TELEDYNE | FLIR Defense

RANGER® R1

Short-Range Perimeter Surveillance Radar

APPLICATIONS

SECURE BORDERS

MONITOR PORTS

GUARD INDUSTRIAL FACILITIES

FORCE PROTECTION

DEFEND PUBLIC INFRASTRUCTURE



The 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 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.

For more information contact:
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SPECIFICATIONS

Ranger R1	
Frequency	Ka band
Resolution	0.3 m range, 1° azimuth
Scan Rate	1 rev/sec (60 rpm)
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	30 watts
Environmental	NEMA 4
Temperature	Operating: -30°C to +65°C Storage: -40°C to +70°C
Humidity	up to 95%, non-condensing (60°C max)
Altitude	Up to 15,000 ft (operating and storage)
Wind	Up to 120 km/hr
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
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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