

## OCULUS TI

### Rugged pan/tilt unit with dual video and thermal camera

The Oculus TI provides a choice of simultaneous thermal and video outputs in ruggedised pan/tilt casing.

The Oculus TI range employs DRS' proven un-cooled 320x240 (DA) or high resolution 640x480 (DB), 17µm VOx thermal imaging technologies, to provide man detection up to 2.1 kilometres. The thermal features ICE image enhancement and continuous digital zoom. All models offer simultaneous video verification provided by a 36x zoom module or 30x HD zoom module.

As with all Oculus units, everything is fully housed within a hard anodised aluminium casing, fully rated to IP67, and ready to handle the harshest of environments. The toughened, optically flat glass provides clear images, even at the highest zoom levels and can be kept clean at all times by the compact wiper unit. Optical encoders for both the pan and tilt axes provide highly accurate positioning and repeatability, allied with self-correction systems that will counteract any external interference with the moving head.

The Oculus TI models can be mounted upright or inverted, and the yoke can be offset to eliminate blindspots through a full 360 degrees of rotation. Mounting accessories are available to suit standard mounting platforms, including 4" PCD.

#### Key features:

- HD and SD video option
- ICE - Image enhancement technology
- Industry leading 17µm thermal technology
- Simultaneous video and thermal outputs
- Man detection up to 2.1km
- IP and HD-SDI option
- Optical encoders for accurate positioning and repeatability
- Protected to IP67 (IP68 option)
- 316L stainless steel option
- Built-in camera lens wiper as standard
- Preset, tours and privacy masking
- Multiple mounting options
- Optional heater for reliable operation down to -40°C



#### Tamarisk® Image enhancement selections



AGC

Firefighter is visible with minimal contrast. Background of scene is washed out and nothing is visible through the window.



ICE Low

Firefighter and background are clearly visible with added contrast and edge enhancement. No visibility through the window.



ICE High

Maximum edge enhancement brings out details of firefighter and reveals elements in the distant background through the window.

AGC

Automatic Gain Control adjusts the image gain to the optimal range.

ICE Low

Provides moderate levels of contrast and edge enhancement.

ICE High

Additional local area contrast and edge enhancement to enrich background and foreground content.

### The Silent Sentinel Range

Silent Sentinel offer an extensive range of camera and lens configurations to meet your exact surveillance requirements.

Contact customer service for more information on our full range of products and bespoke design and build services.

Tel: + 44 (0)1992 558 093

[www.silentsentinel.com](http://www.silentsentinel.com)



OCULUS



AERON



OSIRIS



JAEGAR

## Oculus standard thermal range

Sensor type	Uncooled V0x Microbolometer	Uncooled V0x Microbolometer	Uncooled V0x Microbolometer	Uncooled V0x Microbolometer	Uncooled V0x Microbolometer	Uncooled V0x Microbolometer	Uncooled V0x Microbolometer	Uncooled V0x Microbolometer
Pixel size	17µ	17µ	17µ	17µ	17µ	17µ	17µ	17µ
Spectral band	8-14µm	8-14µm	8-14µm	8-14µm	8-14µm	8-14µm	8-14µm	8-14µm
Thermal sensitivity	<50mK	<50mK	<50mK	<50mK	<50mK	<50mK	<50mK	<50mK
Array format	320x240	320x240	320x240	320x240	640x480	640x480	640x480	640x480
Frame rates	9Hz, 25Hz	9Hz, 25Hz	9Hz, 25Hz	9Hz, 25Hz	9Hz, 25Hz	9Hz, 25Hz	9Hz, 25Hz	9Hz, 25Hz
Image control	White hot, Black hot, Invert	White hot, Black hot, Invert	White hot, Black hot, Invert	White hot, Black hot, Invert	White hot, Black hot, Invert	White hot, Black hot, Invert	White hot, Black hot, Invert	White hot, Black hot, Invert
Focus	Fixed, preset, Athermalised	Fixed, preset, Athermalised	Fixed, preset, Athermalised	Fixed, preset, Athermalised	Fixed, preset, Athermalised	Fixed, preset, Athermalised	Fixed, preset, Athermalised	Fixed, preset, Athermalised
Zoom	E-zoom 1-4, Region of interest	E-zoom 1-4, Region of interest	E-zoom 1-4, Region of interest	E-zoom 1-4, Region of interest	E-zoom 1-4, Region of interest	E-zoom 1-4, Region of interest	E-zoom 1-4, Region of interest	E-zoom 1-4, Region of interest
FOV	40°-7.5mm f1.2	16°-19mm f1.1	9°-35mm f1.2	6°-50mm f1.2	44°-14.25mm f1.2	25°-25mm f1.2	18°-35mm f1.2	12°-50mm f1.2
Video output	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite

