AINSTEIN

GENIUS IN RADAR

I-79

4D IMAGING RADAR

HIGH-RESOLUTION LONG-RANGE: 0.5-240m

PRODUCT OVERVIEW

The I-79 radar provides accurate detection in extended-range applications while delivering high-resolution. This radar enhances the identification of vulnerable road users and potential obstacles, and is competent for a variety of safety applications in autonomous vehicles.

APPLICATIONS

- Forward Collision Warning
- Adaptive Cruise Control
- Automatic Emergency Braking
- Obstacle Detection
- Autonomous Vehicles
- ADAS Systems
- Long-Range Radar
- Elevation Resolution
- Point Cloud Output
- Camera Fusion

4D Imaging

Next Generation performance with a comprehensive waveform design, algorithm architecture, and anti-inference features. Ten Times point cloud density and stable identification of targets.

HIGH DEFINITION

The I-79 long-range imaging radar excels at detecting distant objects and, with its increased angular resolution, it is excellent at distinguishing between close targets.

ALL-WEATHER & ENVIRONMENTS

Ainstein's radar-based vehicle sensors provides the utmost reliability regardless of weather, lighting or environment. The ruggedized housing ensures performance in any conditions.

AINSTEIN VEHICLE

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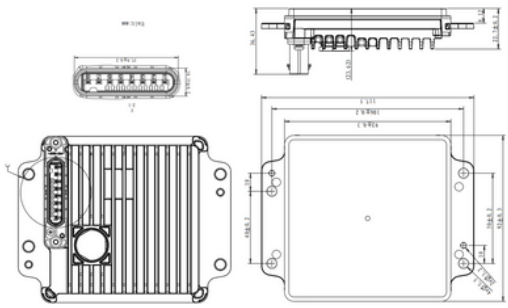
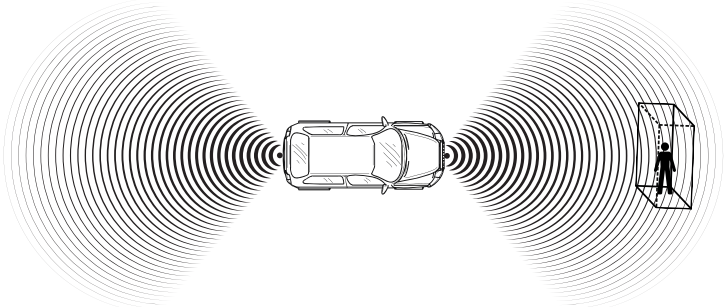
I-79
PRODUCT SPECIFICATIONS

Frequency	76 ~ 77 GHz
Power Consumption	< 8 W
Operating Voltage	9 ~ 16 V
Operating Temperature	-40 ~ 85°C
Ingress Protection	IP 67 & IP 69 K
Detection Range	0.5 ~ 240 m
Range Accuracy	±0.1 m
Range Resolution	0.39 m
Velocity Coverage	-111 ~ 55 m/s -400 ~ 200 kph
Velocity Accuracy	±0.027 m/s ±0.1 kph
Velocity Resolution	0.1m/s 0.36 kph
Azimuth Field of View	±60°
Azimuth Accuracy	±0.1° @0° ±0.1° @ ±10° ±0.5° @ ±45°
Azimuth Resolution	3.6° / 1.8° (Super Resolution)
Elevation Field of View	±15°
Elevation Accuracy	±0.1° @ 0° ±0.5° @ ±9°
Elevation Resolution	3°
Cycle Time	60 ms
Max. # of Output Targets	2048 Point Cloud Detections 50~60 Tracked Objects
Radar Interface	2 x CAN-FD / 1 x Broad-R 100 Mbps
Dimension	92 x 92 x 22.5 mm





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