



## MID-RANGE PERIMETER SURVEILLANCE RADAR

# FLIR Ranger® R2

The FLIR Ranger® R2 is a high-resolution radar that accurately detects personnel and vehicles at a range of up to 1,400 m. This ground-based radar works in virtually any climate, weather, or lighting condition, providing 24/7 security. Additional units – such as a short-range FLIR Ranger® R1 – can be networked in an overlapping array to protect larger areas, stitching together an impassable radar area outside and inside your perimeter.

The Ranger R2 scans a full 360° every second, covering more than 6 square km (2.4 square miles). Operating in the Ka-band, this radar is compact and highly portable. R2 is ideal for force protection and securing borders, airports, seaports, and critical infrastructure. R2 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 R2 integration a snap.

### FEATURES

#### MULTIPLE SECURITY APPLICATIONS

Whether securing airports, seaports, borders, critical infrastructure, or for force protection, FLIR radars provide an ideal wide-area surveillance solution.

#### 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

R2 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 integrat

### APPLICATIONS

SECURE BORDERS

MONITOR PORTS

GUARD INDUSTRIAL FACILITIES

FORCE PROTECTION

CRITICAL INFRASTRUCTURE PROTECTION

## SKYWATCH DETAILS

Ranger R2	
Target Types	Moving, Greater than 0.1 m/s minimum Vehicles and personnel
Target Velocity	0.1 to 50 m/s
Frequency	Ka Band
Resolution	0.3 m range, 1° azimuth
Scan Rate	One revolution per second (60 rpm)
Azimuth Beamwidth	1° (2-way)
Elevation Beamwidth	6° (2-way)
Elevation Control	Up: 2°; Down: 10° (fixed settings)
Input Power	20 to 32 VDC, 24 nominal
Radiated Power	Safe for human exposure
Communications	Ethernet, wireless, fiber
XML	Yes
False Alarm Rates	< 1 per 24 hours
Mask Zone(s)	Two selectable angular blank sectors Unlimited polygon detection zones
Network	8 per server; total unlimited
Size	14.4" height x 18.25" diameter (364 x 461mm)
Weight	29 lbs (13.1 Kg)
Range	
Operating Range	5 – 1400 m
Detection Range	5 - 1400 m, personnel walking 5 - 1400 m, personnel running 5 - 500 m, personnel crawling (low crawl) 5 - 1400 m, personnel crawling (hands & knees) 5 - 500 m, personnel swimming 5 - 1400 m, vehicles and watercrafts
Coverage Area	6.16 km <sup>2</sup> (2.41 mi <sup>2</sup> )
Environmental	
Temperature	-30° to +65°C (operating) -40° to +70°C (storage)
Humidity	50% +/- 5 to 95% +/- 4, non- condensing (60°C max)
Altitude	Up to 15,000 ft (operating and storage)
Vibration	MIL-STD-810F
Shock	40 g peak for 20 ms, half sine (with vibration mount)
Wind	Up to 120 km/hr
Weather	Sealing Weather resistant (rain, snow, dust, sand, salt spray)
Power Consumption	45 watts
Ratings	FCC Class B, EN 301480, Parts 1 & 3; CE: EN 60215 EN 300019-1-4 (Class 4.1E with -40°C) EN 300019-1-5 (Class 5.2, including mechanical class 5M3)
Environmental Ratings	NEMA 4
Data Bandwidth	Maximum: 1 Mbits without PPI Maximum: 7 Mbits with PPI
Protocol	ICD 0100



### 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

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18-2741-SUR-LND-Ranger R2-  
Specsheet A4



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