## Oculus standard and HD video range

Video cameras	SD	SD (Low light)	HD	HD
Optical zoom	36x	18x	30x	20x
Digital enlargement	12x (432x combined)	12x (432x combined)	12x (360x with optical zoom)	N/A
Image sensors	1/4" Exview CCD	1/3" Exview CCD	1/2.8"-Type Exmor CMOS sensor	1/2.8"-Type (1/3") CMOS
Resolution	530TVL	530TVL	Approx 3.27million	2096x1097 (2.3M)
Signal system	PAL	PAL	HD: 1080p/SD: NTSC/PAL	HD: 1080p
Lens (wide to tele)	F=3.4mm to 122mm f1.6 to f4.5	F=4.7mm to 84mm f1.6	f=4.3mm to 129.0mm f1.6 to 4.7	f=4.7mm to 94mm f1.6
Angle of view – horizontal	58.° (W) to 1.7° (T)	54.4° (W) to 3.1° (T)	54.1° (W) to 2.9° (T)	55.2° (W) to -2.9° (T)
Minimum illumination (50IRE)	1.4 lux Colour, 0.01 lux Mono	0.25 lux Colour, 0.0025 lux Mono	1.7 lux, 0.5 lux in high sens mode	1.6lux, 0.04 lux in high sens mode
Video output	Composite	Composite	Digital/IP	Digital/IP

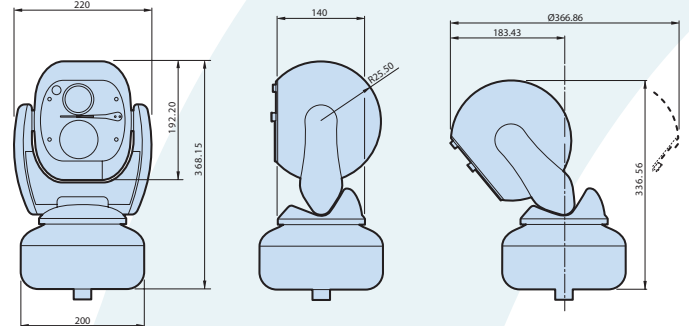
## Mechanical specifications

Construction	Die-cast hard anodised, powder coated aluminium with A4 stainless fittings	
Turning diameter	Normal 220mm / 8.66"	Offset 370mm / 14.57"
Height	370mm / 14.57"	340mm / 13.38"
Height with adaptor	500mm / 19.68"	470mm / 18.50"
Pan rotation limit / speed	360° continuous / 180° per second (excluding ramping)	
Tilt rotation limit / speed	+90° to -30° upright (-68° inclined) +30° to -90° inverted 180° per second (excluding ramping)	
Weight (with adaptor)	7Kg (8Kg) 15.43lb (17.63lb)	
Mounting profile	Upright / Inverted / Offset	
Pan/tilt bearings	Sealed for life – no maintenance required	
Motor drive	Long life toothed polypropylene belt drive, Pulleys bonded to keypad shafts for minimum backlash	
Environmental rating	IP67	
Operating temperature range (ambient, dry)	-20°C to +60°C (-40°F to +140°F with optional heater) -4°F to +150°F (-40°F to +150°F with optional heater)	
Mounting	4" PCD mount	
Connection socket	IP67 Neptune multi-way SD, IP67 Marine HD-SDI option and IP67 IP option	

## Electrical, electronic and software specifications

Optical encoder preset accuracy	0.01°
Rotational contacts	Heavy duty slip rings for power, data, video, switching for washer
Position control	"Capable of retaining position without drift, Automatic position recovery if forced away by a "non-control" intervention"
Roll around mode	Auto 180° pan spin when tilt reaches end of travel while following subjects
Configuration	Via on screen menus
Presets	127 + wash preset (repeatability 0.05°)
Tours	16 preset tours (maximum of 60 positions each), four 8 minute mimic tours
Privacy zones	Maximum of eight on-screen simultaneously
Communications	Coaxial or RS485 half duplex data comms with absolute positioning output
Supported protocols	Pelco-D, Pelco-P, CBC OCP485, Forward vision mic1 FV300, Philips, Vicon.
Power requirements	"At Oculus unit: 14 to 36VDC or 14 to 26VAC, 45W peak (100W with optional heater) Supplied PSU requires 230VAC, 12VDC support on some models"
Additional details	In-built real-time clock

