

Aptiv MRR

The **Aptiv Medium Range Radar (MRR)** is used to detect targets (pedestrians, bicycles, motorcycles, cars, trucks) ahead of the host vehicle. The MRR system is intended for a variety of automotive applications including Adaptive Cruise Control, driver alert, and collision mitigation functions. The MRR has a range of 160m and a horizontal field of view of > 90 degrees.



The APTIV MRR radar module, including electronics, measures at L97.0mm × W106.0mm × D38.5mm

Features include:

- Extremely reliable Class-leading performance and durability
- Horizontal Field of View 90 deg
- Vertical Field of View 5.0 deg
- Maximum Range 160m
- Wide input voltage range +6V to+16V DC
- Automotive temperature range (-40C to +85C)
- Multi-mode, multi-application capability
- Solid-state Technology, no moving parts
- Resistant to vibration and extremely robust
- Simultaneous Transmit and Receive Pulse Doppler
- Compact packaging
- Complete radar module, including electronics, measures 97.0mm × 106.0mm × 38.5mm
- Produced using processes proven in high-volume manufacture of engine control units
- Detects pedestrian, bicycles, motorcycles, cars, trucks

Aptiv MRR specifications

Parameter	MRR long-range requirement	MRR mid-range requirement
Minimum range	3m	1m
Maximum range	160m	40m
Range accuracy	+/-0.5m noise component with +/- 3% bias component	+/-0.5m noise component with +/- 3% bias component
Range discrimination for two targets at the same angle and range rate	2.5m	0.7m
Minimum range rate	< -100m/s (* assumes Doppler unfolding done externally)	
Maximum range rate	> +20m/s (* assumes Doppler unfolding done externally)	
Range rate accuracy	+/- 0.3m/s	
Range rate discrimination for two targets at the same range and angle	0.5 m/s	
Azimuth field of view	> 90deg	> 90deg
Azimuth angle centroid accuracy	+/- 1.0deg (corner reflector targets)	+/- 1.0deg (corner reflector targets)
Azimuth angle discrimination for two targets at the same range and range rate	8deg	8deg
Vertical field of view	5.0deg	
Minimum amplitude	< -10dB	
Maximum amplitude	> 40dB	
Update interval	30ms (alternating between mid-range and long-range)	
Maximum detections	64 mid-range and 64 long-range	
Service / automatic azimuth alignment	MRR calculates a misalignment angle within +/-0.5deg of the vehicle centerline when radar is mounted pointing in the direction of Host vehicle travel. Angle compensation using calculated misalignment angle is done externally	

Contact Hexagon | AutonomouStuff

info.as.ap@hexagon.com +1 309.291.0966

For the most recent details of this product visit autonomoustuff.com

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