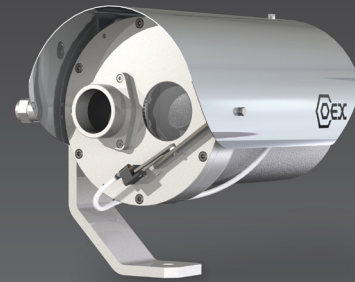


# COEX™ C3000 4K IP TriMode Fixed Camera Station

The COEX™ C3000 4K IP TriMode Fixed 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 4K video with a 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 (2<sup>nd</sup> generation IP encoder), the camera station is capable of quad-stream H.264 and H.265 encoding for simultaneous live view and recording.

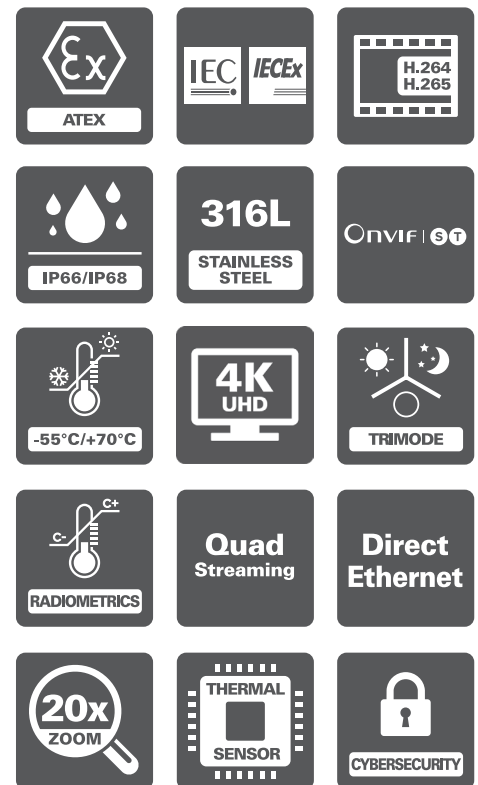
Utilizing the advanced radiometry feature, the camera station can provide real-time temperature data and differential temperature monitoring of critical devices and applications.

The C3000 4K IP TriMode Fixed 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
- Advanced radiometry



# Specifications

CERTIFICATIONS / RATINGS*7		[OPTIONS]
ATEX / IECEx	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 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	IEC62368-1, IEC60825-1	
DNV	Pending	
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 200 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	
Mounting Orientation	Upright or inverted	
Mounting Base	Single Ø 12.5mm / 0.49" fixing hole	
Dimensions*1 (W x D x H)	233 x 310 x 259 mm / 9.17" x 12.21" x 10.20"	
Weight*1	14.5 kg / 32 lbs	
Cable Gland Entries	1 x M20	
ELECTRICAL		
Power Requirements	24 V AC/DC (±10%) 50/60 Hz 9 VA Quiescent 14 VA Operating 22 VA Operating (with heater) 27 VA Max	
Power Consumption*1		
Wash Control*1	Volt free switched output (24 V 0.75 A max)	
Auxiliary Inputs*3	1 x contact closure input (5 V pull up) [up to 4 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		
Preset Memory	128 user programmable preset positions (zoom, focus)	
Wash/Wipe*1	[Optional wash/wipe with auto-wiper off] Zoom and focus control Preset store/recall	
ONVIF Control Features	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

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 x 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 <sup>*4/5</sup>	~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 <sup>*6</sup>	100 kb/s to 12 Mb/s
Image Resolution <sup>*6</sup>	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 (640 x 512, 336 x 256), D1 (720 x 576/480), VGA (640 x 480), QVGA (320 x 240)
Image Rate <sup>*6</sup>	Full, half, quarter, sixth
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**

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, TSRT, 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), TSRT, 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 F 85 T315 - W - E 5 E X

### A - CAMERA HOUSING SIZE

2 Size 2 camera housing

### B - FIXED/PTZ

F Fixed

### C - DAY/NIGHT CAMERA

85 4k UHD, 20x 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 Gigabit Ethernet Base-T

### G - BASE/MOUNTING TYPE

Standard fixed mounting

5 Alternative fixed mounting

### F - TECHNOLOGY SERIES

E 2nd Gen, IP encoder

## Synectics

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Specifications subject to change. E & OE.

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MANUFACTURER OF



CAMERA STATIONS

Reference Numbers:

06DS 0535 Iss 2