

CCTV | IP &amp; Analogue PTZ

## X4 COMMANDER S - Hybrid



### Key Features

- Dual IP and Analogue PTZ Camera
- Pelco P and D Telemetry
- Tough, rugged camera, Marine-Grade finish as standard
- Dual HD Streaming
- Adaptive White Light and IR (zoom-linked) operation – 500m target range.
- VMS Integration, including Redvision VMS1000
- 37:1, 1/1.8" CMOS Starlight Sensor
- Brushless Stepper Motors for Resilience and Durability
- ONVIF (Profile S, G & T) Compliant
- SD Card recording option, up to 256GB.

## **X4 COMMANDER Hybrid 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 anodised 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.

### **Dual Analogue and IP PTZ**

The Hybrid X4 COMMANDER 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 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.

### **VMS Integration Including Redvision VMS1000**

Redvision's VMS1000 (powered by Digifort) 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. This level of integration provides users with simple access to the cameras auxiliary commands, including wiper and white light control.

## **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. A complete range of brackets, mounts and cable extensions are also available, which are zinc plated then powder coated.

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<sup>TM</sup>, 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 T; 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 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.

The X4 COMMANDER 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.



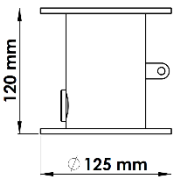

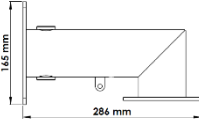

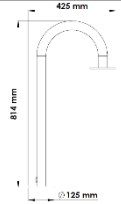

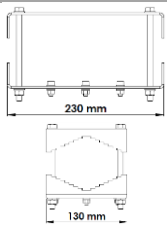

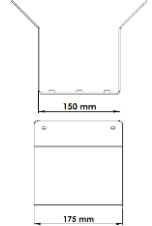


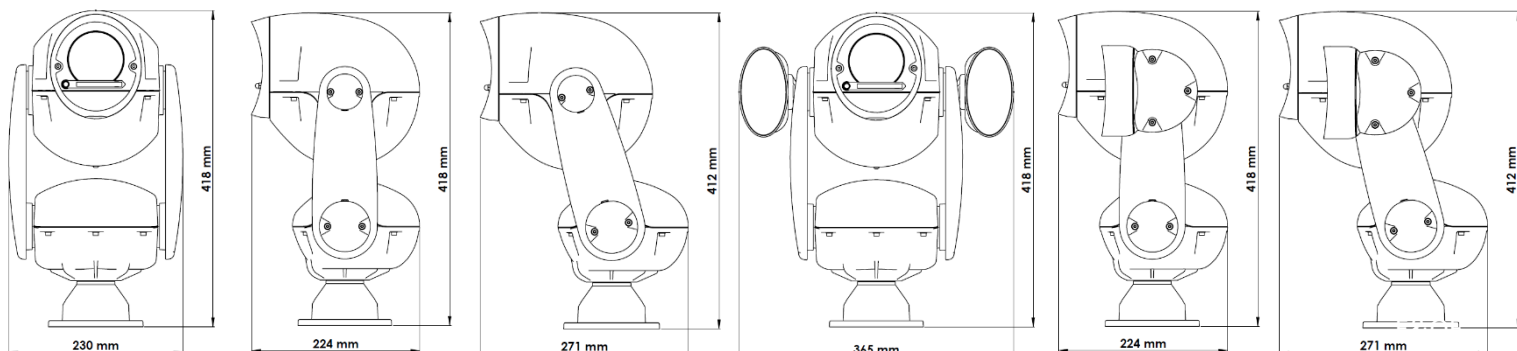
Image	Part Code and Description
	<b>RVX4S-HYB-G:</b> 37:1 4MP Hybrid IP and Analogue Zoom Ball PTZ, WIPER - Light Grey <b>RVX4S-HYB-ALM-G:</b> 37:1 4MP Hybrid IP and Analogue Zoom Ball PTZ, 4 alarm inputs, 2 alarm outputs, WIPER - Light Grey
	<b>RVX4S-HYB-B:</b> 37:1 4MP Hybrid IP and Analogue Zoom Ball PTZ, WIPER - Black <b>RVX4S-HYB-ALM-B:</b> 37:1 4MP Hybrid IP and Analogue Zoom Ball PTZ, 4 alarm inputs, 2 alarm outputs, WIPER - Black
	<b>RVX4S-HYB-IR-G:</b> 37:1 4MP Hybrid IP and Analogue Zoom Ball PTZ, IR, WIPER - Light Grey <b>RVX4S-HYB-ALM-IR-G:</b> 37:1 4MP Hybrid IP and Analogue Zoom Ball PTZ, 4 alarm inputs, 2 alarm outputs, IR, WIPER - Light Grey
	<b>RVX4S-HYB-IR-B:</b> 37:1 4MP Hybrid IP and Analogue Zoom Ball PTZ, IR, WIPER - Black <b>RVX4S-HYB-ALM-IR-B:</b> 37:1 4MP Hybrid IP and Analogue Zoom Ball PTZ, 4 alarm inputs, 2 alarm outputs, IR, WIPER - Black
	<b>RVX4S-HYB-IRX-G:</b> 37:1 4MP Hybrid IP and Analogue Zoom Ball PTZ, Extra Long-Range IR up to 500m, WIPER - Light Grey <b>RVX4S-HYB-ALM-IRX-G:</b> 37:1 4MP Hybrid IP and Analogue Zoom Ball PTZ, 4 alarm inputs, 2 alarm outputs, Extra Long-Range IR up to 500m, WIPER - Light Grey
	<b>RVX4S-HYB-IRX-B:</b> 37:1 4MP Hybrid IP and Analogue Zoom Ball PTZ, Extra Long-Range IR up to 500m, WIPER - Black <b>RVX4S-HYB-ALM-IRX-B:</b> 37:1 4MP Hybrid IP and Analogue Zoom Ball PTZ, 4 alarm inputs, 2 alarm outputs, Extra Long-Range IR up to 500m, WIPER - Black
	<b>RVX4S-HYB-IRWL-G:</b> 37:1 4MP Hybrid IP and Analogue Zoom Ball PTZ, IR/ White Light, WIPER - Light Grey <b>RVX4S-HYB-ALM-IRWL-G:</b> 37:1 4MP Hybrid IP and Analogue Zoom Ball PTZ, 4 alarm inputs, 2 alarm outputs, IR/ White Light, WIPER - Light Grey
	<b>RVX4S-HYB-IRWL-B:</b> 37:1 4MP Hybrid IP and Analogue Zoom Ball PTZ, IR/ White Light, WIPER - Black <b>RVX4S-HYB-ALM-IRWL-B:</b> 37:1 4MP Hybrid IP and Analogue Zoom Ball PTZ, 4 alarm inputs, 2 alarm outputs, IR/ White Light, WIPER - Black

