

COEX™ C3000 4K IP TriMode PTZ Camera Station with Integrated Junction Box

The COEX C3000 4K IP TriMode PTZ 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, 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 (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.

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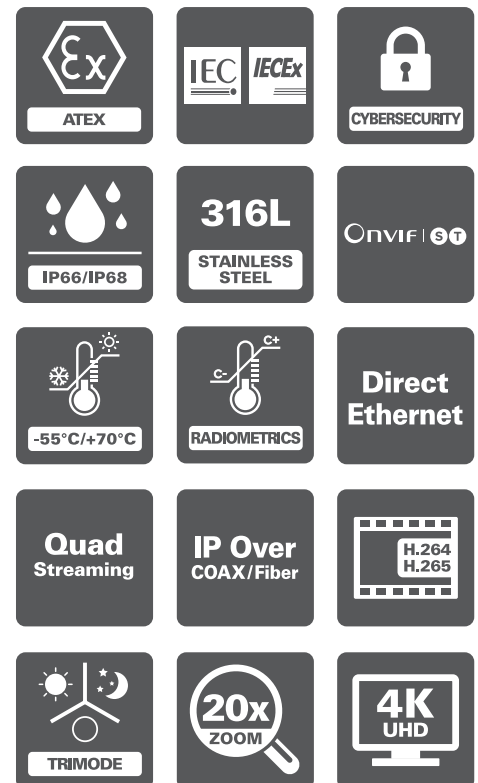
cybersecurity measures built-in, including encrypted video streaming, HTTPS, and 802.1x protocols.

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

- Integral wiper
- COEX FEWS3 wash systems
- Advanced radiometry
- Continuous rotation
- Integral fiber optic transmission
- Various voltage options 24 V AC/DC and (100 to 240) V AC
- Ethernet extender (Coax or Twisted Pair)



Specifications

| CERTIFICATIONS / RATINGS ⁹ | | [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 | |
| Pan Turning Circle | Ø 660 mm / 25.98" | |
| Tilt Turning Circle | Ø 416 mm / 16.38" | |
| Mounting Orientation | Upright or inverted | |
| Mounting Base | 8 x M8 tapped holes, equispaced on a 4" (101.6 mm) P.C.D. | |
| Dimensions* ¹ (W x D x H) | 429 x 310 x 443 mm / 16.89" x 12.21" x 17.44" | |
| Weight* ¹ | 33 kg / 72.8 lbs | |
| Cable Gland Entries ³ | 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/DC (±10%) 50/60 Hz |
| Power Rating | 1.5 A max @ 100 V (Inrush 30 A max) | - |
| Power Consumption | 40 VA Quiescent 99 VA Operating (with heater) 115 VA Max | 11 VA Quiescent 72 VA Operating 80 VA Operating (with heater) 100 VA Max |
| Wash Control* ^{1/6} | 24 V DC (0.75 A max) switched output [Volt free (2.5 A 240 V AC max) switched output] [Switched live (0.2 A) with neutral 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 |
| Effective Pixels | FHD 1080p 25/29.97/50/59.94 FPS |
| Zoom Range | 8.51 mega pixels |
| Focal Length/Aperture | 20x zoom (up to 240x with digital zoom) |
| Angle of View (H) | 4.4 mm (wide) to 88 mm (tele), F2.0 to F3.8 |
| Minimum Illumination (50IRE, High Sensitivity Mode) | 70.2° (wide) to 4.1° (tele), 60° (wide) to 3.5° (tele) with image stabilizer on |
| Minimum Illumination (50IRE) | 0.4 lux (1/30 s) |
| Electronic Shutter | 0.06 lux (1/4 s, 1/3 s) |
| Signal/Noise Ratio | 1.6 lux (1/30 s) |
| Features | 0.21 lux (1/4 s, 1/3 s) |
| Image Stabilization | 1/1 to 1/10,000 sec, 28 steps |
| | > 50 db (weight on) |
| | 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) |
| | 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 | 75- 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*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 day/night and thermal images Up to 2 independently configurable encoded video streams per image sensor |
| Stream Bitrate*8 | 100 kb/s to 12 Mb/s |
| Image Resolution*8 | 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*8 | 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 ^{*7} | Ethernet (100Base-T, 10-Base-T), Auto/full/half duplex, Auto/10/100, Configurable MTU Size [Fiber optic SFP connectivity] [Ethernet Extender] |
| 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 | 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] ^{*7} | 100FxLP | 100Fx | 100WLFxA | 1000Lx | 1000WLxA | 1000WLxB |
|------------------------------|---|-----------------|--------------------------|---------------------------------------|--------------------------|--------------------------|
| Optical interface | 100Base-Fx | 100Base-Fx | 100Base-Fx | 1000Base-Lx | 1000Base-Lx | 1000Base-Lx |
| Fibers Required | Dual | Dual | Single | Dual | Single | Single |
| Wavelength | 1310 nm | 1310 nm | Tx 1310 nm Rx 1550 nm | 1310 nm | Tx 1310 nm Rx 1550 nm | Tx 1550 nm Rx 1310 nm |
| Transmit Optical Power | (-20 to -10) dBm | (-15 to -8) dBm | (-14 to -8) dBm | (-9 to -3) dBm | (-9 to -3) dBm | (-9 to -3) dBm |
| Receive Sensitivity | < -31 dBm | < -31 dBm | < -33 dBm | < -22 dBm | < -22 dBm | < -22 dBm |
| Standard Optical Link Budget | > 11db | > 16dB | > 19dB | > 13dB | > 13dB | > 13dB |
| Optical Connector | LC | LC | SC | LC | SC | SC |
| Fiber Management | Integral fiber management with termination capacity for spare fiber cores | | | | | |
| Features | [Link loss forwarding, fault detection] | | | Link loss forwarding, fault detection | | |

| [ETHERNET EXTENDER] ^{*7} | Coax | Single Pair UTP |
|-----------------------------------|---|--|
| Connectivity | Extended range Ethernet connectivity up to 610 m (2 000 ft) | Extended range Ethernet connectivity up to 305 m (1 000 ft) |
| Interface Data Rate | 100 Mb/s | 100 Mb/s |
| 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 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 Wash output relay option shall be specified at the time of order.

*7 Exact interface option and media type must be specified at the time of order. Maximum transmission distance dependent on cable infrastructure quality and integrity. *8 Maximum permissible resolution, bitrate and framerate per additional stream will be reduced dependent on the configuration of the primary stream. *9 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 85 T315 - W - E 3 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

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

C Coax

U UTP

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

sales@synecticsglobal.com

synecticsglobal.com

Specifications subject to change. E & OE.

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MANUFACTURER OF



CAMERA STATIONS

Reference Number:

06DS 0550 Iss 3