Visible vs FLIR Thermal Comparison

APPLICATIONS

• Force Protection

• Border Surveillance

• Tactical Reconaissance

• Training Range Applications

• Fixed and Mobile Security

FLIR *RANGER*®
MS-UC DefendIR

Portable, MID Range Thermal imaging Surveillance System with Multi-sensor option

The Ranger® MS-UC DefendIR is an industry leading mid-range thermal imager for seeing in complete darkness and through a multitude of environmental conditions including smoke, rain, snow, dust and dense fog. The Ranger MS-UC DefendIR is the first of its kind, uncooled imager to offer continuous optical zoom. The system is based on forward looking infrared (FLIR) technology developed for the US military, but vaults ahead of the competition through the innovative use of VisionSense™. This technology offers user-controlled, customized real time mixing and merging of the two visual sources - a visible light (CCD) camera and an infrared camera. VisionSense generates the ability to penetrate glare, and see through windows, glass or water.

The Ranger MS-UC DefendIR is ideally suited for day and night perimeter security, maritime surveillance and DHS/DoD applications. Offering multiple lens and detector combinations, each camera can be customized to meet detailed performance requirements. Featuring a sleek integrated pan and tilt design, the camera is capable of continuous 360° panning and a +/- 80° tilt (varies with some lens configurations) withstanding ambient temperatures ranging from -40° to +65° C. The ruggedized housing is environmentally sealed to meet NEMA 4, IP66 and MIL-STD-810F specifications and has been tested and certified by an independent lab.

Out of the box, the Ranger MS-UC DefendIR is ready to integrate into your system. It supports most protocols used in commercial and military applications and can be easily integrated into existing fiber, wireless or IP networks. It can also interface with VMD, radar, UGS or other trigger sensors for a "slew to cue" solution.

KEY FEATURES

• Simultaneous analog video outputs – thermal and visible-light – along with IP and serial control interfaces for easy integration into IP or analog networks

• Available in 640 x 480 detector arrays

• Continuous thermal zoom available

• P/T with continuous 360° pan

• VisionSense™ technology combines infrared and CCD imagery in real time

• Multiple lens combinations for tailor-made range performance

• NEMA 4, IP66, MIL-STD-810F, CE tested, ISO 9001:2008

◆FLIR® | The World's Sixth Sense®

Specifications

RANGER MC-US DEFENDIR	
Video Outputs	Two video channels - one thermal and one mixed (CCD EO and thermal), varying from 0 to 100% CCD EO
Serial Interface	RS-422 and 10/100 Ethernet
Power Input	15-24 VDC ± 20% or 220/110 VAC 50/60 Hz
Power Consumption	<22 Watts (nominal) / 45 Watts (peak)
Weight	<28 lbs. (12.7 kg) (Varies by configuration)
Operating Temperature	-40° to +65° C
Environmentally Sealed	NEMA 4 and IP66 Certified, MIL STD 810F tested
MIL-STD-810F tests	Methods 501.4, 502.4, 503.4, 505.4, 506.4, 507.4, 508.5, 509.4, 510.4, 514.5, 516.5 and 521.2
Azimuth Control	Continuous 360°
Elevation Control	45mm/135mm model: -25° to +80° All other models: -80° to +80°
Pan & Tilt Slew Rate	0.25-60°/sec Controlled (varies by configuration) Up to 110°/sec Uncontrolled. (varies by configuration)
Pointing Accuracy & Pan Repeatability	Pan ± 0.25° (varies by configuration) Tilt ± 0.1° (varies by configuration)
THERMAL CAMERA	
Detector	Uncooled, Vanadium Oxide Microbolometer
Frame Rate	30 Hz (NTSC) and 25 Hz (PAL)
Resolution	640 x 480
Spectral Response	LWIR
IR Lens Options	25mm, 50mm, 100mm 30/90mm DFOV or Continuous zoom, 45/135mm DFOV or Continuous zoom
Optical IR Zoom	30/90mm 3X continuous 45/135mm 3X continous
Digital IR Zoom	Continuous Digital Zoom 1x to 4x
Focus	Remote focus
Gain / Level Controls	Automatic or Manual
CCD CAMERA	
CCD Camera	Narrow FOV 1.6°, Wide FOV 42°
Image Stabilization	By software command
Zoom	Optical: 26x Digital: 12x Total: 312x
Minimum Illumination	2.0 lux/1/60 sec (NTSC) 0.14 lux/1/4 sec (NTSC)
Starlight Mode	0.7 lux/1/60 sec (NTSC) 0.05lux/1/4 sec (NTSC)

Ranger® MS-UC DefendIR

CORPORATE HEADQUARTERS
FLIR Systems, Inc.
27700 SW Parkway Ave.
Wilsonville, OR 97070
PH: +1 877.773.3547

THE AMERICAS
2800 Crystal Drive
Suite 330
Arlington, VA 22202
T +1.703.416.6666

EUROPE
Piepersberg 12
42653 Solingen
Germany
T +49 212 222090
F +49 212 201045

MIDDLE EAST
Suite 1-11
Building 6E-A
Dubai Airport Freezone
PO Box 371363
Dubai, UAE
T +971 4 701 7195
F +971 4 701 7194

ASIA
Level 28 Gateway East
152 Beach Road
Singapore
T +65.6827.9789
F +65.6295.2567

www.flir.com
NASDAQ: FLIR

17-0712-SUR

◆FLIR® | The World's Sixth Sense®