

COEX™ C2000 4K IP TriMode PTZ Camera Station

The COEX™ C2000 4K IP TriMode PTZ Camera Station has a unique compact and lightweight design developed specifically to meet the worldwide demand for surveillance and process monitoring of harsh industrial and marine environments, providing unprecedented visual feedback in all lighting conditions.



The COEX C2000 marine camera stations are manufactured from the highest-grade, corrosion-resistant, electro-polished 316L stainless steel. They are designed for toughness and durability to operate in the most adverse environments, from freezing temperatures to the blistering heat of desert conditions.

This premium-performance camera station combines Full 4K video with 20x optical zoom and the latest thermal imaging technology, providing comprehensive coverage of a wide range of specific site applications where the benefits of using visible and thermal imaging are required.

Featuring the latest encoding technology (3rd generation IP encoder), the camera station is capable of quad-stream H.264 and H.265 encoding for simultaneous live view and recording.

Utilising the advanced radiometry feature, the camera station can provide real-time temperature data and differential temperature monitoring of critical devices and applications.

The C2000 4K IP TriMode PTZ Camera Station has cybersecurity measures built-in, including encrypted video streaming, HTTPS, and 802.1x protocols.

This camera station is compatible with a variety of VMS platforms through ONVIF Profile S and T compliance.

Options

- Integral wiper
- COEX MEWS5 wash systems
- Advanced radiometry⁷
- Continuous rotation

	316L STAINLESS STEEL	 IP66/IP67
 CYBERSECURITY	 -45°C/+70°C	 H.264 H.265
 TRIMODE	 4K UHD	 THERMAL SENSOR
 20x ZOOM	Quad Streaming	 RADIOMETRICS

Specifications

CERTIFICATIONS / RATINGS ⁵		[OPTIONS]
EMC	EMC EN61000-6-2, EN61000-6-4 Class A limits	
CE / UKCA	IEC62368-1	
DNV	TAA00001M2	
ENVIRONMENTAL		
Operating Temperature ⁶	-45°C to +60°C [+70°C] / -49°F to +140°F [+158°F]	
Storage Temperature	-45°C to +80°C / -49°F to +176°F	
Ingress Protection	IP66 & IP67 to IEC60529, Type 6 Enclosure	
Salt Mist	IEC60068-2-52 & IEC60945 Section 8.12	
Vibration	0.7 g to IEC60068-2-6 & IEC60945	
Wind Loading	Operational to 130 km/h, survival to 268 km/h	
Humidity	5% to 95%	
MECHANICAL		
Material	Electro-polished 316L stainless steel	
Window	Optical: HD grade toughened glass, thermostatically operated demister [Wiper ²] Thermal: Germanium window with DLC (Diamond-Like Carbon) coating and impact guard	
Pan Turning Circle	Ø 630 mm / 24.80"	
Tilt Turning Circle	Ø 416 mm / 16.38"	
Mounting Orientation	Upright or inverted	
Mounting Base	4 x M8 tapped holes, equispaced on a 4" (101.6 mm) P.C.D.	
Dimensions ¹ (W x D x H)	412 x 310 x 338 mm / 16.22" x 12.21" x 13.31"	
Weight ¹	18 kg / 39.7 lb	
Cable Gland Entries	1 x M20	
ELECTRICAL		
Power Requirements	24 V AC/DC (±10%) 50/60 Hz	
Power Consumption ¹	11 VA Quiescent 72 VA Operating 80 VA Operating (with heater) 100 VA Max	
Wash Control ¹	24 V AC/DC (0.75 A max) switched output	
Auxiliary Inputs ³	1 x contact closure input (5 V pull up) [additional inputs available on request]	
Relay Outputs ³	1 x volt free switched output (24 V 0.75 A max) [up to 2 available on request]	
Audio ³	[Line Input]	
CAMERA OPERATION	362° Rotation	[Continuous Rotation]
Pan Operation	0° to 42°/sec, mechanical limits, programmable soft-stops, preset positioning	0° to 42°/sec, programmable soft-stops, preset positioning
Tilt Operation	180° rotation, 0° to 21°/sec, mechanical limits, programmable soft stops, preset positioning	
Preset Memory	128 user programmable preset positions (pan, tilt, zoom, and focus), preset accuracy <0.05°, absolute positioning	
PTZ Features	Proportional pan & tilt control in relation to zoom depth, intelligent focus	
Wash/Wipe ¹	[Optional wash/wipe with auto-wiper off]	
ONVIF Control Features	PTZ control (continuous, relative and absolute), focus control, preset store/recall, auxiliary controls (wash/wipe/auto focus), wash/wipe control mappable to ONVIF presets for control systems that have no support for auxiliary commands, alarm inputs, and relay outputs	

