COEX™ C3000 HD IP TriMode PTZ Camera Station

The COEX™ C3000 HD IP TriMode PTZ Camera Station has a unique compact and lightweight design developed specifically for hazardous-area applications. C3000 camera stations are designed for both toughness and durability as demanded for operation in the most adverse of environments, providing unprecedented visual feedback in all lighting conditions.

COEX C3000 hazardous-area camera stations operate in the most extreme environments worldwide. Designed for toughness, durability, and certified to perform in ambient temperatures from -55°C to +70°C without compromise, they are ideal for oil and gas, marine, and industrial installations.

This premium-performance camera station combines Full HD (1080p) video with 30x 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 (2nd generation IP encoder), the camera station is capable of quad-stream H.264 and H.265 encoding for simultaneous live view and recording.

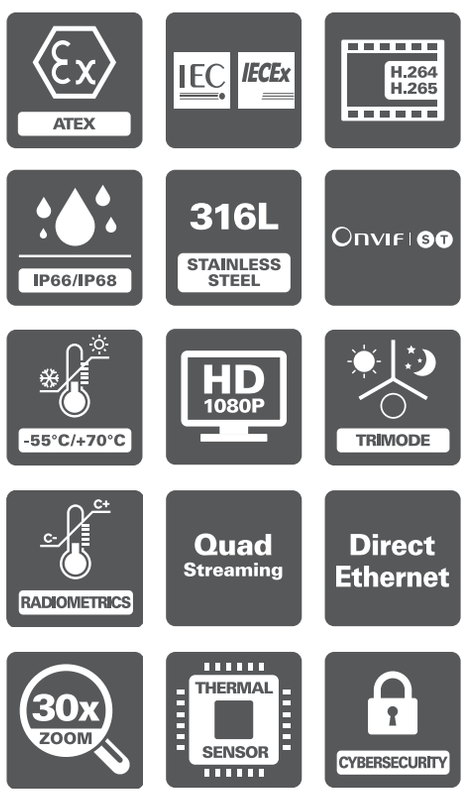
Utilizing the advanced radiometry feature, the camera station can provide real-time temperature data and differential temperature monitoring of critical devices and applications.

The C3000 HD 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 FEWS3 wash systems
- Continuous rotation
- Advanced radiometry



SYNECTICS

Specifications

CERTIFICATIONS / RATINGS*7	[OPTIONS]
ATEX / IECEx / UKCA	ATEX II 2GD, Ex db IIB/IIC Gb; Ex tb IIIC Db; T4 / T5 / T6 EN60079-0, EN60079-1, EN60079-28, EN60079-31, IEC60079-0, IEC60079-1, IEC60079-28, IEC60079-31
ATEX / IECEx / UKCA Certified Temperature	-55°C to +40°C (T6), +50°C (T5), +60/70°C (T4)
EMC	EN61000-6-2, EN 61000-6-4, Class A limits
CE / UKCA	IEC62368-1, IEC60825-1
DNV	TAA00001M2
INMETRO	BRA 21.GE0018X
C-Tick	On Request

ENVIRONMENTAL	
Operating Temperature	-45°C to +70°C /-49°F to +158°F
Storage Temperature	-45°C to +80°C /-49°F to +176°F
Ingress Protection	IP66 & IP68 (30m Submersion for 4 hrs) 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

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 660 mm / 25.98"
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)	430 x 310 x 368 mm / 16.93" x 12.21" x 14.49"
Weight*1	29 kg / 63.9 lb
Cable Gland Entries	2 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	1/2.8" Progressive scan Exmor CMOS sensor
Signal System	1080p 25/30/50/60 FPS
Effective Pixels	Approximately 2.13 megapixels
Zoom Range	30x zoom (up to 360x with digital zoom)
Focal Length/Aperture	4.3 mm (wide) to 129 mm (tele), F1.6 to F4.7
Angle of View (H)	63.7° (wide) to 2.3° (tele)
Minimum Illumination (50IRE, ICR OFF)	0.1 lux (1/30 s, Slow Shutter Off, High Sensitivity Off), 0.01 lux (1/30 s, Slow Shutter Off, High Sensitivity On) 0.013 lux (Slow Shutter 1/4 s, High Sensitivity Off), 0.0012 lux (Slow Shutter 1/4 s, High Sensitivity On)
Minimum Illumination (50IRE, ICR ON)	0.006 lux (Slow Shutter Off, High Sensitivity Off), 0.0015 lux (Slow Shutter Off, High Sensitivity On)
Minimum Illumination (30IRE, ICR ON)	0.0008 lux (Slow Shutter 1/4 s, High Sensitivity On)
Wide Dynamic Range	On/off, 130 dB @ 1080p30
Electronic Shutter	Auto (1/1 to 1/10,000 s, 22 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, wide dynamic range (WDR), anti-shake, defog, on-screen text display (OSD), image invert
Image Stabilization	EIS

THERMAL IMAGER	T315	T345	T625	T650
Image Sensor	Uncooled LWIR VOx microbolometer			
Pixel Pitch	17 µm			
Thermal Sensitivity	<50 mK at f/1.0			
Spectral Response	7.5- 13.5 µm			
Refresh Rate	7.5 Hz / 8.3 Hz [25 Hz / 30 Hz]			
Pixel Resolution	336 x 256		640 × 512	
Fixed Focal Length	9 mm f/1.25	25 mm f/1.1	25 mm f/1.1	50 mm f/1.2
Angle of View	35° x 27°	13° x 10°	25° x 20°	12.4° x 9.9°
Depth of Field	1.1 m	11 m	11 m	36 m
Hyperfocal Distance	2.1 m	21 m	21 m	71 m
Features	Continuous digital zoom, auto/manual gain mode (AGC), auto/manual FFC(NUC), selectable color palettes, polarity, second generation digital detail enhancement (DDE), image optimization, active contrast enhancement (ACE), information based histogram equalization (IBHEQ), smart scene optimization (SSO)			
Human Detection[*4/5]	~285 m	~930 m	~930 m	~1700 m

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 color and thermal images Up to 2 independently configurable encoded video streams per image sensor
Stream Bitrate[*6]	100 kb/s to 25 Mb/s
Image Resolution[*6]	Day/Night Camera: 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 (640 x 512, 336 x 256), D1 (720 x 576/480), VGA (640 x 480), QVGA (320 x 240)
Image Rate[*6]	Thermal (Full, half, quarter, sixth), HD (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, TSRTP, 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), TSRTP, 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	Chrome/Firefox/IE/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 Based on Johnson criteria and best conditions. *5 Human detection values shown are nominal values and should be used as estimates only. Exact human detection calculations depend on a wide variety of environmental conditions, video encoding parameters and type of monitor or display used. *6 Maximum permissible resolution, bitrate and framerate per additional stream will be reduced dependent on the configuration of the primary stream. *7 Exact certification requirements must be specified at the time of order.

PART CODE STRUCTURE

	C3	-	A	B	C	D	-	E	-	F	G	H	J
(Example)	C3	-	2	V	75	T315	-	W	-	E	1	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

75	HD (1080p), 30x zoom

D - THERMAL IMAGING MODULE

T315	Medium resolution, 35° HFOV
T345	Medium resolution, 13° HFOV
T625	High resolution, 25° HFOV
T650	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

1	Standard PTZ mounting

F - TECHNOLOGY SERIES

E	2nd Gen, IP encoder

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MANUFACTURER OF COEX CAMERA STATIONS

Reference Numbers:
06\DS 0539 Iss 3