

COEX™ 3000 TriMode Series '6' Ex d Camera Station

The COEX™ 3000 TriMode camera station 6 series has a unique compact and lightweight design specifically developed for hazardous area applications. Combined with the latest thermal imaging technology with a day / night (colour / mono) camera module the C3000 TriMode camera stations ensure unprecedented visual feedback in all light conditions.



Utilised around the world to assist with:

- Pipeline monitoring
- Navigation during night time and foggy conditions
- Ice Detection
- Piracy Detection
- Man-overboard Safety
- Environmental Protection
- Intruder Detection
- Safety and Security Protection

Even during daylight the C3000 TriMode can provide increased visibility over conventional camera stations with human detection at over 1100 m^{*3/4}

COEX Series 6 camera stations are fitted with a 640 x 480 thermal imaging camera and a high resolution analogue day / night camera with removable IR cut filter.

Features

- ATEX II 2 GD Certification
- IECEx Certification
- Ex d IIC, T4, T5 or T6
- DNV Type Approval
- IP66 & 68 Rated – completely protected against dust & water ingress, for the most extreme environments
- Electro-polished 316L stainless steel, for maximum corrosion resistance
- TriMode Operation – Day (colour), Night (mono) and Thermal Imaging
- Low Voltage Operation
- Preset accuracy and repeatability of <0.05°
- Advanced Mechanical Design to minimise size and weight
- Pre-Heat Mode for safe start up in freezing conditions

- Smart Move Technology assists target acquisition and tracking
- Germanium and Toughened Glass Windows

Options

- Continuous Rotation [C]
- Absolute Positioning
- Integral Wiper [W]
- COEX™ "FEWS" Ex Pressurised Wash System
- Integral Fibre Optic Transmission (via alternative base)
- Fibre Optic Transmission (via associated junction box)
- IP within the Camera Housing
- COEX™ Wall Mount Bracket
- COEX™ Range of Tilt Down Towers and accessories

Specifications

CERTIFICATIONS / RATINGS		[OPTIONS]
Certifications / Ratings	Ex d IIC T4 / T5 / T6 Gb; Ex tb IIIC T4 / T5 / T6 Db; ATEX II 2GD IECEX DNV Type Approval CE Compliant to EMC Directive IP66 & IP68 to IEC 60529 (30m Submersion for 4 hrs) -55°C to +60°C	
ENVIRONMENTAL		
Operating Temperature	-45°C to +60°C	
MECHANICAL		
Material	Electro-polished 316L Stainless Steel	
Windows	Germanium and Toughened Glass, Thermostatically Operated Demister [Wiper for Day / Night View only]	
Pan Operation	362° rotation @ 0° to 42°/sec; Mechanical Limits; Programmable Soft-stops; Preset Positioning [Continuous Rotation]	
Tilt Operation	180° rotation @ 0° to 21°/sec; Mechanical Limits; Programmable Soft-stops; Preset Positioning	
Mounting	4 x M8 tapped holes, equispaced on a 4" (101.6 mm) P.C.D.	
Dimensions (W x D x H)	429 x 310 x 368 mm	
Pan Turning Circle	Ø 660 mm	
Weight	29 kg	
ELECTRICAL		
Power Requirements	24Vac 50 / 60Hz or 24Vdc (±10%)	
Power Consumption	92VA Maximum	
TELEMETRY		
Interface	RS485 serial asynchronous data	
Protocols*2	Synectics™, Pelco®, and other industry standard protocols available	
Functions*1	Pan, Tilt, Zoom, Aux1, [Aux2] and Aux in	
Day/Night Camera	On / Off Selection of: Digital Zoom, BLC, Autofocus;	
Functions*1	Auto / Manual Selection of: Focus, Colour / Mono Operation, Frame Integration, White Balance	
Thermal Camera	Continuous Electronic Zoom, Multiple Colour Palettes (including Inverted), Multiple Contrast Display, Contrast and Level Control, Hot and Cold Spot, Auto / Manual Shuttering	
Functions*1	Password protected on-screen menu system for camera station configuration and diagnostics	
OSD		
CAMERA / LENS		
	C3000-2V36-T6->>[2C36] [W]*5	C3000-2V10-T6->>[2C10] [W]*5
Video Output	1.0 Vpk-pk CVBS into 75Ω; Colour PAL 50Hz [NTSC 60Hz]	
Image Sensor	¼" EXview HAD CCD	⅓" Super HAD CCD II
Resolution	>550TVL	>530TVL
S/N Ratio	>50dB	
Zoom Range	36x zoom (up to 432x with digital zoom)	10x zoom (up to 120x with digital zoom)
Minimum Illumination	1.4 lux 0.1 lux (with ⅓ sec integration) 0.01 lux mono (with ⅓ sec integration)	0.25 lux 0.015 lux (with ⅓ sec integration) 0.0004 lux mono (with ⅓ sec integration)
Focal Length	3.4 to 122.4 mm	5.1 to 51 mm
Angle of View	57.8° to 1.7°	52° to 5.4°
Aperture	F1.6 to 4.5	F1.8 to 2.1
THERMAL IMAGER		
	C3000-2V<<-T650 [2C<<] [W]*5	C3000-2V<<-T625 [2C<<] [W]*5
Image Sensor	Amorphous Silicon Microbolometer	
Spectral Response	8 – 14 μm	
Thermal Sensitivity	70mK [50mK]	
Refresh Rate	<9Hz [25Hz]	
Resolution	640 x 480	
Fixed Focal Length	50 mm	25 mm
Angle of View	12.4° x 9.3°	25° x 18.7°
Human Detection*3/4	~1100 m	~560 m