## Dimensions (in millimeters)

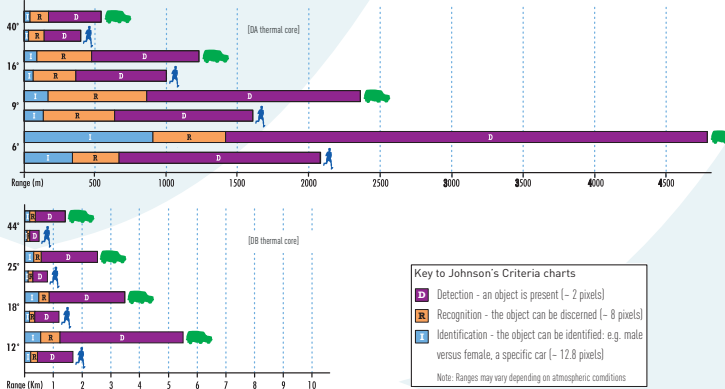


## Ordering information

Product code	Product description
RC3-51PYD36X-DA70FB	Oculus Rugged Dome Thermal/Video Thermal 70°(5mm) 320x240 25Hz plus 36:1 Sony video Black
RC3-51PYD36X-DA40FB	Oculus Rugged Dome Thermal/Video Thermal 40°(7.5mm) 320x240 25Hz plus 36:1 Sony video Black
RC3-51PYD36X-DA16FB	Oculus Rugged Dome Thermal/Video Thermal 16°(19mm) 320x240 25Hz plus 36:1 Sony video Black
RC3-51PYD36X-DA09FB	Oculus Rugged Dome Thermal/Video Thermal 9°(35mm) 320x240 25Hz plus 36:1 Sony video Black
RC3-51PYD36X-DA06FB	Oculus Rugged Dome Thermal/Video Thermal 6°(50mm) 320x240 25Hz plus 36:1 Sony video Black
RC3-51PYD36X-DB44FB	Oculus Rugged Dome Thermal/Video Thermal 44°(14mm) 640x480 25Hz plus 36:1 Sony video Black
RC3-51PYD36X-DB25FB	Oculus Rugged Dome Thermal/Video Thermal 25°(25mm) 640x480 25Hz plus 36:1 Sony video Black
RC3-51PYD36X-DB18FB	Oculus Rugged Dome Thermal/Video Thermal 18°(35mm) 640x480 25Hz plus 36:1 Sony video Black
RC3-51PYD36X-DB12FB	Oculus Rugged Dome Thermal/Video Thermal 12°(50mm) 640x480 25Hz plus 36:1 Sony video Black
RC3-51HYJ30X-DA70FB	Oculus Rugged Dome Thermal/Video Thermal 70°(5mm) 320x290 25Hz plus HD 30:1 HD-SDI Sony video Black
RC3-51HYJ30X-DA40FB	Oculus Rugged Dome Thermal/Video Thermal 40°(7.5mm) 320x240 25Hz plus HD 30:1 HD-SDI Sony video Black
RC3-51HYJ30X-DA16FB	Oculus Rugged Dome Thermal/Video Thermal 16°(19mm) 320x240 25Hz plus HD 30:1 HD-SDI Sony video Black
RC3-51HYJ30X-DA09FB	Oculus Rugged Dome Thermal/Video Thermal 9°(35mm) 320x240 25Hz plus HD 30:1 HD-SDI Sony video Black
RC3-51HYJ30X-DA06FB	Oculus Rugged Dome Thermal/Video Thermal 6°(50mm) 320x240 25Hz plus HD 30:1 HD-SDI Sony video Black
RC3-51HYJ30X-DB44FB	Oculus Rugged Dome Thermal/Video Thermal 44°(14mm) 640x480 25Hz plus HD 30:1 HD-SDI Sony video Black
RC3-51HYJ30X-DB25FB	Oculus Rugged Dome Thermal/Video Thermal 25°(25mm) 640x480 25Hz plus HD 30:1 HD-SDI Sony video Black
RC3-51HYJ30X-DB18FB	Oculus Rugged Dome Thermal/Video Thermal 18°(35mm) 640x480 25Hz plus HD 30:1 HD-SDI Sony video Black
RC3-51HYJ30X-DB12FB	Oculus Rugged Dome Thermal/Video Thermal 12°(50mm) 640x480 25Hz plus HD 30:1 HD-SDI Sony video Black

Note: Also available in White and Stainless steel. Change 'B' at the end of the product code to 'W' or 'SS'

## Detection, recognition, identification range charts



Designed and manufactured in the UK.

Specifications may be subject to change without notice • DN220714 - 1.1c • © 2014