



TPS-77 MRR

MULTI-ROLE RADAR

LOCKHEED MARTIN
We never forget who we're working for®



TPS-77 MULTI-ROLE RADAR SYSTEM

Radar Characteristics

General Characteristics

Multi-Role Radar System
Frequency Band (D/L) - 1215 to 1400 MHz
Active Electronic Elevation Scanning Array
Solid State Transmitters

Multi-Role Characteristics

Performance Designed to Meet Customer Requirements
Highly Configurable Performance due to Flexible Time Energy Management
Operator Mission Selection by Azimuth Identification

Configurable Parameters

Instrumented Ranges and Height	Rotation Rate
Maximum Elevation Coverage	Transmit Power

Example Missions

Long Range
Gap Filler Radar
UAV Detection
Low Level Flight Surveillance
Tactical Ballistic Missile Warning
Ground Based Air Defense
Maritime Surveillance
Border Security / Surveillance
Ground Control Intercept Drug Interdiction
Terminal Control Radar
Customer Unique

System Reliability

Availability	99.9%
Critical MTBF	> 2000 Hours
MTTR	< 45 Minutes

Frequency Control

4 Agility Modes
100 Center Frequencies
Azimuth Based Control

Target Loading

1500 Plots

Transportation Configuration

C-130, Helicopter, Truck, Train

Long Range Surveillance Mission

Coverage Volume

Range	10 - 463 km (5 - 250 nmi)
Azimuth	360°
Height Coverage	0 - 30.5 km (0 - 100 kft)
Elevation Coverage	0° - +20° with electronically adjustable tilt
Scan Rate	5 RPM

Performance

Target Size	Typical fighter aircraft
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Probability of Detection	80%
PD Range	259 km (140 nmi)
PD Height	up to 30.5 km (100 kft)

Accuracies - up to 15.2 km (50 kft)	
Range	< 50 m (164 ft) out to 222 km (120 nmi)
Azimuth	< 0.22° out to 222 km (120 nmi)
Height	< 915 m (3000 ft) out to 185 km (100 nmi)

Low Level Flight Surveillance Mission

Coverage Volume

Range	2 - 150 km (1 - 81 nmi)
Azimuth	360°
Height Coverage	0 - 15 km (0 - 50 kft)
Elevation Coverage	0° - +30° with electronically adjustable tilt
Scan Rate	10 RPM

Performance

Target Size	Typical fighter aircraft
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Probability of Detection	90%
PD Range	150 km (81 nmi)
PD Height	up to 12 km (40 kft)

Accuracies - Up to 12km (40kft)	
Range	< 50 m (164 ft) out to 150 km (81 nmi)
Azimuth	< 0.20° out to 150 km (81 nmi)
Height	< 850 m (2800 ft) out to 150 km (81 nmi)

With more than 65 years of experience developing and delivering ground-based radar solutions to our customers, our high-performing, high-reliability, solid state radar systems specialize in early warning, situational awareness and defense. Our radars are designed with significant commonality and fully integrated SSR systems. They can operate in all environments and are deployed worldwide.

- Optional Mobility Configuration Shown -

