NDAA Compliant

CCTV | IP PTZ

X2 COMBAT S

Key Features

- Tough, rugged camera, Marine-Grade finish as standard
- PoE 90W (802.3bt Midspan) Version available
- Adaptive White Light and IR (zoom-linked) operation
- VMS Integration, including Redvision VMS1000™
- Rugged Mounting Bracket Options
- Brushless Stepper Motors for Resilience and durability
- ONVIF Compliant
- SD Card recording option, up to 256GB.

ONVIF™ Member

X2 COMBAT 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.

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 COMBAT 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-COMBAT PTZ. Quick and simple setup directly from the COMBAT's Web User Interface; or tracking targets by mouse click from a compatible control platform, latency and over run are no longer an issue.

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 VMS1000, 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 256GB 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. A 90W PoE version (802.3bt Midspan) offers quick and easy connectivity via RJ45 socket, operating over a full 100m Cat 5e span.
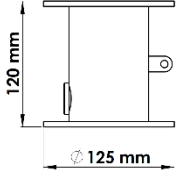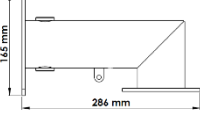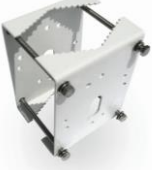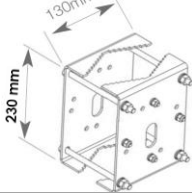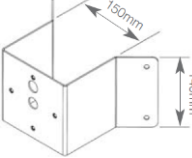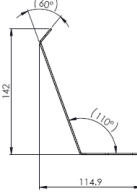
Night-time performance

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-G: 30:1 4MP Zoom Ball PTZ, WIPER - Light Grey **RVX2S-POE-G:** 30:1 4MP Zoom Ball PTZ, WIPER. High-PoE (802.3bt Midspan) 60W - Light Grey **RVX2S-ALM-G:** 30:1 4MP Zoom Ball PTZ, 4 alarm inputs, 2 alarm outputs, WIPER - Light Grey
	RVX2S-B: 30:1 4MP Zoom Ball PTZ, WIPER - Black **RVX2S-POE-B:** 30:1 4MP Zoom Ball PTZ, WIPER. High-PoE (802.3bt Midspan) 60W - Black **RVX2S-ALM-B:** 30:1 4MP Zoom Ball PTZ, 4 alarm inputs, 2 alarm outputs, WIPER - Black
	RVX2S-IR-G: 30:1 4MP Zoom Ball PTZ, IR, WIPER - Light Grey **RVX2S-POE-IR-G:** 30:1 4MP Zoom Ball PTZ, IR, WIPER. High-PoE (802.3bt Midspan) 90W - Light Grey **RVX2S-ALM-IR-G:** 30:1 4MP Zoom Ball PTZ, 4 alarm inputs, 2 alarm outputs, IR, WIPER - Light Grey
	RVX2S-IR-B: 30:1 4MP Zoom Ball PTZ, IR, WIPER - Black **RVX2S-POE-IR-B:** 30:1 4MP Zoom Ball PTZ, IR, WIPER. High-PoE (802.3bt Midspan) 90W - Black **RVX2S-ALM-IR-B:** 30:1 4MP Zoom Ball PTZ, 4 alarm inputs, 2 alarm outputs, IR, WIPER - Black
	RVX2S-IRWL-G: 30:1 4MP Zoom Ball PTZ, IR/ White Light, WIPER - Light Grey **RVX2S-POE-IRWL-G:** 30:1 4MP Zoom Ball PTZ, IR/ White Light, WIPER. High-PoE (802.3bt Midspan) 90W - Light Grey **RVX2S-ALM-IRWL-G:** 30:1 4MP Zoom Ball PTZ, 4 alarm inputs, 2 alarm outputs, IR/ White Light, WIPER - Light Grey
	RVX2S-IRWL-B: 30:1 4MP Zoom Ball PTZ, IR/ White Light, WIPER - Black **RVX2S-POE-IRWL-B:** 30:1 4MP Zoom Ball PTZ, IR/ White Light, WIPER. High-PoE (802.3bt Midspan) 90W - Black **RVX2S-ALM-IRWL-B:** 30:1 4MP Zoom Ball PTZ, 4 alarm inputs, 2 alarm outputs, IR/ White Light, WIPER - Black

![Redvision logo]

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	120 mm / Ø 125 mm
	RVX2-WALL-G: Wall mount bracket - Light Grey **RVX2-WALL-B**: Wall mount bracket - Black	165 mm / 286 mm
	RVX2-SWAN-G: Swan mount bracket - Light Grey **RVX2-SWAN-B**: Swan mount bracket - Black	425mm / 814mm / 125mm
	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	130mm / 230 mm
	RVX2-CNR-G: Corner Mount adapter for RVX2-WALL - Light Grey **RVX2-CNR-B**: Corner Mount adapter for RVX2-WALL - Black	150mm / 140mm
	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	60° / 142 / 110° / 114.9
	RVX2-PSU: 24V DC PSU for X2 non alarm and alarm ball PTZ	
Other	**RVX2-SD, RVX2-PC4, RV-POE-INJ-90W**	

![Redvision™ logo]

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	Color: 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°, H: 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: 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 / Brightness / Saturation / Sharpness / Contrast / Exposure Control / Scene
Noise Reduction	2D/3D DNR
Region of Interest	Off/On (8 Zone, Rectangle)
Privacy Masking	Supported

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, Profile G), SDK, CGI
Streaming Method	Unicast
Max. User Access	10 Users
Edge Storage	Built-in Micro SD slot, up to 256G
Web Viewer	Microsoft Windows: ≤IE11, Chrome, Firefox, Microsoft Edge MacOS: Chrome, Firefox

Intelligence & Alarm

Auto Tracking	Supported
Alarm	Motion alarm, Disk alarm, Day/Night switch alarm, Network alarm, Audio abnormal alarm, Alarm push

Electrical and Physical

Power Supply	24VDC via RVX2 PSU module; input 100~240VAC 50/60Hz. PoE Version: RJ45 socket, takes power & data (90W)
Power Consumption	24VDC: 50W. PoE: 802.3BT Midspan 90W (LED models)
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	ASTM B117 1000 hour Salt-Spray Test
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	BS EN 55032:2015+A11:2020, Class A BS EN 50130-4:2011+A1:2014
Camera Body	Marine finish as standard, Aluminium, die-cast alloy, with anodised, powdercoated finish
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	Distance covered
Detection	IR Light: 300m White Light: 250m
Observation	IR Light: 250m White Light: 200m
Recognition	IR Light: 150m White Light: 150m
Identify	IR Light: 75m White Light: 75m