

OCULUS Ti V

Rugged PTZ Thermal Camera Vehicle

The Oculus Ti V is a professional vandal resistant high speed, continuous PTZ dual head thermal camera which has been specifically designed for vehicle mounting applications.

The camera has been cast from aluminium which is then hard anodized and powder coated resulting in a camera ideally suited for challenging applications.

The camera offers thermal detection at long range day or night in any weather and with simultaneous optical video output for video verification. As a thermal/optical unit it can also be used to provide temperature indication of fire or thermo graphic applications.

Utilising Optical Incremental Encoders, Oculus can accurately pinpoint and maintain its position, automatically correcting itself should an external force such as vibration or harsh vehicle movement cause the head to move.

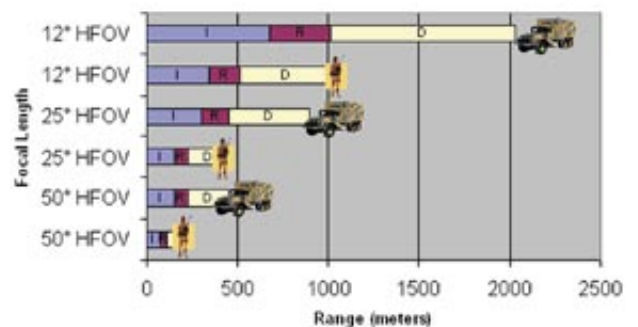
The unique design allows the Oculus to be mounted upright, inverted or cantered offering complete 360 degree coverage with no blind spots. A range of mounting accessories is available with an industry standard 4" PCD mounting platform.



Key features

- Combined Thermal and Optical Unit
- Long range detection up to 1000 metre range. (12 degree lens)
- Temperature scale
- Dual video output
- Multiple thermal lens option
- Thermal white hot and black hot control
- User definable temperature related colour palette
- Flexible mounting option
- High resolution Day/Night 36x optical camera module
- High speed pan and tilt system
- Presets, tours and privacy masks as standard
- Hard anodised IP67 Aluminium housing
- Multiple protocols
- Wiper as standard

Detection Recognition Identification
in good conditions, provisional range data



Specification Video Module

Image Sensor	¼" EXview CCD
Signal System	PAL
Number of total pixels	~440000 pixels
Lens	36x optical zoom, f=3.4mm (wide) to 122.4mm (tele), F1.6 to F4.5
Digital Zoom	12x (432x with optical zoom)
Angle of view (H)	57.8° (wide end) to 1500 mm (tele end)
Minimum working distance	320 mm (wide end) to 1500 mm (tele end)
Sync system	Internal / External (V-lock)
Minimum illumination	1/60 s mode: 1.4lx (typical) (F1.6, 50IRE) 1/4 s mode: 0.1lx (typical) (F1.6, 50IRE)
S/N ratio	More than 50dB
Electronic shutter	1/1 to 1/10000s, 22 steps
White balance	Auto, ATW, Indoor, Outdoor, One-push, Manual
Gain	Auto, Manual, (-3 to 28dB, 2dB steps)
AE control	Auto, Manual, Priority Mode, Bright, EV compensation, Back-light compensation, Slow AE
EV compensation	-10.5 to 10.5 dB (1.5dB steps)
Back-light compensation	On / Off
Privacy zone masking	On / Off (24 positions)
Flicker cancel	Auto
Focusing system	Auto (Sensitivity: normal, low), One-push AF, Manual, Infinity, Interval AF, Zoom trigger AF
Picture effects	E-Flip, Nega Art, Black & White, Mirror Image
Camera operation switch	Zoom tele, Zoom wide
Video Output	VBS: 1.0 Vp-p (sync negative), Y/C
Camera control interface	VISCA (TTL signal level)
Power consumption	6 to 12V DC / 1.6W (motors inactive), 4.0W (motors active)

