COEX™ C3000 Thermal IP Fixed Camera Station

The COEX™ C3000 Thermal IP 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, while allowing constant visual feedback in zero-light conditions.

The COEX C3000 hazardous-area camera stations are manufactured from the highest-grade, corrosion-resistant, electro-polished 316L stainless steel. Designed for toughness and durability to operate in the most extreme environments, they are certified for temperatures from -55°C to +70°C ambient temperature.

This premium-performance camera station uses the latest thermal imaging technology to cover a wide range of specific site applications where the benefits of using thermal imaging are required.

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

Incorporating high-efficiency encoding technology, the camera station is capable of dual-stream H.264 encoding for simultaneous live view and recording.

COEX camera stations are compatible with a variety of VMS platforms through ONVIF Profile S compliance.

Options
- Advanced radiometry

SYNNECTICS
Specifications

CERTIFICATIONS / RATINGS

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 +50°C (T6), +60°C (T5), +70°C (T4)

CSAus Class / Division
Class I, Div 1, Groups A, B, C, D; Class II, Div 1, Groups E, F, G; Class III, Div 1; T4 / T5 / T6

CSAus Class / Zone
Class I, Zone 1, AEx d IIC Gb; Zone 21, AEx tb IIIC Db; T4 / T5 / T6

CSAus Standards
FM3600, FM3615, FM3616, UL50, UL50E, UL60950-1
UL60079-0, UL60079-1, ANS16079-31

CSAus Certified Temperature
-55°C to +50°C (T6), +55/60°C (T5), +70°C (T4)

CSA Class / Division
Ex d IIC Gb; Ex tb IIC Db; Class II, Div 1, Groups E, F, G; Class III, Div 1; T4 / T5 / T6

CSA Standards
C22.2 No. 0-10, C22.2 No. 60079-1, C22.2 No. 60079-1, C22.2 No. 60950-1, IEC60529,
C22.2 No. 94.1-07, C22.2 No. 94.2-07

CSA Certified Temperature
-55°C to +50°C (T6), +60°C (T5), +70°C (T4)

EMC
EN61000-6-2, EN 61000-6-4, EN5022, IN5024 Class A limits

EMC (US & Can.)
FCC CFR47 Part 15 Class A
ICES-003 Class A

CE
IEC60950-1, IEC60825-1

DNV
A-13470

C-TICK
On Request

ENVIRONMENTAL

Operating Temperature
-45°C to +70°C / -49°F to +158°F

Storage Temperature
-45°C to +70°C / -49°F to +158°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
Germanium window with DLC (Diamond-Like Carbon) coating and impact guard

Mounting Orientation
Upright or inverted

Mounting Base
1 x Ø12.5 mm / 0.49” fixing hole

Dimensions** (W x D x H)
179 x 310 x 235 mm / 7.05” x 12.21” x 9.25”

Weight**
8 kg / 17.6 lb

Cable Gland Entries
1 x M20

ELECTRICAL

Input Power Options
24 V AC/DC (±10%) 50/60 Hz

Power Consumption**
8 VA Quiescent
11 VA Operating
24 VA Operating (with heater)
27 VA Max

Auxiliary Inputs**
1 x contact closure input (5 V pull up) [up to 4 available on request]

Relay Outputs**
2 x 24 V AC/DC (0.75 A max) switched output

CAMERA OPERATION

Preset Memory
128 user programmable preset positions (digital zoom), return to home function

ONVIF Control Features
Digital zoom control
Preset store/recall

Motion Detection
Configurable Sensitivity

Alarm Automation
Advanced rules engine with preset recall, alarm and video profile change actions
Zoom activity status
### THERMAL IMAGER

