

KRATOS | GENERAL MICROWAVE Microwave Electronics Division

MODEL RDR24M00

Range & Velocity Measuring Sensor

Main Features

- High Range & Velocity Accuracy
- Small Size & Weight
- Low Power Consumption
- Built In Test
- Extreme Environmental Conditions
- Low Cost



RDR24M00

Applications

RDR24M00 Range and Velocity Measurement Sensor is a Versatile, Compact, Low cost, designed to be used in military and civil applications, the RDR24M00 is a modern Sensor utilizing latest technology, achieving cutting edge performance.

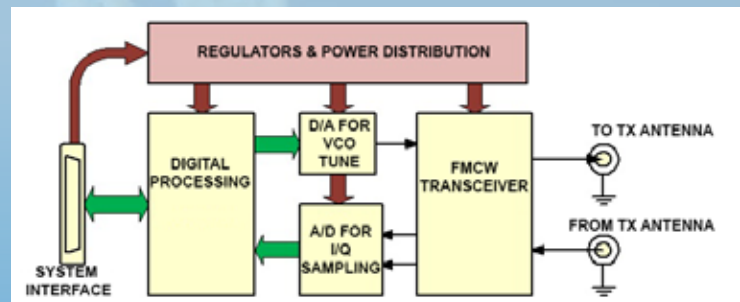
The sensor is typically used in Smart Munition, Security and Surveillance as well as Automotive and Medical applications requiring measurements at high speeds. It is a main building block in devices such as Altimeters, Proximity Sensors and Liquid Level Measurement sensors.

The RDR24M00 kit provides a complete data package that enables easy integration of the sensor into the OEM system.

Description & Block Diagram

The RDR24M00 is a FMCW radar sensor, producing wideband and high rate chirp signals in the 24 GHz ISM band.

A 24 GHz transceiver RFIC lies at the heart of the RDR24M00 module. The transmitted signal is controlled by the D/A converter, while two external antennas are used based on the desired spatial coverage and sensitivity. The received signals are down-converted by the transceiver to zero IF (I and Q). They are sampled and then processed by the FPGA.

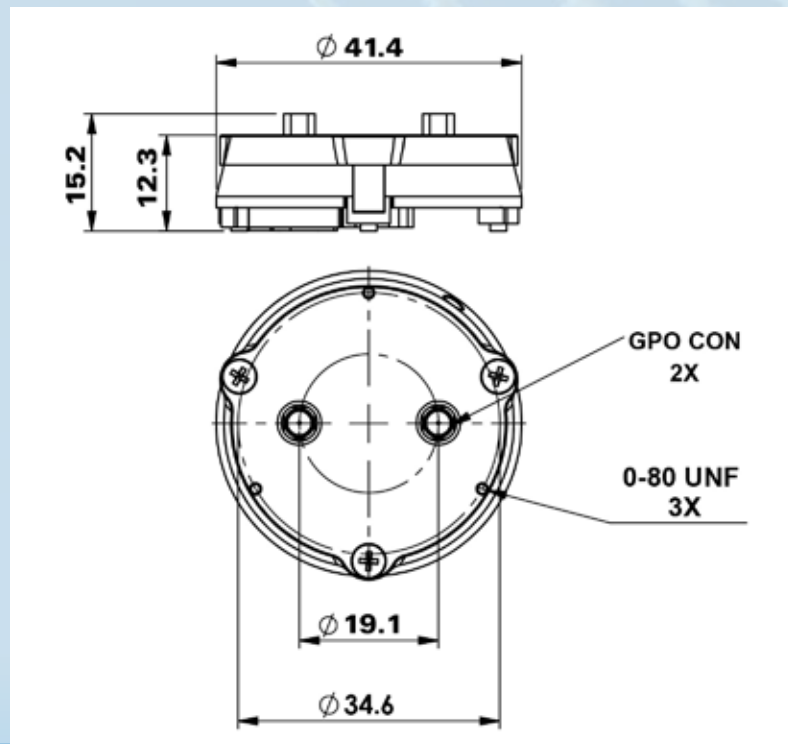


Main specifications

PARAMETER		VALUE
1	Frequency Range	24.0 to 24.3 GHz min.
2	Measuring Accuracy	0.5 m typ.
3	Modulation	FMCW
4	Transmitter Output Power	5 dBm typ.
5	Receiver Noise Figure	14 dB typ. (21 dB max.)
6	Antennas Port VSWR	2:1
7	Tx to Rx Isolation	30 dB typ.
8	Host Communications	RS485 or RS422
9	Supply Voltage	+5V ±1V
10	Weight	70 gr. 2.5 oz.

Dimensions and Outline

The outline configuration of the RDR24M00 sensor should be defined by the OEM manufacturer to meet their specific system requirement. The following is a sample outline.



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