TELEDYNE | FLIR Defense

RANGER® R3D

Dual mode, perimeter surveillance radar

APPLICATIONS

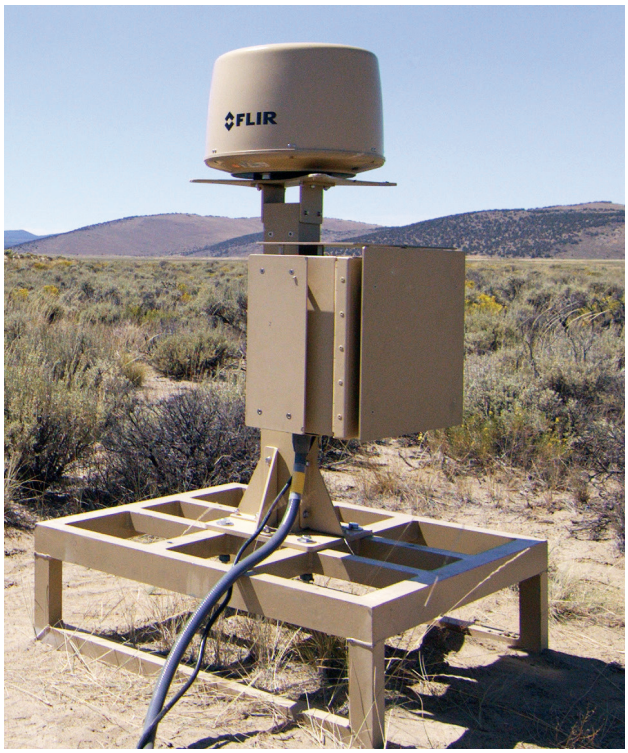
BORDER SECURITY

INDUSTRIAL FACILITY SECURITY

MONITOR PORTS, AIRPORTS, & MILITARY BASES

CRITICAL INFRASTRUCTURE PROTECTION

FORCE PROTECTION



The Ranger R3D is a dual mode, ground surveillance radar designed to provide efficient, 24/7 persistent surveillance, both within and beyond the fence. Operating in the Ka-band, the Ranger R3D leverages the resolution and accuracy of advanced FMCW technology and the extended range and terrain adaptability of Doppler in a single, compact, and lightweight package. Ruggedized for permanent, all-weather installations and mobile, stop-and-scan operations, its low minimum detection velocity (MDV) detects slow-moving threats such as walkers and crawlers.

A COTS unit for detecting and tracking surface movement, R3D provides wide area detection when used as a cueing device. Operators can be confident of up to 128 threats at a time due to low false alarm rates. Network with other FLIR radars to create an overlapping array that protects larger areas such as borders, ports, airports, and military bases. Target information output includes ID, location, range, bearing, latitude, longitude, confidence level, heading, speed, and time.

FEATURES

DOPPLER CAPABILITY

Ranger R3D Doppler provides extended range coverage in almost any terrain. Overcome blind target ranges/velocities by switching to Fast Scan/FMCW.

DUAL-MODE CAPABILITY

Switch between Fast Scan and Doppler depending on terrain and recognition requirements. Enhanced performance supports both radial and tangential detection.

INTEGRATED PROTECTION

Network multiple FLIR radars and EO/IR imagers with FLIR command and control to form a single powerful, integrated surveillance system.

FAST, ACCURATE THREAT DETECTION

R3D quickly detects up to 128 threats simultaneously while accurately displaying each target's location.

RUGGEDIZED FOR RIGOROUS DUTY

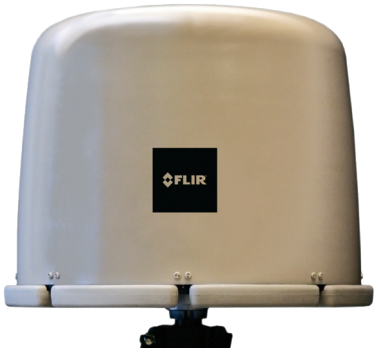
Designed for permanent, all-weather installations and mobile, stop-and-scan operations, R3D can detect pedestrians, crawlers, and vehicles in virtually any environment.

For more information contact:
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SPECIFICATIONS

R3D	
Target Types	Moving, Less than 0.1m/s minimum for vehicles and personnel
Target Velocity	0.1 to 50 m/s
Communications	Ethernet, wireless, fiber
XML	Yes (ICD-0100 compliant)
Target Information	Includes: ID; location: range & bearing; latitude & longitude; Confidence level; Heading; Speed; Time
COMMAND & CONTROL	
Scan Rate	3 to 60 rpm, continuous or sector
Elevation Coverage	6°
Elevation Control	Up: 2°; Down: 5° (fixed settings)
Input Power	20 to 32 VDC, 24 nominal
False Alarm Rate	< 1 per 24 hours (Fast Scan)
Mask Zone(s)	One angular detection zone (Doppler) Two selectable angular detection zones (Fast Scan) One selectable angular detection zone (Doppler) Unlimited polygon detection zones
ENVIRONMENTAL	
Network	Up to 8 per server; total unlimited
Dimensions	14.7" h x 18.3" diameter
Weight	29 lbs (14 kg)
Power Consumption	40 watts
Operating Range	5 – 6,500 m
Detection Range	5 – 3,500 m, personnel walking 5 – 6,500 m, vehicles and watercrafts
Coverage Area	133 km^2 (53 mi^2)
Temperature	-30° to +65° C (operating) -40° to +70° C (storage)
Humidity	up to 95%, non-condensing (60°C max)
Altitude	Up to 15 000 ft (operating and storage)
Wind	Up to 140 km/hr
Weather Sealing	IP66 rating
Protocol	ICD-0100

	FAST SCAN (NO DOPPLER)	FAST	DOPPLER INTERMEDIATE	LONG RANGE
Instrument Range	2,800 m	6,500 m	6,500 m	6,500 m
Detection Pedestrian	1,900 m	2,500 m	3,000 m	3,500 m
Detection Light Vehicle	2,500 m	4,300 m	5,000 m	6,000 m



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