



TRANSPORTABLE, MID-RANGE MULTI-SENSOR SURVEILLANCE SYSTEM

FLIR Ranger® MS-UC DefendIR

The Ranger® MS-UC DefendIR is an industry-leading mid-range thermal imager that can see in complete darkness and through a multitude of environmental conditions, including smoke, rain, snow, dust, and dense fog. The Ranger DefendIR is ideally suited for day and night perimeter security, maritime surveillance, and DHS/DoD applications. The ruggedized housing is environmentally sealed and certified to meet meet NEMA4X, IP66 and MIL-STD-810F specifications, standing up to the most challenging weather and temperature conditions.

Pan/tilt, continuous optical zoom, and multiple lens options allow vast areas to be monitored in real time. Capable of continuous 360° panning and a +/- 80° tilt in ambient temperatures ranging from -40° C to 65° C, DefendIR can interface with VMD, radar, UGS, and other trigger sensors. Payload includes an uncooled LWIR sensor and CCD camera; using VisionSense™ technology, an operator can blend the thermal and CCD camera imagery for clearer contextual outputs.

FEATURES

THERMAL/VISIBLE LIGHT CAMERA SYSTEM

Blend imagery from the uncooled IR and CCD cameras with VisionSense™ to penetrate glare and see through glass or water.

PAN/TILT AND ZOOM ADVANTAGES

Continuous optical zoom lets the user stay focused on the target. Tilt and continuous 360° pan allows for easier tracking.

READY OUT-OF-THE-BOX

Integrates easily into existing fiber, wireless, or IP systems, and supports most protocols used in commercial and military applications CE tested.

SIMPLE INTEGRATION

One cable, four bolts, and multiple lens options – integrator and operator can secure an entire installation with one camera and choose whichever lens is needed to cover every required field of view and detection range.

RUGGEDIZED FOR CHALLENGING ENVIRONMENTS

Environmentally sealed and certified to meet NEMA4X and I66 specifications, DefendIR can withstand extreme weather and temperatures.

APPLICATIONS

FORCE PROTECTION

BORDER SURVEILLANCE

TACTICAL RECONNAISSANCE

TRAINING RANGE APPLICATIONS

FIXED AND MOBILE SECURITY

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 \pm 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)
Pointing Accuracy & Pan Repeatability	Pan \pm 0.25° (varies by configuration) Tilt \pm 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 Continuous zoom, 45/135mm Continuous zoom
Optical IR Zoom	30/90mm 3X continuous 45/135mm 3X continuous
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	0.6 lux typical, 1/60 sec (NTSC) 0.04 lux typical 1/4 sec (NTSC)



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