



## **DUAL MODE, PERIMETER SURVEILLANCE RADAR**

# FLIR Ranger® R5D

The Ranger® R5D is a dual mode, ground surveillance radar designed specifically for the environmental conditions common to the Middle East region. As a dual mode radar, the Ranger R5D uses FMCW modulation and can be operated in either Fast Scan or Doppler mode with a Fast Scan range up to 5km. Low minimum detection velocity (MDV), high resolution, and advanced tracking algorithms result in low false alarm rates.

Operating in the Ka-band, this radar is compact and highly portable. It scans 360° every second, 24/7, monitoring large areas in most climates in real time. Easily network other FLIR radars and EO/IR images for slew-to-cue capabilities. Ideal for desert environments, border security, and force protection, R5D provides fast and accurate detection of up to 500 threats simultaneously.

### **FEATURES**

#### **PULSE DOPPLER CAPABILITY**

Ranger R5D Doppler provides extended range coverage in almost any terrain. Overcome blind target ranges/velocities by switching to Fast Scan/FMCW.

#### **DUAL-MODE FLEXIBILITY**

Both modes share one antenna and detect tangential movement. Scan rate, RF bandwidth, and PRFs are optimized per selected mode.

#### **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**

R5D quickly detects up to 500 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.

### **APPLICATIONS**

DESERT ENVIRONMENTS

SECURE BORDERS

FORCE PROTECTION

INDUSTRIAL FACILITY SECURITY

CRITICAL INFRASTRUCTURE SECURITY

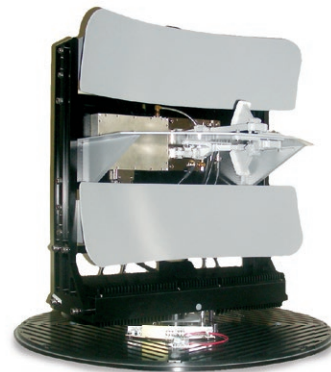
MONITOR PORTS, AIRPORTS, & MILITARY BASES

## SKYWATCH DETAILS

R5D	
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	4°
Elevation Control	Up: 2°; Down: 5° (fixed settings)
Input Power	20 to 32 VDC, 24 nominal
Radiated Power	Safe for human exposure
False Alarm Rate	< 1 per 24 hours (Fast Scan)
Mask Zone(s)	One angular detection zone (Doppler) Two selectable angular detection zones (Fast Scan) Unlimited polygon detection zones
Environmental	
Network	Up to 8 per server; total unlimited
Dimensions	22.5" h x 21.3" diameter
Weight	37 lbs (17kg)
Power Consumption	40 watts
Operating Range	5 – 10 000 m
Detection Range	5 – 5,500 m, personnel walking 5 – 9,400 m, vehicles and watercrafts
Coverage Area	346 km <sup>2</sup> (135 mi <sup>2</sup> )
Temperature	-30° to +65°C (operating) -40° to +70°C (storage)
Humidity	50% to 95%, non-condensing (60°C max)
Altitude	Up to 15,000 ft (operating and storage)
Wind	Up to 140 km/hr
Weather Sealing	IP 65 rating
Protocol	ICD-0100

	Fast Scan (no Doppler)	Fast	Doppler Intermediate	Long Range
Instrument Range	5,600 m	10,500 m	10,500 m	10,500 m
Detection Pedestrian (1m <sup>2</sup> )	3,000 m	4,000 m	4,600 m	5,500 m
Detection Light Vehicle (10m <sup>2</sup> )	5,000 m	6,800 m	8,000 m	9,400 m

*\*Note: In Doppler long mode, scan angle is limited to 180°*



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