



SHORT-RANGE PERIMETER SURVEILLANCE RADAR

FLIR Ranger® R1

The FLIR Ranger® R1 is a ground-based perimeter surveillance and tracking radar that accurately detects personnel and vehicles at a range of up to 700 m. It scans a full 360° every second, covering up to 1.5 square km (0.6 square miles). Additional units – such as a mid-range FLIR Ranger® R2 – can be networked in an overlapping array to protect larger areas, stitching together an impassable radar area outside and inside your perimeter.

Operating in the Ka-band, this radar is compact and highly portable. It works in virtually any climate, weather, or lighting condition, providing 24/7 security. R1 is ideal for force protection and securing borders, airports, seaports, and critical infrastructure. R1 provides fast and accurate detection of up to 128 threats simultaneously. Ethernet XML target data in GIS coordinates, as well as wireless and fiber connectivity, makes R1 integration a snap.

FEATURES

ADD RADARS FOR WIDER COVERAGE

Network multiple units with the full range of FLIR radars and imagers to cover terrain profiles inside and outside perimeters.

LOW FALSE ALARM RATE

Accuracy, ease of operation, and the lowest false alarm rate in the industry, separates FLIR Ranger radars from the competition.

THE POWER OF RADAR + IMAGING

Using the radar's advantage in continuously detecting multiple targets allows linked thermal and EO cameras to focus on quickly classifying each threat.

FAST, ACCURATE THREAT DETECTION

R1 quickly detects up to 128 threats simultaneously while accurately displaying each target's location.

RELIABLE OPERATION & EASY INTEGRATION

High availability rate saves on costs for spare systems or repairs, and it requires only one cable and four bolts for integration.

APPLICATIONS

SECURE BORDERS

MONITOR PORTS

GUARD INDUSTRIAL FACILITIES

FORCE PROTECTION

DEFEND PUBLIC INFRASTRUCTURE

SPECIFICATIONS

Ranger R1

Frequency	Ka band
Resolution	0.3 m range, 1° azimuth
Scan Rate	1 rev/sec (60 rpm)
Beam Width	Azimuth 1° (2-way) Elevation 6° (2-way)
Target Type	Moving vehicles & personnel
Target Velocity	0.1 m/s to 50 m/s
Data Output	Lat./Long. or Range/Angle
Data Bandwidth	Min: 1 Mbits without PPI - Max: 7 Mbit with PPI
Communications	Ethernet, wireless, fiber
Protocol	ICD 0100
XML	Yes
Network	8 per server; total unlimited
Input Power	20 to 32 VDC, 24 VDC nominal
Power Consumption	45 watts
Environmental	NEMA 4
Temperature	Operating: -30°C to +65°C Storage: -40°C to +70°C
Humidity	50% ± 5 to 95% ± 4 Non-condensing (60°C max)
Altitude	Up to 15,000 ft (operating and storage)
Wind	Up to 120 km/hr
Shock	40 g peak for 20 ms, half sine (with vibration mount)
Vibration	MIL-STD-810F
Ratings	FCC Class B, EN 301480, Parts 1 & 3; CE: EN 60215 EN 3000 19-1 (Class 4.1E) EN 300019-1-5 (Class 5.2, Including mechanical class 5M3)
Size	14.4" height x 18.25" diameter (364 x 461mm)
Weight	29 lbs (13.1 Kg)

Range

Operating Range	5 – 700 m
Target	Walking 5 – 700 m Running 5 – 700 m Hands/Knees 5 – 500 m Low Crawl 5 – 500 m Swimming 5 – 500 m
Target Detection (Vehicles & Watercraft)	5 – 700 m
Coverage Area	1.54 km ² (0.60 mi ²)
Mask Zones	Two selectable angular blank sectors. Unlimited Polygon detection zones.

Options

Camera integration	
Networkable - up to 8 units per server	
Wireless Ethernet Communication	
Fiber optic communications	
Vibration mount	



AMERICAS

FLIR Systems, Inc.
Corporate Headquarters
27700 SW Parkway Ave
Wilsonville OR 97070
Office: +1 877.773.3547

FLIR Systems, Inc.
DC Headquarters
1201 S. Joyce Street
Suite C006
Arlington, VA 22202
Office: +1 703.682.3400

EUROPE

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

FLIR Systems AB
Antennvägen 6,
PO Box 737
SE-187 66 Täby
Sweden
Office: +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, Shinagawa-ku.
Tokyo, 141-0021, Japan
Office: +81-3-6721-6648

For More Information contact
surveillance_sales@flir.com

www.flir.com
NASDAQ: FLIR

Equipment described herein is subject to US export regulations and may require a license prior to export. Diversion contrary to US law is prohibited. Imagery for illustration purposes only. Specifications are subject to change without notice. ©2019 FLIR Systems, Inc. All rights reserved. 01/02/19

18-2740-SUR-LND-Ranger R1-
Specsheet LTR



The World's Sixth Sense®