



## HIGH PERFORMANCE AUTOMOTIVE RADAR

- ✓ User-selectable multi-mode, multi-band operation
- ✓ 4 dimensions: range, speed, azimuth & elevation angle
- ✓ Direct unambiguous speed measurement
  
- ✓ Self-diagnosis blind & misalignment
- ✓ Interference suppression
- ✓ Sensor fusion interfaces point cloud & spectrum
  
- ✓ Synchronization
- ✓ Attitude sensor pitch & roll
- ✓ Plug-and-play 360° sensor data fusion



# PERFORMANCE

	UMRR-11 Type 132 4D/UHD Resolution		UMRR-96 Type 153 4D/UHD Resolution		
	Long-Range Mode	Medium-Range Mode	Long-Range Mode	Medium-Range Mode	Short-Range Mode
Operating Frequency	76...77 GHz 4 center frequencies (bands)	76...77 GHz 2 center frequencies (bands)	77...81 GHz 3 center frequencies (bands)		
Detection Range: Pedestrian	80 m or 262 ft	50 m or 164 ft	55 m or 180 ft	55 m or 180 ft	19 m or 63 ft
Detection Range: Passenger Car	175 m or 574 ft	64 m or 210 ft	120 m or 394 ft	55 m or 180 ft	19 m or 63 ft
Detection Range min...max.	1...175 m or 3...574 ft	0.5...64 m or 1.6...210ft	0.8...120 m or 2.6...394 ft	0.4...55 m or 1.3...180 ft	0.2...19 m or 0.5...63 ft
Range Separation	≤ 1.8 m or ≤ 5.9 ft	< 0.66 m or < 2.17 ft	< 1.2 m or < 3.9 ft	< 0.6 m or < 2 ft	< 0.3 m or < 1ft
Range Accuracy	< 0.5 m or < 1.6 ft	< 0.25 m or < 0.8 ft	< 0.5 m or <1.6 ft	< 0.3 m or < 1 ft	< 0.2 m or <0.5 ft
Speed min...max.	-400...+200 km/h or -248...+124 mph	-340...+170 km/h or -211...+150 mph	-340...+140 km/h or -211...+87 mph	-340...+140 km/h or -211...+87 mph	-400...+140 km/h or -249...+87 mph
Speed Separation	< 0.3 m/s		< 0.3 m/s		
Speed Accuracy	≤ 0.1 m/s		< 0.2 m/s		
Field of View: Azimuth	-16° ... +16°	-50° ... +50°	-50° ... +50°	-65° ... +65°	-65° ... +65°
Field of View: Elevation	-7.5° ... +7.5°		-7.5° ... +7.5°		
Angle Separation: Azimuth	4° (optional)	15° (optional)	30° (optional)		
Angle Accuracy: Azimuth	≤ 0.25°	≤ 0.5°	≤ 1°		
Angle Accuracy: Elevation	≤ 0.5°		≤ 2°		
<b>MECHANICAL</b>					
Weight	≤ 274 g or ≤ 9.7 oz		≤ 153 g or ≤ 5.4 oz		
Dimensions	95 x 84 x 26 mm or 4 x 3 x 1 in		97 x 76 x 18 mm or 4 x 3 x 0.7 in		
<b>GENERAL</b>					
Update Cycle Time	≤ 55 ms		≤ 55 ms		
Operating Voltage	8...32 V		8...24 V		
Power Consumption	4.5...6 W		4.5...6 W		
Operating Temperature	-40° ... +85°C or -40 ... +185°F		-40° ... +85°C or -40 ... 185°F		
Interfaces	Ethernet 100 Mbit (4 wire); 1x CAN V2.0b (passive)		Ethernet 100 Mbit (2 wire); 2x CAN V2.0b (passive) <sup>1</sup>		
Connector	Hirose LF10 series		TE 1411011-1 series		
Shock / Vibration	100 g <sup>rms</sup> / 14 g <sup>rms</sup>		100 g <sup>rms</sup> / 14 g <sup>rms</sup>		
IP	IP67		IP67		

<sup>1</sup> CAN (FD) optional

All product specifications and data in this document are subject to change without notice. smartmicro disclaims any and all liability.