R1

FLIR RANGER™

R1 Mid-Range Perimeter Surveillance Radar

The FLIR Ranger® R1 perimeter surveillance radar provides accurate, high resolution detection of vehicles and personnel. This ground-based radar works in virtually any climate, weather or lighting condition, providing 24/7 security at a range up to 700 m.

FLIR mid-range perimeter surveillance radars scan a full 360 degrees every second effectively monitoring up to 1.5 square kilometers (0.6 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.

Ranger R1 in the field

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

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	

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