



MAN-PORTABLE MID-RANGE GROUND SURVEILLANCE RADAR

FLIR Ranger® R8SS

The man-portable FLIR Ranger® R8SS electronically-scanned, mid-range radars detect and track personnel and vehicles up to 15 kilometer ranges. Light and small, the Ranger R8SS provides best-in-class target detection and acquisition performance in a form factor that fits in a backpack or is easily mounted to a vehicle or permanent structure as part of an integrated solution. The low false alarm rate and extremely reliable operation builds operator trust and yields high operational availability.

The R8SS has a low minimum detection target velocity that allows detection of slow-moving threats such as walkers or crawlers. It uses a $\pm 45^\circ$ scan sector to monitor a perimeter. Adding a pan and tilt provides a full 360° coverage every second. The R8SS provides fast and accurate detection of more than 500 threats simultaneously, allowing large areas to be continuously monitored in real time.

FEATURES

COMPLETE PERIMETER SECURITY

Extremely fast scanning at 4 times a second per panel, nothing is missed. The Ranger Panel Radars can scan a full 360° every second with a pan tilt mount, quickly detecting any ground threat from any direction.

HIGH-PERFORMANCE GROUND SURVEILLANCE

Built-in GPS and North finding capability, automatic target tracker and classification, and low false alarm rate deliver best-in-class performance.

BUILT FOR RUGGED ENVIRONMENTS

Panel Radars are MIL-STD-810G qualified and IP67 certified.

FAST, ACCURATE THREAT DETECTION

Panel Radars quickly detects more than 500 threats simultaneously while accurately displaying each target's location.

MAN-PORTABLE AND EASY TO INTEGRATE

R8SS can be transported in a backpack of a dismounted soldier and draws only 135W, giving it extreme deployment flexibility. With four mounting bolts and a single cable, the radar is easy to install in fixed installations.

APPLICATIONS

FORCE PROTECTION

BORDER SECURITY

VEHICLE DISMOUNT

ARTILLERY AND MORTAR FIRE CORRECTION

UAS DETECTION

SPECIFICATIONS

Parameters	R8SS
Instrumented range	15,000 m
Detection Range	
Person	8 km
Light Vehicle	12 km
Large Vehicle	18 km
MicroUAS	N/A
MiniUAS	N/A
Small UAS	N/A
Minimum Detection Range	10m
Scan sector	± 45° (fixed) - 360° with P/T
Vertical coverage	≥ 4°
Number of simultaneously displayed tracks	Up to 512
Electronic scan rate	2 Hz or 4 Hz
Minimum Detection Velocity (MDV)	< 0.1 m/s
Accuracy	
Range Accuracy	± 3 m
Angular Accuracy (azimuth)	< 0.2 degree
Angular accuracy (elevation)	N/A
Power	
Power consumption	135 W nominal
Operating voltage	20 - 48 VDC
Overview	
Size (in)	14.7" x 14.4" x 4.3" (37 x 36 x 11 cm)
Weight	≤ 23.1 lbs (10.5 kg)
Operating frequency	X-Band
Connectivity	Ethernet
Environmental	MIL-STD-461F, IP67, MIL-STD-810G, FCC/CE
Other Features	
Built-in GPS	Yes
Built-in compass	Yes



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

Washington DC
2800 Crystal Drive
Suite 330
Arlington, VA 22202
PH: +1.703.416.6666

EUROPE

FLIR Systems
2 Kings Hill Avenue - Kings Hill
West Malling, Kent ME19 4AQ
United Kingdom
PH: +44 (0)1732 220 011
F +44 (0)1732 843 707

FLIR Systems AB
Antennvägen 6,
PO Box 737
SE-187 66 Täby
Sweden
PH: +46 (0)8 753 25 00

MIDDLE EAST

FLIR Systems B.V. - Abu Dhabi
Wadi Al Fey St.
Building 60, Office # 302
New Ministries Exit / Khalifa Park
Area
Abu Dhabi, U.A.E.
Office: +971 2 666 1561
e-Fax +1 503 914 1591

FLIR Systems Saudi Arabia
Office 127, First Floor
Akaria Plaza Building, Olaya Street
Riyadh, 11481, Saudi Arabia
Office: +966 11 464 5323
Fax +966 11 464 0438

ASIA

FLIR Systems Japan K.K.
Meguro Tokyu Bldg. 5F,
2-13-17
Kami-Osaki, Shinaga-
wa-ku.
Tokyo, 141-0021, Japan
T +81-3-6721-6648

For More Information contact
surveillance_sales@flir.com

www.flir.com
NASDAQ: FLIR

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