

MSP-Vehicle

Miniature Sensor Platform, Day & Night Multi Sensor Observation Head Especially Developed for Vehicle Applications

MSP is a day and night multi sensor observation head, especially developed for vehicle applications.

The system provides 360° horizontal and $\pm 45^\circ$ vertically camera orientation capability with high level of stabilisation.

Using thermal imaging and Sony CCD technology, MSP includes an uncooled dual field of view (45mm\135mm) thermal imaging camera for day and night operation. MSP is ruggedised to withstand the harshest weather and environmental conditions, including rain, direct sunlight, high humidity and dust.

Main Advantages & Features

- Cost effective day night system on a gyro stabilised PTZ
- Digital image stabilisation as standard
- Thermal camera with resolution of 640X480 (17 μ m)
- Auto focus thermal imaging Dual FOV 45/135mm
- Automatic focus CCD 26x optical zoom (42°-1.7°) with continuous digital zoom 4x
- Environmentally sealed housing
- Easy installation and maintenance
- Threat identification capability
- Light weight, rugged and robust



Applications

- Mobile border surveillance
- Vehicle remote viewing
- Customs and Police
- Search and rescue
- Mobile threat detection
- Force protection
- Robotic vehicles

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Outline Specification

Night Camera:

Dual FOV Thermal Camera, Spectral Band 8 – 12 μ m
FPA Image Sensor 640x480
NETD < 50°mK (with F#1 optics)
Video Output \Signal CCIR or RS-170
Control Operation Polarity, NUC, Image Flip, Manual Gain/Level, e-Zoom, Focus Corrections
Field Of View Dual wide (45mm) narrow (135mm)
384x228 WFOV 12.2° X 9.2° NFOV 4.1° X 3.1°
640x480 WFOV 20.2° X 15.1° NFOV 6.8° X 5.1°
Auto Focus corrections

Pan & Tilt:

Pan: 360° (slipping), Tilt: \pm 45°
Axis speed: 0.0056°/sec to 50°/sec

Stabilisation performance

Pan & tilt stabilisation to \pm 0.056° 1 σ
Digital stabilisation to \pm 2 pixels

Power:

Operating voltage: 24Vdc
Consumption: 50W nominal (During power mode)
100W max (heaters)

Physical Characteristics:

System Weight <12kg
Camera Size 45.0cm diameter x 36.6cm height-swept volume

Day Camera:

CCD Sony Camera
FCB-EX1000\P
1/4-type EX-view HAD CCD
NTSC (380k pixel) PAL (440k pixel)
Auto, Manual, Priority mode, Bright, EV compensation, Backlight, compensation, Slow AE
Auto Focus corrections
26x optical zoom, 42° - 1.7°
Continuous digital zoom 4x
Auto (Sensitivity: normal, low), One push AF, Manual, Infinity, Interval AF, Zoom trigger AF

Communication:

RS422 or RS232 with the PTZ and cameras

Environmental:

Operating temperature range -30°C to +55°C
Storage temperature range -40°C to +70°C
Humidity Rain +40°C 93% RH
Sand/dust Mil-Std-810E
Encapsulation IP66
Shock & Vibration Mil-Std-810E

Standard Package:

Standard Package
Pan/Tilt or fixed mounted head with integrated thermal imagers and CCD camera
Break-out cable with standard mating connectors
Operator manual

Thermal Imager Range performance:

Range Performance Wide FOV 45 mm



Man (1.7mX0.5m)
Detection: 830m
Recognition: 280m



Object (2.3mX2.3m)
Detection: 2000m
Recognition: 690m

Range Performance Narrow FOV 135 mm



Man (1.7mX0.5m)
Detection: 2500m
Recognition: 830m



Object (2.3mX2.3m)
Detection: 6200m
Recognition: 2000m



Instro Precision Limited

Tel : + 44 (0) 1843 604455 Fax : + 44 (0) 1843 864143
Email : marketing@instro.com Web : www.instro.com