<table>
<thead>
<tr>
<th></th>
<th>T315</th>
<th>T345</th>
<th>T625</th>
<th>T650</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Image Sensor</strong></td>
<td>Uncooled LWIR VOx microbolometer</td>
<td></td>
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<tr>
<td><strong>Pixel Pitch</strong></td>
<td>17 μm</td>
<td></td>
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<tr>
<td><strong>Thermal Sensitivity</strong></td>
<td>&lt;50 mK at f/1.0</td>
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<tr>
<td><strong>Spectral Response</strong></td>
<td>75 - 13.5 μm</td>
<td></td>
<td></td>
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<tr>
<td><strong>Refresh Rate</strong></td>
<td>75 Hz / 8.3 Hz [25 Hz / 30 Hz]</td>
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<tr>
<td><strong>Pixel Resolution</strong></td>
<td>336 x 256</td>
<td>640 x 512</td>
<td></td>
<td></td>
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<tr>
<td><strong>Fixed Focal Length</strong></td>
<td>9 mm f/1.25</td>
<td>25 mm f/1.1</td>
<td>25 mm f/1.1</td>
<td>50 mm f/1.2</td>
</tr>
<tr>
<td><strong>Angle of View</strong></td>
<td>35° x 27°</td>
<td>13° x 10°</td>
<td>25° x 20°</td>
<td>12.4° x 9.9°</td>
</tr>
<tr>
<td><strong>Depth of Field</strong></td>
<td>1.1 m</td>
<td>11 m</td>
<td>11 m</td>
<td>36 m</td>
</tr>
<tr>
<td><strong>Hyperfocal Distance</strong></td>
<td>2.1 m</td>
<td>21 m</td>
<td>21 m</td>
<td>71 m</td>
</tr>
<tr>
<td><strong>Features</strong></td>
<td>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)</td>
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<tr>
<td><strong>Advanced Radiometry</strong></td>
<td>[When used with Synergy 3, the advanced radiometry feature provides 4 regions of interest per preset position that can be individually monitored or compared against one another for temperature threshold changes]</td>
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</tr>
<tr>
<td><strong>Human Detection</strong></td>
<td>~285 m</td>
<td>~930 m</td>
<td>~930 m</td>
<td>~1700 m</td>
</tr>
</tbody>
</table>

### VIDEO ENCODING

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<table>
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<tr>
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<tbody>
<tr>
<td><strong>Compression Standards</strong></td>
<td>H.264 (MPEG4 part 10/AVC) high, main, base profiles MJPEG</td>
</tr>
<tr>
<td><strong>Bitrate Mode</strong></td>
<td>Constant Bitrate (CBR), Variable Bitrate (VBR)</td>
</tr>
<tr>
<td><strong>Encoding Capability</strong></td>
<td>Up to 2 independently configurable encoded video streams</td>
</tr>
<tr>
<td><strong>Stream Bitrate</strong></td>
<td>300 kb/s to 8 Mb/s</td>
</tr>
<tr>
<td><strong>Image Resolution</strong></td>
<td>D1 (720 x 576/480), 2CIF (720 x 288/240), CIF (352 x 288/240)</td>
</tr>
<tr>
<td><strong>Image Rate</strong></td>
<td>1 to 25/30 IPS</td>
</tr>
<tr>
<td><strong>GOP Structure</strong></td>
<td>1 x I-frame/sec (IPP…PP)</td>
</tr>
</tbody>
</table>

### NETWORK

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<tbody>
<tr>
<td><strong>Interface Options</strong></td>
<td>Ethernet (100Base-T, 10-Base-T), Auto/full/half duplex, Auto/10/100</td>
</tr>
<tr>
<td><strong>Protocols</strong></td>
<td>TCP/IP, UDP, ICMP, DHCP, HTTP HTTPS, NTP RTSP/RTP/RTCP IGMP SNMP SYNS, SSL, TLS</td>
</tr>
<tr>
<td><strong>Control Protocol</strong></td>
<td>SYNS, ONVIF (Profile S compliant)</td>
</tr>
<tr>
<td><strong>Video Stream Delivery</strong></td>
<td>SYNS, RTSP/RTP (Unicast: UDP/TCP/HTTP, Multicast UDP)</td>
</tr>
<tr>
<td><strong>Network Discovery</strong></td>
<td>SYNS, WS-Discovery (ONVIF)</td>
</tr>
<tr>
<td><strong>Device Security</strong></td>
<td>Password protected web interface, HTTPS support, HTTP disable, ONVIF discovery disable</td>
</tr>
<tr>
<td><strong>Supported Internet Browsers</strong></td>
<td>Chrome / Firefox / IE version 6 or higher (Requires VLC Active-X for in-browser video rendering)</td>
</tr>
<tr>
<td><strong>System Maintenance</strong></td>
<td>Field upgradeable firmware, diagnostic logs, configuration backup / restore</td>
</tr>
</tbody>
</table>

**NOTE:** *1 Dependent on 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 Maximum permissible bitrate per stream will be reduced dependent on the number of encode sessions configured. *6 Exact certification requirements must be specified at the time of order.