Clad Steel core
- Braided screen: 16/7/0.14 OFC(88%)
- Wave impedance: 72±3 Ohm (@ 200MHz)
- Capacitance: 73±5pF/m

ATTENUATION	
1~450MHz	25dB/100m
450~862MHz	45dB/100m
862~2150MHz	60dB/100m

TWIN POWER CABLE

FIGURE-8 24/0.2 TWIN-CORE

2X24-.2PB-1M	05093003	BLACK
2X24-.2PBR-1M	05093004	BROWN
2X24-.2PW-1M	05093005	WHITE
2X24-.2PG-1M	05093006	GREY

DOUBLE INSULATED FLAT 24/0.2 TWIN-CORE

2X24-.2DSW-1M	05093020	WHITE
2X24-.2DSR-1M	05093026	RED

- 2-core x 24 strand (0.2mm)
- PVC Insulation
- Sold per metre
- Available as 100 metre roll

Common Wiring Colours

These are common colour codes for various security equipment, however check with your hardware's installation documentation before connecting to an existing system!

4-core	4-core alt.	6-Core
+ PWR	+ PWR	+ PWR
ALARM SIG		ALARM SIG
ALARM GND		ALARM GND
	ALARM SIG	TAMPER SIG
	COM (TAMPER)	TAMPER GND
PWR GND	PWR GND	PWR GND

RG59U & POWER COMBO CABLE

CCTVCOM24-1M | 05062038

- Bonded CCTV RG59U and Double Insulated 2x Power
- Easy to install power and video at same time!

NAIL-DOWN CABLE CLIPS

6RCCB	05492050	6MM BLACK
6RCCW	05492051	6MM WHITE
15RCCB	05492060	15MM BLACK
15RCCW	05492061	15MM WHITE

- 6mm round cable clip to suit RG59U
- Pack of 100 pcs
- 15mm square cable clip to suit bonded RG59U+Power or Twin RG59U cables

4-CORE / 6-CORE CABLE

4X7-.2SC-1MT	05062008	4-core
6X7-.2SC-1MT	05062024	6-core

- 4-core (4.8mmØ)
- 6-core (5.5mmØ)
- Great for alarm signal lines

Video Intercoms

DHF72PC	21816223	7" MONITOR & CAMERA KIT
DHF72SM	21816227	EXTRA 7" MONITOR
DSPC72	21816217	EXTRA DOOR CAMERA

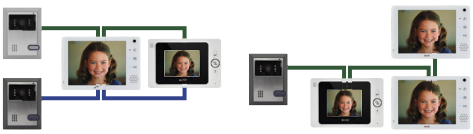
DHF42PC	21816221	4.2" MONITOR & CAMERA KIT
DHF42SM	21816226	EXTRA 4.2" MONITOR
DSPC42	21816218	EXTRA DOOR CAMERA

The Doss DHF Hands-free Video Intercoms are an economical, convenient solution for home security. See who's at the door before opening it! Multiple configurations are possible with up to 2 door stations and up to 3 monitors. You can even mix and match between the models to create the video intercom system that suits you and your home!

Features

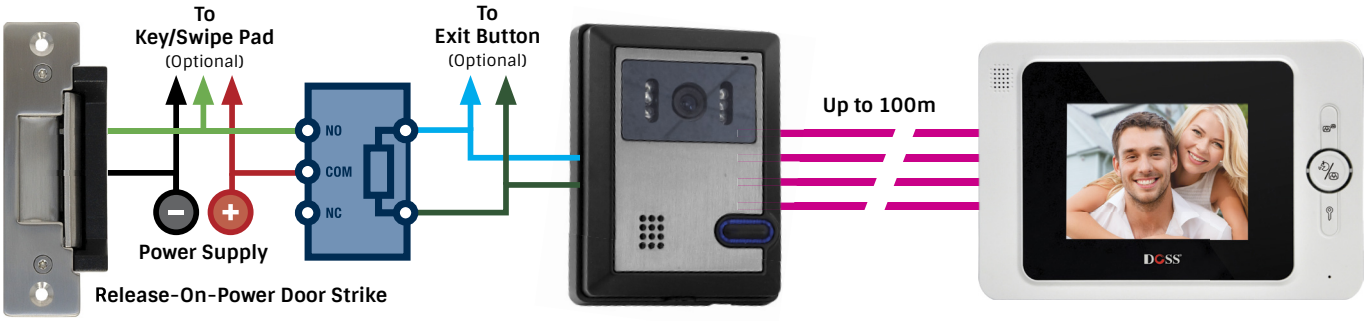
- Hands-free, two-way video intercom
- Connect up to 2 door cameras, and up to 3 monitors
- Mix and Match cameras and monitors between the two ranges
- Easy to install: 4-core wire up to 100m
- Door release control—integrates well with existing or new access control systems
- High-quality camera with IR illumination

Configuration Examples



	1	2	3
1	✓	✓	✓
2	✓	✓	✗

Connecting to Access Control System



Presence detection

WIRELESS DOOR BEAM & ALARM WITH SOLAR PANEL

DEA7WL | 01301663 KIT
SPK300 | 01301664 SPARE/EXTRA SPEAKER

DEA7WL is a compact wireless entry alarm system which is easy to install both indoors and out. It is designed for both residential and commercial uses to alert you to the entry of customers and visitors.

- For monitoring a driveway or use as an entrance alert
- No wiring required between the sensor and speaker—up to 100m wireless range
- Weatherproof photoelectric beam sensor for outdoor use
- Connect additional speakers to the sensor wirelessly (one speaker included)

SECURITY PRESSURE MAT

PM100 | 01308066

Floor pressure mats are designed to detect a person treading on them. An ideal security solution, the PM100 offers a low cost covert method of detecting a person.

- High impact PVC material
- Trapped air cushion
- Size: 800 x 540mm

ROLLER-DOOR REED SWITCH

RSC40 | 01305510

Heavy duty reed switch for roller doors

- Armoured cable
- Normally Open contacts

PTZ Dome IP Camera

DOSS DMZ50IPW camera enables you to keep an eye on your territory 24/7! It has a 2MP sensor for clear image recording as well as tilt and zoom in functions.

Area scan function provides routine scanning of the areas of your choice, non-stop unless told it otherwise. Easy set up and easy to control. Being powered by PoE means no hassle wiring!

Features:

- 2MP HD IR network intelligent high speed dome
- 1/2.8" CMOS sensor
- Ambarella zoom module
- Encoding system: H.264 / MJPEG, dual stream output
- Focal length: 4.7mm ~ 47mm
- 10x optical zoom
- Full HD 1080P
- Horizontal 360° continuous rotation, 90° vertically tilt
- Audio alarm input/output
- MicroSD card slot
  - Accepts up to 64GB
- Support ONVIF / HTTP / TCP / DDNS / NTP / SMTP / RTSP
- ONVIF Profile S protocol, GB/T28181 protocol
- 255 preset, 4 pattern, 4 cruise
- Lightning-proof, IP66
- DC24V / PoE

DMZ50IPW
43160140

90° tilt

360° continuous pan

10x Optical Zoom

Full HD 1080P MJPEG/H.264

PoE Power over Ethernet

Records to MicroSD up to 64GB

IR Illumination up to 80m