NOTE: *1 Dependant on equipment fitted. *2 Refer to Synectics for availability and compatibility with other control systems *3 Based on Johnson Criteria. *4 Actual range may vary depending on camera set-up, user experience, environmental conditions and type of monitor or display used. *5 >> replace with thermal camera module and << replace with day / night camera module.

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Specifications subject to change. E & OE.

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MANUFACTURER OF



CAMERA STATIONS



BS EN ISO 9001 CERTIFICATE No. 0956

Reference Numbers: 03GF0614_2

C3000T2S6/0414/A4 Iss 2

COEX™ 3000 TriMode Series '3' Ex d Camera Station

The COEX™ 3000 TriMode camera station 3 series has a unique compact and lightweight design specifically developed for hazardous area applications. Combined with the latest thermal imaging technology with a day / night (colour / mono) camera module the C3000 TriMode camera stations ensure unprecedented visual feedback in all light conditions.



Utilised around the world to assist with:

- Navigation during night time and foggy conditions
- Ice Detection
- Piracy Detection
- Man-overboard Safety
- Environmental Protection
- Intruder Detection
- Safety and Security Protection

Even during daylight the C3000 TriMode can provide increased visibility over conventional camera stations with human detection at over 1100 m^{3/4}

COEX Series 3 camera stations are fitted with a 384 x 288 analogue thermal imaging camera and a high resolution analogue day / night camera with removable IR cut filter

Features

- ATEX II 2 GD Certification
- IECEx Certification
- Ex d IIC, T4, T5 or T6
- DNV Type Approval
- IP66 & 68 Rated – completely protected against dust & water ingress, for the most extreme environments
- Electro-polished 316L stainless steel, for maximum corrosion resistance
- TriMode Operation – Day (colour), Night (mono) and Thermal Imaging
- Low Voltage Operation
- Preset accuracy and repeatability of <0.05°
- Advanced Mechanical Design to minimise size and weight
- Pre-Heat Mode for safe start up in freezing conditions

- Smart Move Technology assists target acquisition and tracking
- Germanium and Toughened Glass Windows

Options

- Continuous Rotation [C]
- Absolute Positioning
- Integral Wiper [W]
- COEX™ "FEWS" Ex Pressurised Wash System
- Integral Fibre Optic Transmission (via alternative base)
- Fibre Optic Transmission (via associated junction box)
- IP within the Camera Housing
- COEX™ Wall Mount Bracket
- COEX™ Range of Tilt Down Towers and accessories

