

TOPGRD® 60 – Enforcement

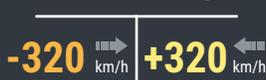
Advanced 60 GHz Enforcement Radar

The TOPGRD 60 is a 60 GHz radar sensor designed for enforcement applications. Its specialized hardware and software enhance **road safety compliance** by delivering **high-resolution** speed and **position detection** with exceptional accuracy.

The TOPGRD 60 features a unique hardware self-test and integrated secondary radar, ensuring reliable operation for **safety systems worldwide**. It sets a new standard in enforcement technology with device monitoring for updated sensor status.

Wide Speed Range

The speed of the target can be detected in the range of



Frequency Range



Why choose the TOPGRD 60?

Enforcement Focus ✓

Designed specifically to meet the requirements of enforcement grade sensing worldwide.

Built-In Reliability ✓

Integrated secondary radar provides on-demand self-test of complete internal measurement chain.

Unmatched Accuracy ✓

Delivers precise speed and position detection for trusted enforcement results.

Worldwide Use ✓

First smartmicro enforcement radar in the 60 GHz band for worldwide use.

Key Features



60 GHz Operating Frequency

Ensures high range and angular resolution for maximum precision in enforcement applications.



Speed Detection up to 320 km/h (±)

Covers the full spectrum from city traffic to high-speed highways.



Integrated Secondary Radar

Provides a hardware-based full-spectrum self-test for unmatched reliability.



Independent Clock Sources

Guarantee improved accuracy and system integrity in all operating conditions.



Super Resolution AI Tracking

Features new high-performance AI algorithm for seamless tracking and unmatched detection.



IMPROVING SAFETY THROUGH PRECISE DETECTION

Driving the data into safety compliance systems, the TOPGRD 60 is designed to be **used internationally** to provide **highly accurate data** to inform decision making

CONCLUSIONS

Where to use?

Applications of the TOPGRD 60

Speed Enforcement 	Red-Light Enforcement 
Driver Behaviour Enforcement 	Object Tracking 

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PERFORMANCE

Long-Range Mode

Operating Frequency		61...61.5GHz 2 center frequencies (bands)
Range	Minimum	3m
	Max.: Passenger Car ²	120m
	Max.: Truck	120m
	Instrumented ³	120m
	Separation	≤ 1.62m
	Accuracy	< 0.45m or 1% (bigger of)
Speed	Min./Max.	-340...+340km/h
	Separation	<0.6km/h
	Accuracy	<+0.3km/h or 1% (bigger of)
Angle	Field of View: Azimuth ⁴	-32...+32°
	Field of View: Elevation	-23...+23°
	Accuracy: Azimuth ⁵	≤ 0.5°
	Accuracy: Elevation	≤ 0.5°

Mechanical Details

Weight	≤ 410g ≤ 14.46oz
Dimensions (H/W/D)	114.7 x 97.5 x 38mm 4.4 x 3.8 x 1.5in (plus connector)

Further Information

Initialization Time	< 10s
Processing Latency	2-4 cycles
Operating Voltage⁶	7...32V
Power Consumption	<5W
Update Cycle Time	≤60ms or ≤50ms ⁷

² Typical values; all values given for bore sight; they may vary depending on the clutter environment. Please note that the radar system can neither achieve a detection probability of 100% nor a false alarm rate equal to zero.

³ The instrumented range indicates the maximum range at which the sensor can effectively process detections.

⁴ The total field of view is an angle interval in which reflectors can be detected; 3dB field of view is narrower.

⁵ Typical value; measured at target output level at bore sight, for a point reflector showing >23dB SNR. Error may increase towards larger angles. In addition to this angle error, angle may drift over temperature, typically -0.5deg to + 0.5deg over specified operation temperature interval.

⁶ Measured at the connector.

⁷ Depending on selected application (intersection or enforcement).

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