



## 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<sup>TM</sup>
- Rugged Mounting Bracket Options
- Brushless Stepper Motors for Resilience and durability
- ONVIF Compliant
- SD Card recording option, up to 256GB.

### **X2 COMBAT<sup>TM</sup> rugged ball PTZ**

The X2-COMBAT<sup>TM</sup> rugged, ball PTZ cameras are designed for tough, outdoor, surveillance applications. The X2-COMBAT<sup>TM</sup> 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<sup>TM</sup> 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<sup>TM</sup> 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<sup>TM</sup> 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<sup>TM</sup> PTZ. Quick and simple setup directly from the COMBAT<sup>TM</sup>'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<sup>TM</sup> 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<sup>TM</sup> 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<sup>TM</sup> 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 X2-COMBAT<sup>TM</sup> 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.


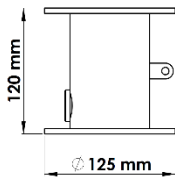

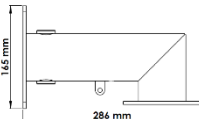

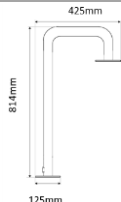

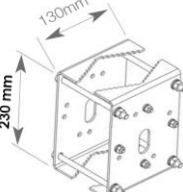

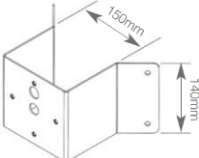


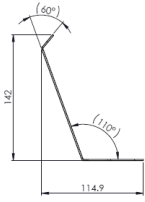

### **Night-time performance**

The Redvision X2-COMBAT<sup>TM</sup> 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<sup>TM</sup> performs up to 300m.

The X2-COMBAT<sup>TM</sup> 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>RVX2S-G:</b> 30:1 4MP Zoom Ball PTZ, WIPER - Light Grey  |
|   | <b>RVX2S-POE-G:</b> 30:1 4MP Zoom Ball PTZ, WIPER. High-PoE (802.3bt Midspan) 60W - Light Grey                        |
|   | <b>RVX2S-ALM-G:</b> 30:1 4MP Zoom Ball PTZ, 4 alarm inputs, 2 alarm outputs, WIPER - Light Grey                       |
|    | <b>RVX2S-B:</b> 30:1 4MP Zoom Ball PTZ, WIPER - Black   |
|   | <b>RVX2S-POE-B:</b> 30:1 4MP Zoom Ball PTZ, WIPER. High-PoE (802.3bt Midspan) 60W - Black                             |
|   | <b>RVX2S-ALM-B:</b> 30:1 4MP Zoom Ball PTZ, 4 alarm inputs, 2 alarm outputs, WIPER - Black                            |
|   | <b>RVX2S-IR-G:</b> 30:1 4MP Zoom Ball PTZ, IR, WIPER - Light Grey   |
|   | <b>RVX2S-POE-IR-G:</b> 30:1 4MP Zoom Ball PTZ, IR, WIPER. High-PoE (802.3bt Midspan) 90W - Light Grey                 |
|   | <b>RVX2S-ALM-IR-G:</b> 30:1 4MP Zoom Ball PTZ, 4 alarm inputs, 2 alarm outputs, IR, WIPER - Light Grey                |
|  | <b>RVX2S-IR-B:</b> 30:1 4MP Zoom Ball PTZ, IR, WIPER - Black  |
|   | <b>RVX2S-POE-IR-B:</b> 30:1 4MP Zoom Ball PTZ, IR, WIPER. High-PoE (802.3bt Midspan) 90W - Black                      |
|   | <b>RVX2S-ALM-IR-B:</b> 30:1 4MP Zoom Ball PTZ, 4 alarm inputs, 2 alarm outputs, IR, WIPER - Black                     |
|  | <b>RVX2S-IRWL-G:</b> 30:1 4MP Zoom Ball PTZ, IR/ White Light, WIPER - Light Grey                                      |
|   | <b>RVX2S-POE-IRWL-G:</b> 30:1 4MP Zoom Ball PTZ, IR/ White Light, WIPER. High-PoE (802.3bt Midspan) 90W - Light Grey  |
|   | <b>RVX2S-ALM-IRWL-G:</b> 30:1 4MP Zoom Ball PTZ, 4 alarm inputs, 2 alarm outputs, IR/ White Light, WIPER - Light Grey |
|  | <b>RVX2S-IRWL-B:</b> 30:1 4MP Zoom Ball PTZ, IR/ White Light, WIPER - Black   |
|   | <b>RVX2S-POE-IRWL-B:</b> 30:1 4MP Zoom Ball PTZ, IR/ White Light, WIPER. High-PoE (802.3bt Midspan) 90W - Black       |
|   | <b>RVX2S-ALM-IRWL-B:</b> 30:1 4MP Zoom Ball PTZ, 4 alarm inputs, 2 alarm outputs, IR/ White Light, WIPER - Black      |

| Image   | Part Code and Description   | Drawing   |
|---|---|---|
|    | <b>RVX2-STANDOFF-G:</b> 120 mm Standoff mount bracket - Light Grey<br><b>RVX2-STANDOFF-B:</b> 120 mm Standoff mount bracket - Black   |    |
|    | <b>RVX2-WALL-G:</b> Wall mount bracket - Light Grey<br><b>RVX2-WALL-B:</b> Wall mount bracket - Black   |    |
|    | <b>RVX2-SWAN-G:</b> Swan mount bracket - Light Grey<br><b>RVX2-SWAN-B:</b> Swan mount bracket - Black   |    |
|   | <b>RVX2-POLE-G:</b> Pole mount adaptor 60-90mm for RVX2-WALL - Light Grey<br><b>RVX2-POLE-B:</b> Pole mount adaptor 60-90mm for RVX2-WALL - Black   |   |
|  | <b>RVX2-CNR-G:</b> Corner Mount adapter for RVX2-WALL - Light Grey<br><b>RVX2-CNR-B:</b> Corner Mount adapter for RVX2-WALL - Black   |  |
|  | <b>RVX2-VISOR-G:</b> Sun & rain Visor (only applies when camera is mounted in upright position) - Light Grey<br><b>RVX2-VISOR-B:</b> Sun & rain Visor (only applies when camera is mounted in upright position) - Black |   |
|  | <b>RVX2-WASH:</b> Washer nozzle kit – compatible with standard CCTV wash pumps  |  |
|  | <b>RVX2-PSU:</b> 24V DC PSU for X2 non alarm and alarm ball PTZ   |   |
| Other   | <b>RVX2-SD, RVX2-PC4, RV-POE-INJ-90W</b>  |   |

| 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)<br>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   |
| Digital Zoom         | 16x   |
| Focus Control        | Auto/Manual   |
| PTZ                  |   |
| Pan/Tilt Range       | Pan: 360° continuous Tilt: 150°<br>(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<br>Stream2: D1, VGA, 640×360, CIF, QVGA @ 25/30fps<br>Stream3: VGA, CIF, QVGA @ 25/30fps |
| Bit Rate Control     | CBR/VBR   |
| Bit Rate             | Stream1: 200kbps~12Mbps<br>Stream2: 10kbps~3Mbps<br>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, RTPC/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<br>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<br>LED models: H 340mm W 293mm   |
| Weight                  | 5.2kg without lamps, 5.8kg with lamps  |
| Operating Temperature   | -40°C ~ +70°C<br>(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<br>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<br>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   |