DAY/NIGHT CAMERA / LENS	
Image Sensor	1/2.5 Exmor-R CMOS sensor
Signal System	4K 2160p 25/29.97 FPS FHD 1080p 25/29.97/50/59.94 FPS
Effective Pixels	8.51 mega pixels
Zoom Range	20x zoom (up to 240x with digital zoom)
Focal Length / Aperture	4.4 mm (wide) to 88 mm (tele), F2.0 to F3.8
Angle of View (H)	70.2° (wide) to 4.1° (tele), 60° (wide) to 3.5° (tele) with image stabilizer on
Minimum Illumination (50IRE, High Sensitivity Mode)	0.4 lux (1/30 s) 0.06 lux (1/4 s, 1/3 s)
Minimum Illumination (50IRE)	1.6 lux (1/30 s) 0.21 lux (1/4 s, 1/3 s)
Electronic Shutter	1/1 to 1/10,000 sec, 28 steps
Signal / Noise Ratio	> 50 db (weight on)
Features	Digital zoom on/off, auto/manual focus, auto/manual iris, auto/manual IR cut filter remove (ICR), auto exposure (AE), automatic gain control (AGC), auto white balance (AWB), backlight compensation (BLC), auto slow shutter, visibility enhancer (VE), defog, highlight compensation (HLC), Noise Reduction (NR)
Image Stabilization	EIS

OTHER THERMAL IMAGER	T306	T318	T614	T618	T624	T636
Image Sensor	Uncooled LWIR VOx microbolometer					
Pixel Pitch	12 µm					
Thermal Sensitivity	<50 mK at f/1.0					
Spectral Response	8 - 14 µm					
Refresh Rate	<9Hz [$<60\text{Hz}$] [25 Hz / 30 Hz]					
Pixel Resolution ⁶	320 x 256			640 x 512		
Fixed Focal Length	6.3 mm f/1.0	18 mm f/1.0	14 mm f/1.0	18 mm f/1.0	24 mm f/1.0	36 mm f/1.0
Angle of View	34.1° x 27.3°	12.7° x 9.7°	30.7° x 24.8°	24.3° x 19.5°	18.2° x 14.6°	12.2° x 9.8°
Features	8x digital zoom, auto/manual gain mode (AGC), auto/manual FFC(NUC), selectable colour palettes, second generation digital detail enhancement (DDE), image optimisation, active contrast enhancement (ACE), information based histogram equalisation (IBHEQ)					
Advanced Radiometry	When used with Synergy, the advanced radiometry feature provides four regions of interest per preset position that can be individually monitored or compared against one another for temperature threshold changes.					