Specifications

CERTIFICATIONS / RATINGS		[OPTIONS]
Certifications / Ratings	Ex d IIC T4 / T5 / T6 Gb; Ex tb IIIC T4 / T5 / T6 Db; ATEX II 2GD IECEX DNV Type Approval CE Compliant to EMC Directive IP66 & IP68 to IEC 60529 (30m Submersion for 4 hrs) -55°C to +60°C	
ENVIRONMENTAL		
Operating Temperature	-45°C to +60°C	
MECHANICAL		
Material	Electro-polished 316L Stainless Steel	
Windows	Germanium and Toughened Glass, Thermostatically Operated Demister [Wiper for Day / Night View only]	
Pan Operation	362° rotation @ 0° to 42°/sec; Mechanical Limits; Programmable Soft-stops; Preset Positioning [Continuous Rotation]	
Tilt Operation	180° rotation @ 0° to 21°/sec; Mechanical Limits; Programmable Soft-stops; Preset Positioning	
Mounting	4 x M8 tapped holes, equispaced on a 4" (101.6 mm) P.C.D.	
Dimensions (W x D x H)	429 x 310 x 368 mm	
Pan Turning Circle	Ø 660 mm	
Weight ¹	29 kg	
ELECTRICAL		
Power Requirements	24Vac 50 / 60Hz or 24Vdc (±10%)	
Power Consumption	92VA Maximum	
TELEMETRY		
Interface	RS485 serial asynchronous data	
Protocols ^{*2}	Synectics™, Pelco®, and other industry standard protocols available	
Functions ^{*1}	Pan, Tilt, Zoom, Aux1, [Aux2] and Aux in	
Day / Night Camera	On / Off Selection of: Digital Zoom, BLC, Autofocus	
Functions ^{*1}	Auto / Manual Selection of: Focus, Colour / Mono Operation, Frame Integration, White Balance	
Thermal Camera	Continuous Electronic Zoom, Multiple Colour Palettes (including Inverted), Multiple Contrast Display,	
Functions ^{*1}	Contrast and Level Control, Hot and Cold Spot, Auto / Manual Shuttering	
OSD	Password protected on-screen menu system for camera station configuration and diagnostics	
CAMERA / LENS		
	C3000-2V36-T3>>[2C36] [W]^{*5}	C3000-2V10-T3>>[2C10] [W]^{*5}
Video Output	1.0 Vpk-pk CVBS into 75Ω; Colour PAL 50Hz [NTSC 60Hz]	
Image Sensor	¼" EXview HAD CCD	⅓" Super HAD CCD II
Resolution	>550TVL	>530TVL
S/N Ratio	>50dB	
Zoom Range	36x zoom (up to 432x with digital zoom)	10x zoom (up to 120x with digital zoom)
Minimum Illumination	1.4 lux 0.1 lux (with ⅓ sec integration) 0.01 lux mono (with ⅓ sec integration)	0.25 lux 0.015 lux (with ⅓ sec integration) 0.0004 lux mono (with ⅓ sec integration)
Focal Length	3.4 to 122.4 mm	5.1 to 51 mm
Angle of View	57.8° to 1.7°	52° to 5.4°
Aperture	F1.6 to 4.5	F1.8 to 2.1
THERMAL IMAGER		
	C3000-2V<<-T345 [2C<<] [W]^{*5}	C3000-2V<<-T315 [2C<<] [W]^{*5}
Image Sensor	Amorphous Silicon Microbolometer	
Spectral Response	8 – 14 μm	
Thermal Sensitivity	50mK	
Refresh Rate	<9Hz [25Hz]	
Resolution	384 x 288	
Fixed Focal Length	45 mm	15 mm
Angle of View	12° x 9.3°	35° x 26°
Human Detection ^{*3/4}	~1000 m	>200 m

NOTE: *1 Dependant on equipment fitted. *2 Refer to Synectics for availability and compatibility with other control systems *3 Based on Johnson Criteria.
*4 Actual range may vary depending on camera set-up, user experience, environmental conditions and type of monitor or display used. *5 >> replace with thermal camera module and << replace with day / night camera module.

