

CCTV | IP & Analogue PTZ

X2 COMBAT S - HYBRID



Key Features

- Dual IP and Analogue PTZ Camera
- Pelco P and D Telemetry
- ONVIF (Profile S, G & T) Compliant
- Tough, rugged camera, Marine-Grade finish as standard
- Adaptive White Light and IR (zoom-linked) operation
- VMS Integration, including Redvision VMS1000TM
- Rugged Mounting Bracket Options
- Brushless Stepper Motors for Resilience and Durability
- SD Card recording option, up to 1TB.
- Long Life Silicone Wiper

X2 COMBAT Hybrid rugged ball PTZ

The X2-COMBAT rugged, ball PTZ cameras are designed for tough, outdoor, surveillance applications. The X2-COMBAT uses advanced production techniques and state-of-the-art technology to offer a world-class, rugged CCTV camera with a best-in-class, feature set. The die-cast aluminium body is anodised before being powder coated, making the camera environmentally tough and resistant to malicious attack or vandalism.

Everything about the X2-COMBAT rugged, ball PTZ is of high quality. All moving parts are designed to last; from its long-life, silicon wiper through to the motor technology used in its pan and tilt mechanism and its 30x optical zoom camera module, with exceptional low-light performance. The camera is perfectly balanced, minimising component wear and giving a mean time before failure (MTBF) rating of 7 years.

Dual Analogue and IP PTZ

The Hybrid X2-COMBAT can be used as either an IP or an analogue PTZ camera. This allows users to install the unit into sites with legacy analogue infrastructure, and keep the same HD camera for when an IP upgrade is permitted. The camera has coaxial video output, and Pelco P or D telemetry control; along with IP connectivity and ONVIF compliance.

Intuitive, operator control

The X2-COMBAT has intuitive, operator control, from fast pan and tilt speeds of up to 180° / second to speeds of less than 0.1° / second, for when an operator is precisely tracking a target. The COMBATTM also features long-life, super-efficient, white-light and IR LED illumination technologies, for night-time operation.

3D positioning allows operators simple control of the X2-COMBATTM PTZ. Quick and simple setup directly from the COMBATTM's Web User Interface; or tracking targets by mouse click from a compatible control platform, latency and over run are no longer an issue.

VMS Integration Including Redvision VMS1000

ONVIF is an open industry standard that defines a communication protocol for IP-based video surveillance devices. This allows different manufacturers' cameras and video management software (VMS) to interoperate. Redvision VMS1000 is an ONVIF-compliant VMS that can be used to manage a wide range of IP cameras, with an enhanced SDK level integration into all Redvision's cameras.

Simple install, maintenance free

The X2-COMBAT is designed for easy installation and configuration. A complete range of brackets, mounts and cable extensions allow upright or hanging installation in any environment, with a choice of RAL colour options to order. Cantilever arms enable the camera to view directly downwards on pole or tower mounts.

The X2-COMBAT mounting bracket has a 4" PCD mount with M8 clearance holes. A complete range of brackets, mounts and cable extensions are also available, which are zinc plated then powder coated.

The X2-COMBAT utilises a tooled silicone wiper option to keep the camera's view through the flat, scratch-resistant window free of water and dirt. A linkage-free, sprung steel mechanism reduces wiper wear and a polycarbonate window gives an even tougher option. Wiper activation is by a button press on VMS systems, including the VMS1000TM, or by pre-set.

Extensive features

The X2-COMBAT has an extensive range of features including four video streams for recording, visualisation, set-up and servicing; H265, H264 and MJPEG compression; optional 1TB maximum SD card-based edge storage; ONVIF compliance to Profile S and G; 400 pre-sets, 12 tours, 12 scans, 6 tracks and 20 privacy masks; alarms, motion detection, intelligent analytics; and its operating temperature range is -40°C to 70°C.

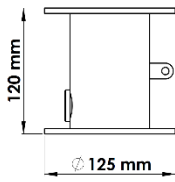
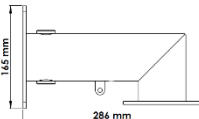
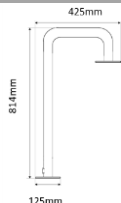
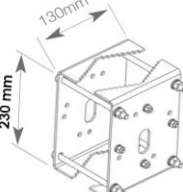
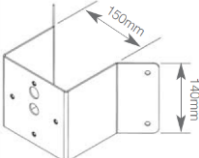
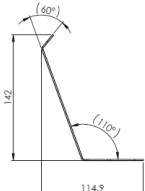
Night-Time Performance

The Redvision X2-COMBAT rugged, ball PTZ cameras have infra-red (IR) and white light illumination options, using long-life, super-efficient LEDs. DORI (Detection, Observation, Recognition and Identification) tests show that the X2-COMBAT performs up to 300m.