VIDEO ENCODING	
Compression Standards	H.264 (MPEG4 part 10/AVC) high, main, base profiles H.265 (MPEG-H part 2/HEVC), MJPEG
Bitrate Mode	Constant Bitrate (CBR), Variable Bitrate (VBR)
Encoding Capability	Simultaneous streaming of both day/night and thermal images Up to 2 independently configurable encoded video streams per image sensor
Stream Bitrate ⁴	100 kb/s to 25 Mb/s
Image Resolution ^{4/5}	Day/Night Camera: 4K (3840 x 2160), Full HD 1080p (1920 x 1080), 720p (1280 x 720), D1 (720 x 576/480), 4CIF (704 x 576), CIF (352 x 288) Thermal Imager: Native (640x512 or 320x256), D1 (720 x 576/480), VGA (640 x 480), QVGA (320 x 240)
Image Rate ⁴	Thermal (Full, half, quarter, sixth), 4K (up to 60 IPS)
GOP Structure	I-frame only, 5 to 240 frames
Region of Interest (ROI)	Configurable per encoded video stream, ability to crop a selected area of the image source for encoding (variable resolution and aspect ratio)

AUDIO ENCODING	
Compression Standards	ARM AACLC, ARM AACLC MPEG2, ARM AACHE, ARM AACHE V2
Sample Rate	48 kHz, 44.1 kHz, 32 kHz, 16 kHz
Stream Bitrate	12 to 384 kb/s (AACHE and AACHE V2 32 to 64 kb/s)

NETWORK DEVICE	
Interface Options	Ethernet (100Base-T, 10-Base-T), Auto/full/half duplex, Auto/10/100, Configurable MTU Size
Protocols	TCP/IP, UDP, ICMP, DHCP, DNS, HTTP, HTTPS, NTP, RTSP/RTP/RTCP, TSRTSP, RTMP, RTMPS, SRT, IGMP, SNMP, SYNS, SSL, TLS, 802.1x (EAP)
Control Protocol	SYNS, ONVIF (Profile S, T compliant)
Video Stream Delivery	RTSP/RTP (Unicast: UDP/TCP, Multicast UDP), TSRTSP, RTMP, RTMPS, SRT
Network Discovery	SYNS, WS-Discovery (ONVIF)
Device Security	Multiple users and 7 access levels protecting access to the web interface, ONVIF and RTSP services, HTTPS support, HTTP disable, 802.1x (EAP), video streaming disabled until change of default password, unicast stream disable
Supported Internet Browsers ^{*9}	Chrome/Firefox/Edge (No Active-X browser components required)
System Maintenance	Field upgradeable firmware, diagnostic logs Hardware system supervisor providing temperature management, cold-start, auto-shutdown and watchdog control

NOTE: *1 Dependent on certification and equipment fitted. *2 Wipers are consumable items that need regular replacement. Please refer to the manual for recommendations and maintenance. *3 Dependent on cable tail option. *4 Maximum permissible resolution, bitrate and framerate per additional stream will be reduced dependent on the configuration of the primary stream. *5 Exact certification requirements must be specified at the time of order. *6 Dependent on lens selection. *7 Advanced Radiometrics Service Pack 1. Advanced Radiometrics Service Pack 2 with added bonus features to follow. *8 Dependent on configuration. *9 Other browsers may be compatible but not tested.

PART CODE STRUCTURE

C2 - A B C D - E - F G H J

(Example) C2 - 2 V 85 T306 - W - B [] E X

A - CAMERA HOUSING SIZE
2 Size 2 camera housing

B - FIXED/PTZ
C PTZ - Continuous pan
V PTZ - Non-continuous pan

C - DAY/NIGHT CAMERA
85 4K UHD, 20x zoom

D - THERMAL IMAGING MODULE
T306 Medium resolution, 35° HFOV
T318 Medium resolution, 13° HFOV
T614 High resolution, 32° HFOV
T618 High resolution, 25° HFOV
T624 High resolution, 18° HFOV
T636 High resolution, 12° HFOV

E - WIPER
Without wiper
W Standard wiper
B Brush wiper

J - SPECIAL
Standard build
X Special build

H - OUTPUT TRANSMISSION TYPE
E Ethernet Base-T

G - BASE/MOUNTING TYPE
Standard PTZ mounting

F - TECHNOLOGY SERIES
B 3rd Gen, IP encoder