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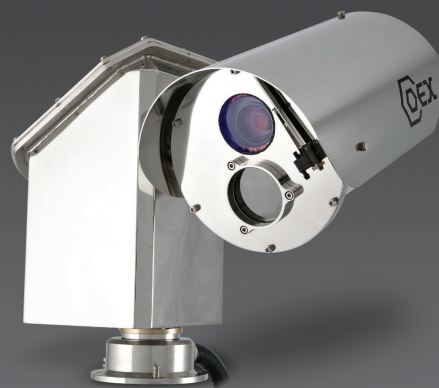
BS EN ISO 9001 CERTIFICATE No. 0956

Reference Numbers: 03GF0584_2

C3000T2S3/0414/A4 Iss 2

COEX™ 2000 TriMode Series '6' Camera Station

The COEX™ 2000 TriMode camera station 6 series has been specifically developed for marine applications and demanding environments. Combining the latest thermal imaging technology with a day / night (colour / mono) camera module the C2000 TriMode camera stations ensure unprecedented visual feedback in all light conditions.



Utilised around the world to assist with:

- Pipeline monitoring
- Navigation during night time and foggy conditions
- Ice Detection
- Piracy Detection
- Man-overboard Safety
- Environmental Protection
- Intruder Detection
- Safety and Security Protection

Even during daylight the C2000 TriMode can provide increased visibility over conventional camera stations with human detection at over 1100 m^{3/4}

COEX Series 6 camera stations are fitted with a 640 x 480 thermal imaging camera and a high resolution analogue day / night camera with removable IR cut filter.

Features

- IP66 & IP67 rated – completely protected against dust & water ingress, for the most extreme environments
- Electro-polished 316L stainless steel, for maximum corrosion resistance
- TriMode Operation – Day (colour), Night (mono) and Thermal Imaging
- Low Voltage Operation
- Preset accuracy and repeatability of <math><0.05^\circ</math>
- Advanced Mechanical Design to minimise size and weight
- Pre-Heat Mode for safe start up in freezing conditions
- Smart Move Technology assists target acquisition and tracking
- Germanium and Toughened Glass Windows

Options

- Continuous Rotation [C]
- Absolute Positioning
- Integral Wiper [W]
- COEX™ "MEWS" Pressurised Wash System
- Synectics IP and Fibre Optic Transmission (via associated junction box)
- COEX™ Wall Mount Bracket
- COEX™ Range of Tilt Down Towers and accessories

