COEX™ C3000 Thermal IP PTZ Camera Station

The COEX™ C3000 Thermal IP 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, 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 (3rd generation IP encoder), the camera station is capable of triple-stream H.264 and H.265 encoding for simultaneous live view and recording.

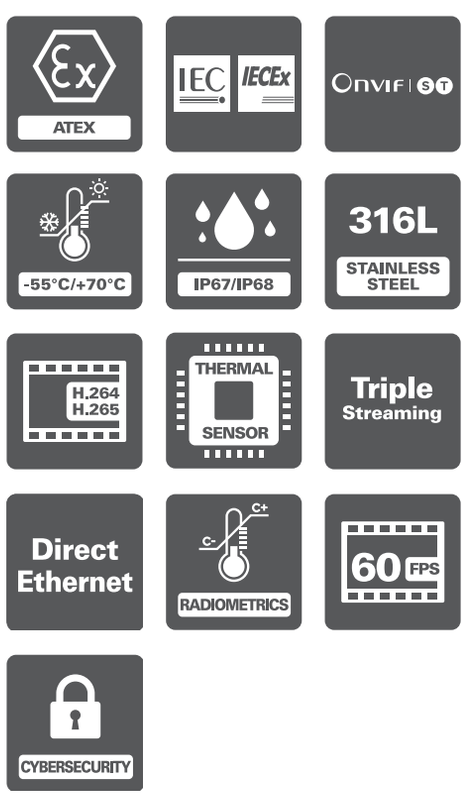
Utilizing the advanced radiometry feature, the camera station can provide real-time temperature data and differential temperature monitoring of critical devices and applications.

The C3000 Thermal IP 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

- Continuous rotation
- Advanced radiometry



SYNECTICS

Specifications

CERTIFICATIONS / RATINGS[*4]		[OPTIONS]
ATEX / IECEx / UKCA	ATEX II 2GD, Ex db IIB/IIC Gb; Ex tb IIIC Db; T4 / T5 / T6 EN60079-0, EN60079-1, EN60079-31, IEC60079-0, IEC60079-1, IEC60079-31	
ATEX / IECEx / UKCA Certified Temperature	-55°C to 40°C (T6), +50/60°C (T5), +70°C (T4)	
EMC	EN61000-6-2, EN 61000-6-4, Class A limits	
CE / UKCA	IEC62368-1, IEC60825-1	
DNV	Pending	
INMETRO	BRA 21.GE0018X	
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	
Humidity	5% to 95%	
MECHANICAL		
Material	Electro-polished 316L stainless steel	
Window	Germanium window with DLC (Diamond-Like Carbon) coating and impact guard	
Pan Turning Circle	Ø 560 mm / 22.05"	
Tilt Turning Circle	Ø 360 mm / 14.17"	
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)	375 x 310 x 352 mm / 14.76" x 12.21" x 13.86"	
Weight[*1]	27 kg / 59.5 lbs	
Cable Gland Entries	2 x M20	
ELECTRICAL		
Power Requirements	24 V AC/DC (±10%) 50/60 Hz	
Power Consumption[*1]	9 VA Quiescent 68 VA Operating 100 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	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 Functions	128 user programmable preset positions (pan, tilt digital zoom), preset accuracy <0.05°, absolute positioning	
ONVIF Control Features	PTZ control (continuous, relative and absolute) Preset store/recall, alarm inputs, and relay outputs	

THERMAL IMAGER	T306	T318	T618	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	7>9Hz [>60Hz] [25 Hz / 30 Hz]			
Pixel Resolution	320 x 256		640 × 512	
Fixed Focal Length	6.3 mm f/1.0	18 mm f/1.0	18 mm f/1.0	36 mm f/1.0
Angle of View	34.1° x 27.3°	12.7° x 9.7°	24.3° x 19.5°	12.2° x 9.8°
Radiometric Functionality Available	Yes	No	Yes	No
Features	8x digital zoom, auto/manual gain mode (AGC), auto/manual FFC(NUC), selectable color palettes, second generation digital detail enhancement (DDE), image optimization, active contrast enhancement (ACE), information based histogram equalization (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	Up to 3 independently configurable encoded video streams
Stream Bitrate*3	100 kb/s to 25 Mb/s
Image Resolution*3	Native (640x512 or 320x256), D1 (720 x 576/480), VGA (640 x 480), QVGA (320 x 240)
Image Rate*3	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	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 Dependent on cable tail option. *3 Maximum permissible resolution, bitrate and framerate per additional stream will be reduced dependent on the configuration of the primary stream. *4 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	V		T306	-		-	B	1	E	X

A - CAMERA HOUSING SIZE

1	Size 1 camera housing

B - FIXED/PTZ

C	PTZ - Continuous pan
V	PTZ - Non-continuous pan

C - DAY/NIGHT CAMERA

	N/A

D - THERMAL IMAGING MODULE

T306	Medium resolution, 35° HFOV
T318	Medium resolution, 13° HFOV
T618	High resolution, 25° HFOV
T636	High resolution, 12° HFOV

E - WIPER

	N/A

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

B	3rd Gen, IP encoder

Synectics

synecticsglobal.com

MANUFACTURER OF COEX CAMERA STATIONS

Reference Number:
06\DS 0749 Iss 1