



Key Features

- Tough, rugged camera, Marine-Grade finish as standard
- PoE 90W (802.3bt) Version available
- Adaptive White Light and IR (zoom-linked) operation – 500m target range.
- Intelligent, Auto- PTZ Tracking
- 37:1, 1/2" CMOS Starlight Sensor
- VMS Integration, including Redvision VMS1000TM
- Rugged Mounting Bracket Options
- Brushless Stepper Motors for Resilience and Durability
- ONVIF Compliant
- SD Card recording option, up to 256GB.

X4 COMMANDER™ rugged ball PTZ

The X4 COMMANDER™ rugged, ball PTZ cameras are designed for tough, outdoor, surveillance applications. The X4 COMMANDER™ 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 pre-treated before being powder coated, making the camera environmentally tough and resistant to malicious attack or vandalism.

Everything about the X4 COMMANDER™ rugged, ball PTZ is of high quality. All moving parts are designed to last; from its long-life, silicone wiper through to the motor technology used in its pan and tilt mechanism and its 37x 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 X4 COMMANDER™ 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 COMMANDER™ 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 X4 COMMANDER™ PTZ. Quick and simple setup directly from the COMMANDER™'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 X4 COMMANDER™ 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 X4 COMMANDER™ mounting

bracket has a 4" PCD mount with M8 clearance holes.

The X4 COMMANDER™ 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 X4 COMMANDER™ 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) offers quick and easy connectivity via RJ45 socket, operating over a full 100m Cat 5e span.

Night-time performance

The Redvision X4 COMMANDER™ 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 X4 COMMANDER™ performs up to 500m. Utilising the latest in sensor technology, the 1/2" CMOS Starlight sensor has exceptional low-light performance down to 0.001 Lux in colour.


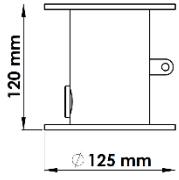

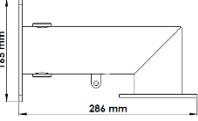


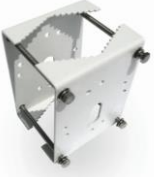
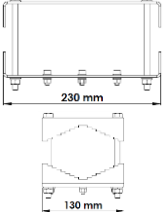

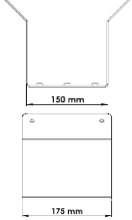



The X4 COMMANDER™ has adaptive Smart illumination, automatically adjusting IR and white light intensity in proportion to zoom and scene content. This feature ensures scene images are well-lit, but not bleached by over-exposure.

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

Intelligent auto-PTZ tracking

The X4 COMMANDER™ 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
	<p>RVX4-G: 37:1 3MP Zoom Ball PTZ, WIPER - Light Grey</p> <p>RVX4-POE-G: 37:1 3MP Zoom Ball PTZ, WIPER. High-PoE (802.3bt) 60W - Light Grey</p> <p>RVX4-ALM-G: 37:1 3MP Zoom Ball PTZ, 4 alarm inputs, 2 alarm outputs, WIPER - Light Grey</p>
	<p>RVX4-B: 37:1 3MP Zoom Ball PTZ, WIPER - Black</p> <p>RVX4-POE-B: 37:1 3MP Zoom Ball PTZ, WIPER. High-PoE (802.3bt) 60W - Black</p> <p>RVX4-ALM-B: 37:1 3MP Zoom Ball PTZ, 4 alarm inputs, 2 alarm outputs, WIPER - Black</p>
	<p>RVX4-IR-G: 37:1 3MP Zoom Ball PTZ, IR, WIPER - Light Grey</p> <p>RVX4-POE-IR-G: 37:1 3MP Zoom Ball PTZ, IR, WIPER. High-PoE (802.3bt) 90W - Light Grey</p> <p>RVX4-ALM-IR-G: 37:1 3MP Zoom Ball PTZ, 4 alarm inputs, 2 alarm outputs, IR, WIPER - Light Grey</p>
	<p>RVX4-IR-B: 37:1 3MP Zoom Ball PTZ, IR, WIPER - Black</p> <p>RVX4-POE-IR-B: 37:1 3MP Zoom Ball PTZ, IR, WIPER. High-PoE (802.3bt) 90W - Black</p> <p>RVX4-ALM-IR-B: 37:1 3MP Zoom Ball PTZ, 4 alarm inputs, 2 alarm outputs, IR, WIPER - Black</p>
	<p>RVX4-IRWL-G: 37:1 3MP Zoom Ball PTZ, IR/ White Light, WIPER - Light Grey</p> <p>RVX4-POE-IRWL-G: 37:1 3MP Zoom Ball PTZ, IR/ White Light, WIPER. High-PoE (802.3bt) 90W - Light Grey</p> <p>RVX4-ALM-IRWL-G: 37:1 3MP Zoom Ball PTZ, 4 alarm inputs, 2 alarm outputs, IR/ White Light, WIPER - Light Grey</p>
	<p>RVX4-IRWL-B: 37:1 3MP Zoom Ball PTZ, IR/ White Light, WIPER - Black</p> <p>RVX4-POE-IRWL-B: 37:1 3MP Zoom Ball PTZ, IR/ White Light, WIPER. High-PoE (802.3bt) 90W - Black</p> <p>RVX4-ALM-IRWL-B: 37:1 3MP Zoom Ball PTZ, 4 alarm inputs, 2 alarm outputs, IR/ White Light, WIPER - Black</p>