Specifications

CERTIFICATIONS / RATINGS		[OPTIONS]
Certifications / Ratings	IP66 & IP67 to IEC 60529 CE Compliant to EMC and Low Voltage Directives LVD Directive: 2006/95/EC	
ENVIRONMENTAL		
Operating Temperature	-45°C to +60°C	
MECHANICAL		
Material	Electro-polished 316L Stainless Steel	
Windows	Germanium and Toughened Glass, Thermostatically Operated Demister [Wiper for Day / Night View only]	
Pan Operation	360° rotation @ 0° to 42°/sec; Mechanical Limits; Programmable Soft-stops; Preset Positioning [Continuous Rotation]	
Tilt Operation	180° rotation @ 0° to 21°/sec; Mechanical Limits; Programmable Soft-stops; Preset Positioning	
Mounting	4 x M8 x 1.25 tapped holes, equi-spaced on a 4" (101.6 mm) P.C.D.	
Dimensions (W x D x H)	412 x 310 x 375 mm	
Pan Turning Circle	Ø 626 mm	
Weight	19 kg	
ELECTRICAL		
Power Requirements	24Vac 50 / 60Hz or 24Vdc (±10%)	
Power Consumption	92VA Maximum	
TELEMETRY		
Interface	RS485 serial asynchronous data	
Protocols*2	Synectics™, Pelco®, and other industry standard protocols available	
Functions*1	Pan, Tilt, Wash, Wipe, Aux1, [Aux2] and Aux in	
Day/Night Camera	On / Off Selection of: Digital Zoom, BLC, Autofocus;	
Functions*1	Auto / Manual Selection of: Focus, Colour / Mono Operation, Frame Integration, White Balance	
Thermal Camera	Continuous Electronic Zoom, Multiple Colour Palettes (including Inverted), Multiple Contrast Display,	
Functions*1	Contrast and Level Control, Hot and Cold Spot, Auto / Manual Shuttering	
OSD	Password protected on-screen menu system for camera station configuration and diagnostics	
CAMERA / LENS		[OPTIONS]
	C2000-2V36-T6>> [2C36] [W]*5	C2000-2V10-T6>> [2C10] [W]*5
Video Output	1.0 Vpk-pk CVBS into 75Ω; Colour PAL 50Hz [NTSC 60Hz]	
Image Sensor	¼" EXview HAD CCD	⅓" Super HAD CCD II
Resolution	>550TVL	>530TVL
S/N Ratio	>50dB	
Zoom Range	36x zoom (up to 432x with digital zoom)	10x zoom (up to 120x with digital zoom)
Minimum Illumination	1.4 lux 0.1 lux (with ⅓ sec integration)	0.25 lux 0.015 lux (with ⅓ sec integration)
	0.01 lux mono (with ⅓ sec integration)	0.0004 lux mono (with ⅓ sec integration)
Focal Length	3.4 to 122.4 mm	5.1 to 51 mm
Angle of View	57.8° to 1.7°	52° to 5.4°
Aperture	F1.6 to 4.5	F1.8 to 2.1
THERMAL IMAGER		[OPTIONS]
	C2000-2V<<-T650 [2C<<] [W]*5	C2000-2V<<-T625 [2C<<] [W]*5
Image Sensor	Amorphous Silicon Microbolometer	
Spectral Response	8 – 14 μm	
Thermal Sensitivity	70mK [50mK]	
Refresh Rate	<9Hz [25Hz]	
Resolution	640 x 480	
Fixed Focal Length	50 mm	25 mm
Angle of View	12.4° x 9.3°	24.6° x 18.6°
Human Detection*3/4	~1100 m	~560 m

NOTE: *1 Dependant on equipment fitted. *2 Refer to Synectics for availability and compatibility with other control systems *3 Based on Johnson Criteria. *4 Actual range may vary depending on camera set-up, user experience, environmental conditions and type of monitor or display used. *5 >> replace with thermal camera module and << replace with day / night camera module.

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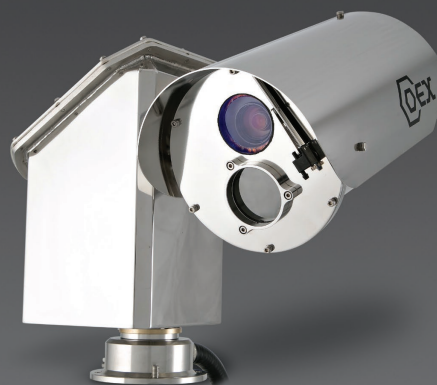


BS EN ISO 9001 CERTIFICATE No. 0956

Reference Numbers: 03GF620_2
C2000T2S6/0414/A4 Iss 1

COEX™ 2000 TriMode Series '3' Camera Station

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COEX Series 3 camera stations are fitted with a 384 x 288 analogue thermal imaging camera and a high resolution analogue day / night camera with removable IR cut filter.