The X2-COMBAT has Osram adaptive illumination, automatically adjusting IR and white light intensity in proportion to zoom and scene content. This feature ensures scene images are well-lit, but not bleached by over-exposure.

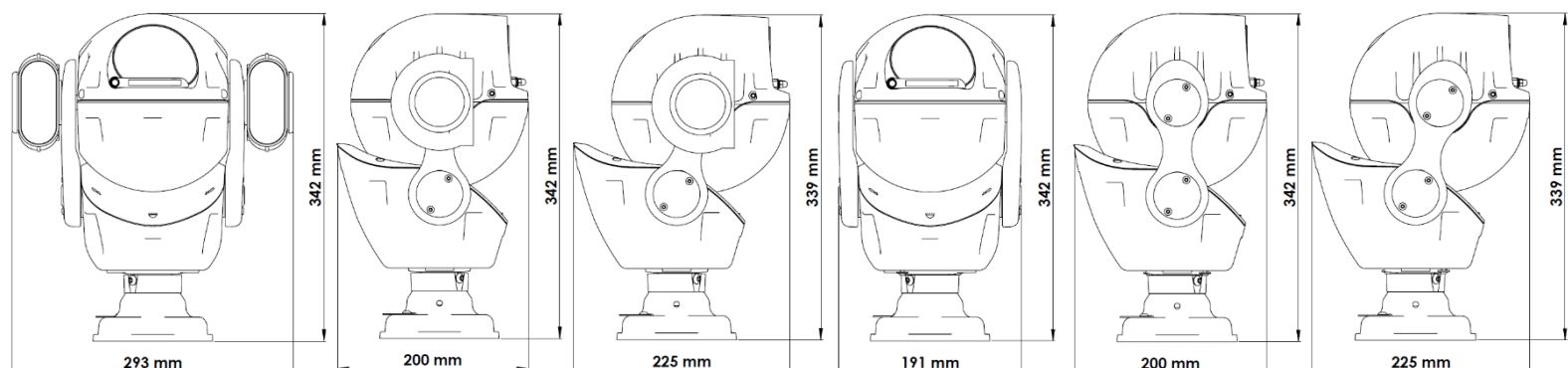
White light can be switched on as a visual deterrent to intruders.

Image	Part Code and Description
	RVX2S-HYB-G: 30:1 4MP Hybrid IP and Analogue Ball PTZ, WIPER - Light Grey
	RVX2S-HYB-B: 30:1 4MP Hybrid IP and Analogue Ball PTZ, WIPER - Black
	RVX2S-HYB-IR-G: 30:1 4MP Hybrid IP and Analogue Ball PTZ, IR, WIPER - Light Grey
	RVX2S-HYB-IR-B: 30:1 4MP Hybrid IP and Analogue Ball PTZ, IR, WIPER - Black
	RVX2S-HYB-IRWL-G: 30:1 4MP Hybrid IP and Analogue Ball PTZ, IR/ White Light, WIPER - Light Grey
	RVX2S-HYB-IRWL-B: 30:1 4MP Hybrid IP and Analogue Ball PTZ, IR/ White Light, WIPER - Black

Image	Part Code and Description	Drawing
	RVX2-STANDOFF-G: 120 mm Standoff mount bracket - Light Grey RVX2-STANDOFF-B: 120 mm Standoff mount bracket - Black	
	RVX2-WALL-G: Wall mount bracket - Light Grey RVX2-WALL-B: Wall mount bracket - Black	
	RVX2-SWAN-G: Swan mount bracket - Light Grey RVX2-SWAN-B: Swan mount bracket - Black	
	RVX2-POLE-G: Pole mount adaptor 60-90mm for RVX2-WALL - Light Grey RVX2-POLE-B: Pole mount adaptor 60-90mm for RVX2-WALL - Black	
	RVX2-CNR-G: Corner Mount adapter for RVX2-WALL - Light Grey RVX2-CNR-B: Corner Mount adapter for RVX2-WALL - Black	
	RVX2-VISOR-G: Sun & rain Visor (only applies when camera is mounted in upright position) - Light Grey RVX2-VISOR-B: Sun & rain Visor (only applies when camera is mounted in upright position) - Black	
	RVX2-WASH: Washer nozzle kit – compatible with standard CCTV wash pumps	
	RV-HYB-PSU: 24V DC PSU for X2 Hybrid Camera	
Other	RVX2-SD, RVX2-PC4, RV-HYB-CABLE-5/10/20	