Image	Part Code and Description	Drawing
	<p>RVX4-STANDOFF-G: 120 mm Standoff mount bracket - Light Grey</p> <p>RVX4-STANDOFF-B: 120 mm Standoff mount bracket - Black</p>	
	<p>RVX4-WALL-G: Wall mount bracket - Light Grey</p> <p>RVX4-WALL-B: Wall mount bracket - Black</p>	
	<p>RVX4-SWAN-G: Swan mount bracket - Light Grey</p> <p>RVX4-SWAN-B: Swan mount bracket - Black</p>	
	<p>RVX4-POLE-G: Pole mount adaptor 60-90mm for Wall Bracket - Light Grey</p> <p>RVX4-POLE-B: Pole mount adaptor 60-90mm for Wall Bracket - Black</p>	
	<p>RVX4-CNR-G: Corner Mount adapter for Wall Bracket - Light Grey</p> <p>RVX4-CNR-B: Corner Mount adapter for Wall Bracket - Black</p>	
	<p>RVX2-WASH: Washer nozzle kit – compatible with standard CCTV wash pumps</p>	
	<p>RVX2-PSU: 24V DC PSU for X2/X3/X4 non alarm and alarm ball PTZ</p>	
<p>Other</p>	<p>RVX4-SD, RVX4-PC4, RV-POE-INJ-90W</p>	

Camera Specification

Camera module	37x optical zoom, 2MP, 1/2" CMOS Starlight sensor, True-ICR
Lens	6mm ~ 222mm FOV: 60° (Wide) ~ 2° (Tele)
Sensitivity	Colour: 0.001Lux @ 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	H.265, H.264, MJPEG
Compression	
Streams	3 + Service Stream
Resolutions	Stream 1: 1920 x 1080 (2MP), 1280 x 720 (1.2MP) Stream 2: D1, VGA, 640 x 360, CIF, QVGA Stream 3: VGA, CIF, QVGA
RTSP Video	RFC2326, Supports VLC & QuickTime
FPS	60fps max.
Bitrate	Stream 1: 200kbps ~ 12Mbps Stream 2: 100kbps ~ 6Mbps Stream 3: 100kbps ~ 6Mbps
ROI	Yes

Network Interface

Interface	Ethernet RJ45, 10-100Base-T connection
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: 90W (LED models)
Dimensions	Non-LED models: H 418mm W 230mm LED models: H 418mm W 365mm
Weight	8kg without lamps, 10kg with lamps
Operating Temperature	-40°C ~ +70°C
Impact rating	(Light colours only, Black: 50°C) Meets IK10 standards (with Polycarbonate window fitted)
Corrosion Testing	ASTM B117 1000 hour Salt-Spray Test
Ingress protection	Meets IP67 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 E-Coat, powder-coated finish
Colour	RAL 7035 Light-Grey or RAL 9005 Black. Custom RAL made to order.

Lighting & DORI

Illumination Range	IR (850nm) to 500m White Light to 300m
DORI Category	Distance covered
Detection	IR Light: 500m White Light: 300m
Observation	IR Light: 275m White Light: 225m
Recognition	IR Light: 175m White Light: 175m
Identify	IR Light: 90m White Light: 90m