Features

- IP66 & IP67 rated – completely protected against dust & water ingress, for the most extreme environments
- Electro-polished 316L stainless steel, for maximum corrosion resistance
- TriMode Operation – Day (colour), Night (mono) and Thermal Imaging
- Low Voltage Operation
- Preset accuracy and repeatability of <math><0.05^\circ</math>
- Advanced Mechanical Design to minimise size and weight
- Pre-Heat Mode for safe start up in freezing conditions
- Smart Move Technology assists target acquisition and tracking
- Germanium and Toughened Glass Windows

Options

- Continuous Rotation [C]
- Absolute Positioning
- Integral Wiper [W]
- COEX™ "MEWS" Pressurised Wash System
- Synectics IP and Fibre Optic Transmission (via associated junction box)
- COEX™ Wall Mount Bracket
- COEX™ Range of Tilt Down Towers and accessories

Specifications

CERTIFICATIONS / RATINGS		[OPTIONS]
Certifications / Ratings	IP66 & IP67 to IEC 60529 CE Compliant to EMC and Low Voltage Directives LVD Directive: 2006/95/EC	
ENVIRONMENTAL		
Operating Temperature	-45°C to +60°C	
MECHANICAL		
Material	Electro-polished 316L Stainless Steel	
Windows	Germanium and Toughened Glass, Thermostatically Operated Demister [Wiper for Day / Night View only]	
Pan Operation	360° rotation @ 0° to 42° /sec; Mechanical limits; Programmable soft-stops; Preset Positioning [Continuous Rotation]	
Tilt Operation	180° rotation @ 0° to 21° / sec; Mechanical Limits; Programmable Soft-stops; Preset Positioning	
Mounting	4 x M8 x 1.25 tapped holes, equi-spaced on a 4" (101.6 mm) P.C.D.	
Dimensions (W x D x H)	412 x 310 x 375 mm	
Pan Turning Circle	Ø 626 mm	
Weight*1	19 kg	
ELECTRICAL		
Power Requirements	24Vac 50 / 60Hz or 24Vdc (±10%)	
Power Consumption	92VA Maximum	
TELEMETRY		
Interface	RS485 serial asynchronous data	
Protocols	Synectics™, Pelco®, and other industry standard protocols available	
Functions*1	Pan, Tilt, Wash*2, Wipe*2 Aux1, [Aux2] and Aux in	
Day / Night Camera	On / Off Selection of: Digital Zoom, BLC, Autofocus	
Functions*2	Auto / Manual Selection of: Focus, Colour / Mono Operation, Frame Integration, White Balance	
Thermal Camera	Continuous Electronic Zoom, Multiple Colour Palettes (including Inverted), Multiple Contrast Display,	
Functions*1	Contrast and Level Control, Hot and Cold Spot, Auto / Manual Shuttering	
OSD	Password protected on-screen menu system for camera station configuration and diagnostics	
CAMERA / LENS		[OPTIONS]
	C2000-2V36-T3>> [2C36] [W]*5	C2000-2V10-T3>> [2C10] [W]*5
Video Output	1.0 Vpk-pk CVBS into 75Ω; Colour PAL 50Hz [NTSC 60Hz]	
Image Sensor	¼" EXview HAD CCD	⅓" Super HAD CCD II
Resolution	>550TVL	>530TVL
S/N Ratio	>50dB	
Zoom Range	36x zoom (up to 432x with digital zoom)	10x zoom (up to 120x with digital zoom)
Minimum Illumination	1.4 lux 0.1 lux (with ⅓ sec integration)	0.25 lux 0.015 lux (with ⅓ sec integration)
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Angle of View	57.8° to 1.7°	52° to 5.4°
Aperture	F1.6 to 4.5	F1.8 to 2.1
THERMAL IMAGER		[OPTIONS]
	C2000-2V<<-T345 [2C<<] [W]*5	C2000-2V<<-T315 [2C<<] [W]*5
Image Sensor	Amorphous Silicon Microbolometer	
Spectral Response	8 – 14 μm	
Thermal Sensitivity	50mK	
Refresh Rate	<9Hz [25Hz]	
Resolution	384 x 288	
Fixed Focal Length	45 mm	15 mm
Angle of View	12° x 9.3°	35° x 26°
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Reference Numbers: 03GF0583_2
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