



ITAS MID RANGE RADAR

PRODUCT DETAILS

This radar system is designed to provide high-precision and reliable detection capabilities, featuring an optimal compact design with a small form factor. The use of high frequencies in the 76-81 GHz range makes it effective for various environments, while wide field of view and angular resolutions ensure superior tracking and detection accuracy. The system is engineered to operate under challenging conditions in industrial, automotive, and defense sectors, making it ideal for multi-target detection and tracking applications. Additionally, it demonstrates suitability for various weather conditions, including fog, rain, snow, and direct sunlight, ensuring consistent performance in diverse environmental scenarios.

Technical Specifications

Working Frequency

76 – 81 Ghz

Field of View

Azimuth ± 90
Elevation ± 30

Azimuth Angular Resolution

2 deg

Elevation Angular Resolution

5 deg

Range

250+ meter

Interfaces

2 x CAN FD Module

Size

82 x 62 x 20 mm with
Housing and Heatsink

Power Consumption

<3W

Power Supply

5V-24V

Ambient Temperature

-40...+125

OPERATING PRINCIPLE

Working Frequency: Special antenna design covering 76-81 ghz band at various center frequencies.

Bandwidth: Depending on the chirp parameters configurations the distance can be changed.(1-250m)

MIMO Antenna Technology: The 4 receive and 4 transmit antenna structure results in 16 configurable virtual antenna arrays.

Multi-Target Capability: Thanks to MIMO and digital beamforming (DBF), the radar can track multiple targets simultaneously.

Digital Beamforming: Radar field of view can be adjusted whatever applications needs.

FMCW: Uses chirps as signal types that can be modified to make the radar work as applications needs.

Microstrip Antennas: ITAS has own antenna designs for various antenna performances like field of view, directivity, bandwidth etc.

CONCLUSION & CONTACT

This advanced radar solution combines precision, reliability, and versatility. Its compact design, efficient power consumption, and high-performance specifications make it an ideal choice for a variety of applications, from automotive safety systems to industrial monitoring. With a range of up to 250 meters and high angular resolution, this radar ensures detailed and accurate object detection.

For more information or to inquire about integration options, please contact us:

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