

# **MSP-Marine**

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

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

The system provides 360° horizontal and ±45° 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 ruggedized to withstand the harshest weather and environmental conditions, including rain, direct sunlight, high humidity and salt fog.

## **Main Advantages & Features**

- Cost effective day night system on a gyro stabilised PTZ
- Digital image stabilisation as standard
- Thermal camera with resolution of 640X480 (17µm)
- 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**

- Marine police
- Coastal surveillance
- Port and shipping control
- Search and rescue
- Environmental policing
- Hovercraft
- Coastguard
- Customs and excise

## **MSP-Marine**

## Miniature Sensor Platform, Day & Night Multi Sensor Observation Head Especially Developed for Naval & Marine Applications

## **Technical Data**

### **Night Camera:**

Dual FOV Thermal Camera, Spectral Band 8 – 12 μm

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° (slipring), Tilt: ±45° Axis speed: 0.0056°/sec to 50°/sec

### Stabilisation performance

Pan & tilt stabilisation to  $\pm 0.056^{\circ}$  1 $\sigma$ Digital stabilisation to  $\pm 2$  pixels

#### **Power:**

Operating voltage: 24 V DC

Consumption: 50W nominal (During power mode)

100W max (heaters)

#### **Physical Characteristics:**

System Weight <12 kg

Camera Size 45.0 cm diameter x 36.6 cm 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:**

RS 422 or Rs232 with the PTZ and cameras

#### **Environmental:**

Operating temperature range - 30  $^{\circ}$ C to +55  $^{\circ}$ 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:**





### **Instro Precision Limited**

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