Specification Thermal Module

Detector	Amorphous Silicon Microbolometer (uncooled)
Spectral Response	7 to 14µm (filter bandwidth)
Thermal Sensitivity	< 50mK
Format	320 x 240 Pixel
Refresh Rate	9 Hz or 25 Hz (PAL)
Start-up time	~ 4 seconds
Contrast / Brightness	Advanced Image Processing
Saturation Temperature	1100°F +/-10% with automatic electronic iris
Focus	1m to ∞, manual adjustment
FOV Alternatives	50° x 37.5°, 25° x 19° or 12° x 9°
Detection range	up to 235m (50° lens, equiv focal length 5.8mm) up to 445m (25° lens, equiv focal length 11mm) up to 1000m (12° lens, equiv focal length 25mm)
Video Analogue Output	PAL
Output Resolution	768 x 574 pixels for higher-clarity thermal images & zymology overlay
Customizable Absolute Colour	3 OEM selectable colour points are mapped to selectable absolute temperatures
Input voltage	8 to 32V DC
Input Power	~ 2W @ 25°C ambient, 12V DC
Power consumption	≤ 5W

Ordering Information

RCV3-51D36P12 B,G,W (Black, Grey OR White)	9Hz Thermal 12° FOV 1000 metre man detection; 36X Optical
RCV3-51D36P25 B,G,W (Black, Grey or White)	9Hz Thermal 25° FOV 600 metre man detection; 36X Optical
RCV3-51D36P50 B,G,W (Black, Grey or White)	9Hz Thermal 50° FOV 200 metre man detection; 36X Optical
RCV3-51D36P12F B,G,W (Black, Grey or White)	25Hz Thermal 12° FOV 1000 metre man detection; 36X Optical
RCV3-51D36P25F B,G,W (Black, Grey or White)	25Hz Thermal 25° FOV 600 metre man detection; 36X Optical
RCV3-51D36P50F B,G,W (Black, Grey or White)	25Hz Thermal 50° FOV 200 metre man detection; 36X Optical

Mechanical

Capable of Continuous pan rotation
Capable of 290° tilt rotation
Capable of normal and inverted mounting
Capable of 180°/second pan speed (excluding ramping)
Capable of 180°/second tilt speed (excluding ramping)
Fitted with sealed for life bearing
Long life toothed polypropylene belt drive, for minimum backlash-pulleys bonded to keypad shafts
Rated to IP67
4" pcd mount
IP67 Multi way connector to support electrical connection requirements, with 10m composite lead

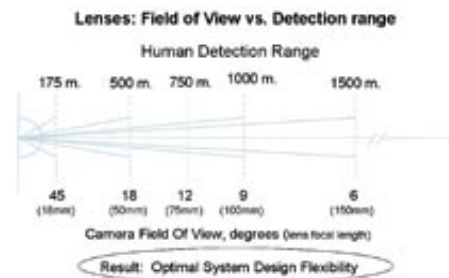
Electronic

Maintaining preset accuracy with optical encoders with a resolution of 0.01°
Capable of retaining position without drift
Recovering position if forced away by a "non-control" intervention
180°pan spin on reaching -90°
Storage of "wash" preset
Storage of 32 preset PTZ positions
Storage of 16 preset tours
Storage of 4x 1 minute mimic tours
8+8 steps of video gain and lift
Up to 24x privacy zones
Access to camera configurations via on screen menus
Stepper motor drive
Multiple control protocols
Robust RS485 half duplex data comms, with absolute positioning output
Coaxial Telemetry
Support for 8 x 8 alarm inputs on RS485 bus, external to PTZ unit. (With alarm interface card)
In built real-time clock to support extensively configurable alarm events and actions
Switch to IR mode via external input (via alarm card)
Heavy duty slip rings for power, data, video, switching for washer, and bonded earth for lightning protection
Power requirements 20-36Vdc or 14-26Vac. 15W peak. Included PSU requires 23V AC

Protocols

Vendor	Protocol	Vendor	Protocol
360-Vision	C-Dome	Philips	2400
BBV	Serial485	Philips	9600
CBC	OCP485	Samsung	SCC2000
DeView	VTC485	Samsung	SCC3000
Forward Vision	FV Mic1-300	Sensormatic	-
Ikegami	ILAN	Ultrak / Honeywell	Diamond
Ikegami	RS485	VCL	-
Kalatel	DP	Baxall DC	FSK-Standard
Pelco D	D2400	BBV	Coaxial
Pelco P	P4800	Pelco	Coaxitron
Pelco P	P9600		

Human Detection Range



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