Camera	
Image Sensor	1/2.8" Progressive Scan CMOS
Effective Pixels	2592(H)×1520(V)
Electronic Shutter	Auto/Manual, 1/5 ~ 1/20,000s
Min. illumination	Colour: 0.01 Lux @ (F1.6, AGC ON) B/W: 0.001 Lux, 0 Lux (IR LED ON)
S/N Ratio	55 dB
Day/Night	Auto(ICR)/Day / Night/Timing
Wide Dynamic Range	True WDR
IR On/Off Control	Auto/Manual
Lens	
Focal Length	5.3 ~ 159mm
Max. Aperture	F1.6 ~ F4.3
Angle of View	H: 55° ~ 2.3°, V: 41.6° ~ 1.7°
Optical Zoom	30x
Focus Control	Auto/Manual
PTZ	
Pan/Tilt Range	Pan: 360° continuous Tilt: 150° (Cantilever function gives 180° view range)
Manual Control Speed	Pan: 0.1° ~ 180°/s, Tilt: 0.1° ~ 90°/s
Preset Speed	Pan: 180°/s, Tilt: 90°/s
Presets	400
PTZ Mode	6 Track, 12 Scan, 12 Tour (up to 32 presets per tour)
3D Positioning	Supported
Power-Off Memory	Supported
PTZ Status Display	Supported
Idle Motion	Activate Preset/ Scan/ Tour/ Track if there is no command in the specified period
Video	
Encoding	H.264 / H.265 / MJPEG / Smart Encode
Max. Resolution	4MP (2592×1520)
Streaming Capability	3 Streams
Stream/Frame Rate	Stream1: 2592×1520, 2560×1440, 2304×1296, , 1920×1080, 1280×720 @ 25/30fps Stream2: 1920×1080, 1280×720, D1, VGA, 640×360, CIF, QVGA @ 25/30fps Stream3: VGA, CIF, QVGA @ 25/30fps
Bit Rate Control	CBR/VBR
Bit Rate	Stream1: 200kbps~12Mbps Stream2: 10kbps~3Mbps Stream3: 10kbps~1.5Mbps
Image Setting	HLC / BLC / Defog / WDR / Anti-shake (DIS) / Brightness / Saturation / Sharpness / Contrast / Exposure Control / Scene
Noise Reduction	2D/3D DNR
Region of Interest	Off/On (8 Zone, Rectangle)
Privacy Masking	Up to 20 Masks
Event	
Alarm Triggers	IVA, Motion detection, Alarm input, Network alarm, SD alarm, Day/Night switch alarm
Event Actions	Alarm record, Alarm output, FTP upload, SMTP upload

