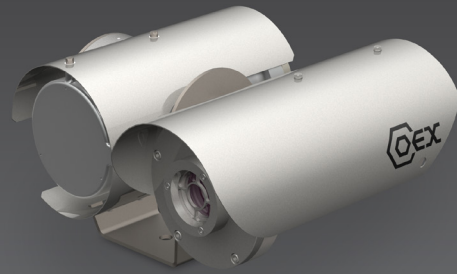


# COEX™ C3000 Thermal IP Fixed Camera Station with Integrated Junction Box

The COEX™ C3000 Thermal IP Fixed Camera Station with Integrated Junction Box has been 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, while allowing constant visual feedback in zero-light 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 delivers superb thermal imaging in all lighting conditions and across long distances.

Featuring the latest encoding technology (2<sup>nd</sup> generation IP encoder), the camera station is capable of triple-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.

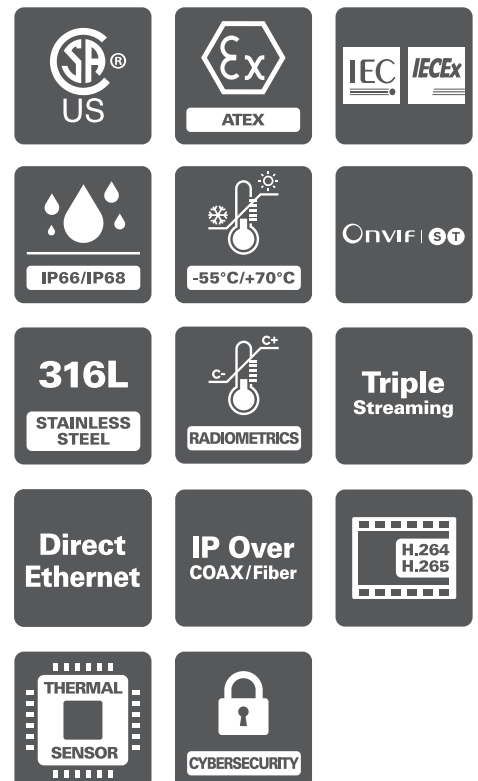
The C3000 Thermal IP Fixed Camera Station with Integrated Junction Box has cybersecurity measures built-in, including encrypted video streaming, HTTPS, and 802.1x protocols.

Providing the capability for the direct entry and termination of field cables, the self-contained junction box also accommodates the management of fiber optic cores, power supply, and optional media converters for signal transmission.

This camera station is a versatile option for pre-existing systems, ensures a straightforward installation process, and is compatible with a variety of VMS platforms through ONVIF Profile S and T compliance.

## Options

- Advanced radiometry
- Integral fiber optic transmission
- Various voltage options 24 V AC/DC and (100 to 240) V AC
- Media converter (Coax)



# 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 +50°C (T6), +60°C (T5), +70°C (T4)	
CSAus Class / Division	Class I, Div 1, Groups A, B, C, D; Class II, Div I, Groups E, F, G; T4 / T5 / T6	
CSAus Class / Zone	Class I, Zone 1, AEx db IIC Gb; Zone 21, AEx tb IIIC Db; T4 / T5 / T6	
CSAus Standards	FM3600, FM3615, FM3616, UL50, UL50E, UL62368-1 UL60079-0, UL60079-1, UL60079-31	
CSAus Certified Temperature	-55 to +50°C (T6), +55/60°C (T5), +70°C (T4)	
EMC	EN61000-6-2, EN 61000-6-4, Class A limits	
EMC (US)	FCC CFR47 Part 15 Class A	
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	Germanium window with DLC (Diamond-Like Carbon) coating and impact guard	
Mounting Orientation	Upright or inverted	
Mounting Base	1 x Ø 13.5 mm / 0.53" fixing hole	
Dimensions*1 (W x D x H)	348 x 310 x 219 mm / 13.70" x 12.21" x 8.62"	
Weight*1	17 kg / 37.5 lb	
Cable Gland Entries*2	3 x M20 / [3 x M25] / [3 x 1/2" NPT]	
ELECTRICAL		
	Integrated PSU	[Without Integrated PSU]
Input Power Options	(100 to 240) V AC 50 / 60 Hz	24 V AC 50 / 60 Hz or 24 V DC (±10%)
Power Rating	1.5 A max @ 100 V (Inrush 30 A max)	-
Power Consumption*1	40 VA Quiescent	8 VA Quiescent
	40 VA Operating	27 VA Max
	115 VA Max	
Auxiliary Inputs*2	1 x contact closure input (5 V pull up) [additional inputs available on request]	
Relay Outputs*2	1 x volt free switched output (24 V 0.75 A max) [up to 2 available on request]	
Audio*2	[Line Input]	
CAMERA OPERATION		
Preset Memory	128 user programmable preset positions (digital zoom)	
ONVIF Control Features	Digital zoom control, preset store/recall, alarm inputs, and relay outputs	

