



## 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

## SKYWATCH DETAILS

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 <sup>2</sup> (0.60 mi <sup>2</sup> )
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](mailto:surveillance_sales@flir.com)

[www.flir.com](http://www.flir.com)  
NASDAQ: FLIR

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