Network	
Protocols	IPv4/IPv6, 802.1x, HTTP, HTTPS, TCP/IP, UDP/IP, RTSP, DHCP, NTP, RTCP/RTP, PPPoE, SMTP, DNS, UPnP, FTP, ARP, SNMP, TLS/SSL, IGMP, DNS, DDNS, ICMP, QOS
Interoperability	ONVIF (Profile S, G & T), SDK, CGI
Streaming Method	Unicast
Max. User Access	10 Users
Edge Storage	Built-in Micro SD slot, up to 1TB
Web Viewer	Microsoft Windows: ≤IE11, Chrome, Firefox, Microsoft Edge MacOS: Chrome, Firefox
Analogue Connectivity	
Coaxial Video	CVBS
Resolution	650 TVL, D1 (720x576 pixels)
Telemetry	Pelco P and D
Intelligence & Alarm	
Auto Tracking	Supported
Alarm	Motion alarm, Disk alarm, Day/Night switch alarm, Network alarm, Audio abnormal alarm, Alarm push
Intelligent Analysis	Intrusion, Single line crossing, Double line crossing, Loitering, Wrong-way detection, Illegal parking, and Smart motion detection
Electrical and Physical	
Power Supply	24VDC (-15% to +20%) via PSU module; input 100~240VAC 50/60Hz.
Power Consumption	24VDC: 50W.
Dimensions	Non-LED models: H 340mm W 191mm LED models: H 340mm W 293mm
Weight	5.2kg without lamps, 5.8kg with lamps
Operating Temperature	-40°C ~ +70°C (Light colours only, Black: 50°C)
Impact Rating	Meets IK10 standards (with Polycarbonate window fitted)
Corrosion Testing	BS EN ISO 9227:2022 1000 Hours Salt Spray
Ingress Protection	Meets IP68 standards
Vibration Testing	TEN 50556:2011, clauses 6.3.2 & 11 (Table 3, Class AL2) EN 60068-2-64-2008 Test Fh
EMC	See technical standards
Camera Body	Marine finish as standard, Aluminium, die-cast alloy, with anodised, powdercoated finish
Wiper Blade	Tooled silicone
Colour	RAL 7035 Light-Grey or RAL 9005 Black. Custom RAL made to order.
Lighting & DORI	
Illumination Range	IR (850nm) to 300m White Light to 250m
DORI Category	Distances calculated as per IEC 62676-4:
Detection (25PPM)	Wide: 99.5m, Tele: 2,583.7m
Observation (62.5PPM)	Wide: 39.8m, Tele: 1,033.5m
Recognition (125PPM)	Wide: 19.9m, Tele: 517.0m
Identify (250PPM)	Wide: 9.95m, Tele: 258.5m



Environmental	
Cold Test	EN 60068-2-1:2007 Test Ae -40°C
Dry Heat Test	EN 60068-2-2:2007 Test Be +70°C
Damp Heat Test, Cyclic Test	EN 60068-2-30:2005 Test Db
Vibration Test	EN 50556:2018 Section 6.3.2 & Table 4 Class AL & Section 6.3.1.5 & EN 60068-2-64:2008 Test Fh
IPX8	IEC 60529:1989+A1:1999+A2:2013+COR1:2019
IP6X	IEC 60529:1989+A1:1999+A2:2013+COR1:2019
Salt Spray	BS EN ISO 9227:2022 1000 Hours Salt Spray

EMC Emission	
Conducted Emissions at Mains Power Port (150kHz-30MHz)	EN 55032:2015+A11:2020+A1:2020
Asymmetric Mode Conducted Emissions (150kHz-30MHz)	EN 55032:2015+A11:2020+A1:2020
Radiated Emissions (30MHz – 1GHz)	EN 55032:2015+A11:2020+A1:2020
Radiated Emissions (Above 1Ghz)	EN 55032:2015+A11:2020+A1:2020
Harmonic Current Emission	EN IEC 61000-3-2:2019+A1:2021
Voltage Fluctuations and Flicker	EN 61000-3-3:2013+A1:2019+A2:2021

EMC Immunity	
Electrostatic Discharge	EN 55035:2017+A11:2020 & EN 50130-4:2011+A1:2014
Radiated Immunity (80MHz-1GHz, 1800MHz, 2600MHz, 3500MHz, 5000Mhz)	EN 55035:2017+A11:2020
Radiated Immunity (80MHz-2.7GHz)	EN 50130-4:2011+A1:2014
Electrical Fast Transients & Burst at AC Power Port	EN 55035:2017+A11:2020 & EN 50130-4:2011+A1:2014
Electrical Fast Transients & Bursts at Signal Port	EN 55035:2017+A11:2020 & EN 50130-4:2011+A1:2014
Surge at AC Power Port	EN 55035:2017+A11:2020 & EN 50130-4:2011+A1:2014
Surge at Signal Port	EN 55035:2017+A11:2020 & EN 50130-4:2011+A1:2014
Conducted Immunity at AC Power Port (150kHz-80MHz)	EN 55035:2017+A11:2020 & EN 50130-4:2011+A1:2014
Conducted Immunity at Signal Port (150kHz-80MHz)	EN 55035:2017+A11:2020 & EN 50130-4:2011+A1:2014
Voltage Dips and Interruptions	EN 55035:2017+A11:2020 & EN 50130-4:2011+A1:2014
Mains Supply Voltage Variations	EN 50130-4:2011+A1:2014