

MID-RANGE PERIMETER SURVEILLANCE RADARS

Ranger® R1, Ranger® R2, Ranger® R3

The FLIR Ranger® family of perimeter surveillance radars provide accurate, high resolution detection of vehicles and personnel. These ground-based radars work in virtually any climate, weather or lighting condition, providing 24/7 security at ranges including 350 m, 700 m, 1400 m and 2800 m.

FLIR mid-range perimeter surveillance radars scan a full 360 degrees every second effectively monitoring up to 1.5/6/25 square kilometers (0.6/2.4/9.6 square miles). Multiple units can be installed with overlapping coverage areas to protect larger areas such as borders. As part of the FLIR integrated product suite, multiple units may be networked with any or all of the full range of FLIR radars and imagers to conform to terrain profiles and secure areas inside and outside a perimeter. Using the radars' advantage in detecting intruders, pan-tilt-zoom (PTZ) cameras can focus on their strength – identifying and assessing threats – for a more efficient and cost effective solution.

The accuracy, simple integration and easy operation of FLIR radars, separate them from the competition. Whether to secure airports, sea ports, borders and critical infrastructure, or for force protection, the FLIR suite of radars is today's answer for detecting and tracking intruders as part of any wide area surveillance solution.



APPLICATIONS

- Secure borders
- Monitor ports
- Guard industrial facilities
- Force protection
- Defend public infrastructure

BENEFITS

- Detect personnel and vehicles
- Tangential detection capability
- Continuous wide area surveillance
- Early warning of intruders
- Low false alarm rates
- Camera integration
- Annunciator integration
- Simple to operate
- Cost effective

GENERAL SPECIFICATIONS

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
Dimensions	13" h x 17" diameter
Weight	24 lbs (11 kg)

RANGER® R1

Operating Range	5 - 700 m
Detection Range	5 - 700 m, personnel walking 5 - 700 m, personnel running 5 - 500 m, personnel crawling (low crawl) 5 - 700 m, personnel crawling (hands & knees) 5 - 500 m, personnel swimming 5 - 700 m, vehicles and watercrafts
Coverage Area	1.54 km ² (0.60 mi ²)

RANGER® R2

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 ² (2.41 mi ²)

RANGER® R3

Operating Range	5 - 2800 m
Detection Range	5 - 1900 m, personnel walking 5 - 1900 m, personnel running 5 - 500 m, personnel crawling (low crawl) 5 - 1900 m, personnel crawling (hands & knees) 5 - 500 m, personnel swimming 5 - 2800 m, vehicles and watercrafts
Coverage Area	24.53 km ² (9.62 mi ²)

ENVIRONMENTAL

Temperature	-30° to +60°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



The Americas

2800 Crystal Drive
Suite 330
Arlington, VA 22202
T +1. 703.416.6666

Middle East

Suite 1-11
Building 6E-A
Dubai Airport Freezone
PO Box 371363
Dubai, UAE
T +971 4 701 7195
F +971 4 701 7194

Europe

Piepersberg 12
42653 Solingen
Germany
T +49 212 222090
F +49 212 201045

Asia

Level 28 Gateway East
152 Beach Road
Singapore
T +65.6827.9789
F +65.6295.2567

www.flir.com/surveillance