Image	Part Code and Description	Drawing
	<b>RVX4-STANDOFF-G:</b> 120 mm Standoff mount bracket - Light Grey <b>RVX4-STANDOFF-B:</b> 120 mm Standoff mount bracket - Black	 120 mm 125 mm
	<b>RVX4-WALL-G:</b> Wall mount bracket - Light Grey <b>RVX4-WALL-B:</b> Wall mount bracket - Black	 145 mm 286 mm
	<b>RVX4-SWAN-G:</b> Swan mount bracket - Light Grey <b>RVX4-SWAN-B:</b> Swan mount bracket - Black	 425 mm 814 mm 125 mm
	<b>RVX4-POLE-G:</b> Pole mount adaptor 60-90mm for Wall Bracket - Light Grey <b>RVX4-POLE-B:</b> Pole mount adaptor 60-90mm for Wall Bracket - Black	 230 mm 130 mm
	<b>RVX4-CNR-G:</b> Corner Mount adapter for Wall Bracket - Light Grey <b>RVX4-CNR-B:</b> Corner Mount adapter for Wall Bracket - Black	 150 mm 175 mm
	<b>RVX4-BIRD-SPIKE:</b> Multiple Anti-Perch Bird Spike Attachment	
	<b>RV-HYB-PSU:</b> 24V DC PSU for X2/X3/X4 Hybrid Camera	
Other	<b>RVX4-SD, RVX4-PC4, RVX2-WASH</b>	



Camera	
Image Sensor	1/1.8" Progressive Scan CMOS
Effective Pixels	2592(H)×1520(V)
Electronic Shutter	Auto/Manual, 1/5 ~ 1/20,000s
Min. illumination	Colour: 0.005Lux @ F1.5 Monochrome: 0.0005Lux @ F1.5 (AGC 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	6.8 ~ 251mm
Max. Aperture	F1.6 ~ F4.3
Angle of View	60.7° (Wide) ~ 2.33° (Tele)
Optical Zoom	37x
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 x 1080, 1280 x 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	
Interface	Ethernet RJ45, 10-100 Base-T connection
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 and T), SDK, CGI
Streaming Method	Unicast
Max. User Access	10 Users
Edge Storage	Built-in Micro SD slot, up to 256G
Web Viewer	Microsoft Windows: Chrome, Firefox, Microsoft Edge, Opera. 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
Alarm I/O	4 in, 2 out
Object Detection	Face, human, vehicle detection and capture
Smoke and Fire Detection	Supported
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 via RV-HYB-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	8kg without lamps, 10kg with lamps
Operating Temperature	-40°C ~ +70°C
Impact Rating	(Light colours only, Black: 50°C)
Corrosion Testing	Meets IK10 standards (with Polycarbonate window fitted)
Ingress Protection	BS EN ISO 9227:2022 1000 Hours Salt Spray
Vibration Testing	Meets IP68 standards
EMC	TEN 50556:2011, clauses 6.3.2 & 11 (Table 3, Class AL2) EN 60068-2-64-2008 Test Fh
Camera Body	See Technical Standards
Wiper Blade	Marine finish as standard, Aluminium, die-cast alloy, with pretreated, powder coated finish
Colour	Tooled silicone
Lighting & DORI	RAL 7035 Light-Grey or RAL 9005 Black. Custom RAL made to order.
Illumination Range	IR (850nm) to 500m (IRX Variant) , 400m (IR/IRWL) White Light to 300m
DORI Category	Distance covered
Detection	IR Light: 500m (IRX) White Light: 300m
Observation	IR Light: 275m White Light: 225m
Recognition	IR Light: 175m White Light: 175m
Identify	IR Light: 90m White Light: 90m



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 Conudcted 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
Conudcted 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