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>*3/4</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	Up to 3 independently configurable encoded video streams			
Stream Bitrate <sup>*6</sup>	100 kb/s to 25 Mb/s			
Image Resolution <sup>*6</sup>	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 DEVICE				
Interface Options <sup>*5</sup>	Ethernet (100Base-T, 10-Base-T), Auto/full/half duplex, Auto/10/100, Configurable MTU Size [Fiber optic SFP connectivity] [Media converter]			
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			

[FIBER OPTICS] <sup>5</sup>	100FxpLP	100Fxp/20km	100Fxp/30km	100WLFxA	1000Lx	1000WLxA
Optical Interface	100Base-Fx	100Base-Fx	100Base-Fx	100Base-Fx	1000Base-Lx	1000Base-Lx
Fibers Required	Dual	Dual	Dual	Single	Dual	Single
Wavelength	1310 nm	1310 nm	1310nm	Tx 1310 nm Rx 1550 nm	1310 nm	Tx 1310 nm Rx 1550 nm
Transmit Optical Power	(-20 to -10) dBm	(-15 to -8) dBm	(-5 to 0) dBm	(-14 to -8) dBm	(-9 to -3) dBm	(-9 to -3) dBm
Receive Sensitivity	< -31 dBm	< -31 dBm	< -31 dBm	< -33 dBm	< -22 dBm	< -22 dBm
Standard Optical Link Budget	> 11 db	> 16 db	> 26dB	> 19 db	> 13 db	> 13 db
Optical Connector	LC	LC	LC	SC	LC	SC
Fiber Management	Integral fiber management with termination capacity for spare fiber cores					
Features	[Link loss forwarding, fault detection]			Link loss forwarding, fault detection		

[MEDIA CONVERTER] <sup>5</sup>	Ethernet over Coax
Connectivity	Auto-optimizing for 75 Ω coaxial cable: 280m (920ft) full-rate over video-grade RG-59 (Up to 350m depending on cable quality) 350m (1150ft) full-rate over RG-6 500m (1640ft) full-rate over RG-11
Interface Data Rate	Auto-configuring for speed (10BASE-T or 100BASE-T) and duplex
Features	Retrofit existing analog CCTV installations to Ethernet-based systems, allow the connectivity of camera stations outside the permitted run length of 100Base-Tx Ethernet cabling

NOTE: \*1 Dependent on certification and equipment fitted. \*2 Dependent on cable tail option. \*3 Based on Johnson criteria and best conditions. \*4 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. \*5 Exact interface option and media type must be specified at the time of order. Maximum transmission distance dependent on cable infrastructure quality and integrity. \*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 - 1 F T315 - E 3 E X

### A - CAMERA HOUSING SIZE

1 Size 1 camera housing

### B - FIXED/PTZ

F Fixed

### C - DAY/NIGHT CAMERA

N/A

### 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

N/A

### J - SPECIAL

Standard build

X Special build

### H - OUTPUT TRANSMISSION TYPE

C Coax

E Ethernet Base-T

S Singlemode fibre

M Multimode fibre

### G - BASE/MOUNTING TYPE

3 Base type 3 (with PSU)

4 Base type 4 (without PSU)

### 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 Number:  
 06DS 0543 Iss 3