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**
- **Intelligent, Auto- PTZ Tracking**

- **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™
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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, G and Q; 400 pre-sets, 12 tours, 12 scans, 6 tracks and 20 privacy masks; alarms, motion detection, intelligent analytics and tracking; 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.
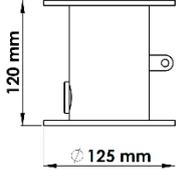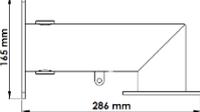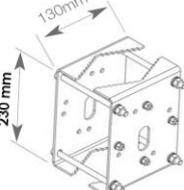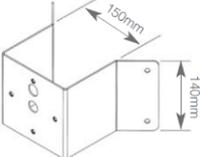
The X2-COMBAT™ has Osram adaptive illumination, automatically adjusting IR and white light intensity in proportion to zoom and scene content. This feature ensures scene images are well-lit, but not bleached by over-exposure.

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

Intelligent auto-PTZ tracking

The X2-COMBAT™ has intelligent, auto PTZ tracking where the camera will automatically follow people or vehicles moving within a scene, adjusting zoom and focus in real-time.

Image	Part Code and Description
	RVX2-G: 30:1 3MP Zoom Ball PTZ, WIPER - Light Grey **RVX2-POE-G:** 30:1 3MP Zoom Ball PTZ, WIPER. High-PoE (802.3bt Midspan) 60W - Light Grey **RVX2-ALM-G:** 30:1 3MP Zoom Ball PTZ, 4 alarm inputs, 2 alarm outputs, WIPER - Light Grey
	RVX2-B: 30:1 3MP Zoom Ball PTZ, WIPER - Black **RVX2-POE-B:** 30:1 3MP Zoom Ball PTZ, WIPER. High-PoE (802.3bt Midspan) 60W - Black **RVX2-ALM-B:**30:1 3MP Zoom Ball PTZ, 4 alarm inputs, 2 alarm outputs, WIPER - Black
	RVX2-IR-G: 30:1 3MP Zoom Ball PTZ, IR, WIPER - Light Grey **RVX2-POE-IR-G:** 30:1 3MP Zoom Ball PTZ, IR, WIPER. High-PoE (802.3bt Midspan) 90W - Light Grey **RVX2-ALM-IR-G:** 30:1 3MP Zoom Ball PTZ, 4 alarm inputs, 2 alarm outputs, IR, WIPER - Light Grey
	RVX2-IR-B: 30:1 3MP Zoom Ball PTZ, IR, WIPER - Black **RVX2-POE-IR-B:** 30:1 3MP Zoom Ball PTZ, IR, WIPER. High-PoE (802.3bt Midspan) 90W - Black **RVX2-ALM-IR-B:** 30:1 3MP Zoom Ball PTZ, 4 alarm inputs, 2 alarm outputs, IR, WIPER - Black
	RVX2-IRWL-G: 30:1 3MP Zoom Ball PTZ, IR/ White Light, WIPER - Light Grey **RVX2-POE-IRWL-G:** 30:1 3MP Zoom Ball PTZ, IR/ White Light, WIPER. High-PoE (802.3bt Midspan) 90W - Light Grey **RVX2-ALM-IRWL-G:** 30:1 3MP Zoom Ball PTZ, 4 alarm inputs, 2 alarm outputs, IR/ White Light, WIPER - Light Grey
	RVX2-IRWL-B: 30:1 3MP Zoom Ball PTZ, IR/ White Light, WIPER - Black **RVX2-POE-IRWL-B:** 30:1 3MP Zoom Ball PTZ, IR/ White Light, WIPER. High-PoE (802.3bt Midspan) 90W - Black **RVX2-ALM-IRWL-B:** 30:1 3MP Zoom Ball PTZ, 4 alarm inputs, 2 alarm outputs, 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	120 mm / ⌀ 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**	
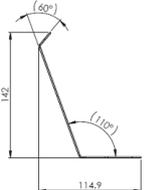
Camera Specification

Camera module	30x optical zoom, 3MP, 1/2.8" CMOS Low-Light sensor, True-ICR
Lens	4.5mm ~ 135mm FOV: 59.8° (Wide) ~ 2.3° (Tele)
Sensitivity	Colour: 0.01Lux @ F1.2 Monochrome: 0.0001Lux @ F1.2 (AGC ON)
Shutter Speed	Auto, 1-10,000/s
Iris	Auto/ Manual
Noise Reduction	3D Digital
Image Enhancement	dWDR, BLC, HLC, Defog
Digital Image Stabilisation	Yes
P/T Range	Pan: 360° continuous Tilt: 150° (Cantilever function gives 180° view range)
P/T Speed	Pan: 180°/sec Tilt: 90°/sec
Privacy	20 Masks, individual colour choice
Preset Positions	400
Preset Tours	12
Autopan Scans	12
Mimic Patterns	6
P/T Coordinates	Yes, OSD Display

Video Streaming

Video Compression	H.265, H.264, MJPEG
Streams	3 + Service Stream
Resolutions	Stream 1: 2048 x 1536 (3MP), 1920 x1080 (2MP), 1280 x 720 (1.3MP) Stream 2: D1, VGA, 640 x 360, CIF, QVGA Stream 3: VGA, CIF, QVGA
RTSP Video	RFC2326, Supports VLC & QuickTime
FPS	30fps max.
Bitrate	Stream 1: 500kbps ~ 12Mbps Stream 2: 100kbps ~ 6Mbps Stream 3: 100kbps ~ 6Mbps
ROI	Yes

Network Interface

Interface	Ethernet RJ45, 10-100 Base-T connection, T568A 10/100 Mode B
Supported Protocols	IPv4, HTTP, HTTPS, 802.1x, TCP, UDP, RTSP, DHCP, NTP, RTCP/RTP, PPPoE, SMTP, SNMP, DNS, UPnP, FTP, ICMP, IGMP, Unicast/ Multicast
Languages (Web interface)	English, French, Italian, Spanish, Russian
ONVIF	Profile S, G, Q
Edge Storage (optional)	Up to 256GB
Security	Base-64 authentication, HTTPS (SSL), 802.1x, IP Address Filtering

Events

Alarm I/O	4 in, 2 out
Intelligent Motion Tracking	Yes
Event Notifications/ Actions	Email (5 recipients), FTP Upload, SD Event recording, alarm output, live stream display, mobile app push notification.
Intelligent Analytics	Perimeter, Virtual Fences, Loitering, Objects left/Removed, Speed, Illegal Parking, with scene calibration and scheduling, email recipients upon event, FTP upload, record event to SD, ONVIF event notification and video overlay.
Motion Detection	Detection grid, scheduling
System Events	SD, Network issue, ICR Switch

Electrical & 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	EN 55032:2015 EN55035:2017 Class A
Camera body	Marine finish as standard, Aluminium, die-cast alloy, with anodised, powder-coated finish
Colour	RAL 7035 Light-Grey or RAL 9005 Black. Custom RAL made to order.
Internal Thermoregulation	Fan fitted Thermostatically controlled heater

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