

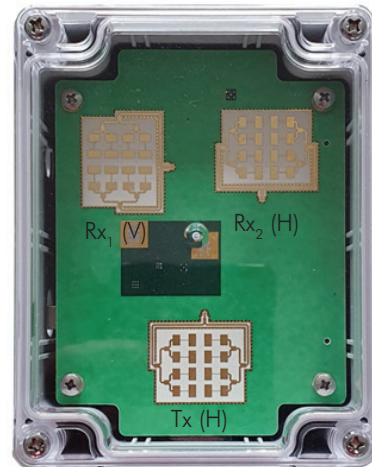


35 GHz RADAR KIT (1Tx + 2Rx)

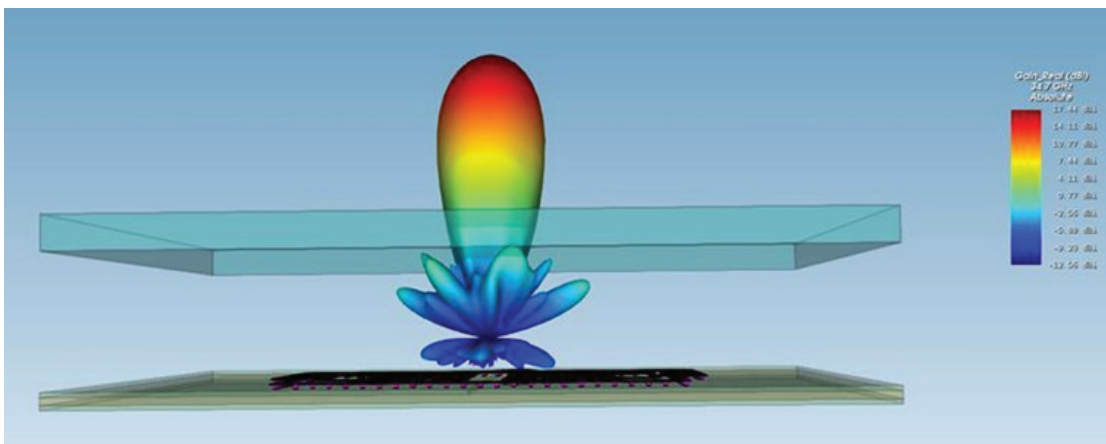
DK-sR35-12VHe AND sR35-12VHe
 FMCW RADAR FOR DISTANCE MEASUREMENTS WITH
 LINEAR V-/H-POLARIZATION

IMST's 35 GHz FMCW Radar sR35-12VHe and the Developer-Kit DK-sR35-12VHe are designed for high accuracy and fast distance measurements. It enables a 2.6 GHz bandwidth from 33.4 to 36.0 GHz. Transmit and receive antennas are designed for linear horizontal (H) and vertical (V) polarization, which enables the characterization of material properties. The radar has been designed for structural monitoring of rotor blades on wind turbines. The user has access to internal radar results via an advanced data interface.

The Developer Kit DK- sR35-12VHe comes with a Graphical User Interface (GUI) called SenTool™. SenTool™ makes it easy to configure the sensor and to measure, visualize and analyze radar data in several different graphical plots.



sR35-12VHe
 with Ethernet (e) Interface,
 USB optional



Antenna Farfield Simulation at 35 GHz





TECHNICAL DATA sR35-12VHe

GENERAL

Radar Method, Modulation	FMCW
Operating Frequency Band	34.7 GHz, 33.4 to 36.0 GHz
Tx/Rx Channels	Tx (H), Rx1 (V), Rx2 (H)
EIRP	16 dBm
Data Interfaces	(e) Ethernet, (u) USB (optional)
Certifications	no

ANTENNA

Antenna Type	Integrated Patch Antennas
Azimuth (3 dB Beam Width)	26°
Elevation (3 dB Beam Width)	20°
Antenna Gain	16.1 - 17.7 dBi
Antenna Polarization	linear, V-/H-Polarization

FMCW MEASUREMENT AT BANDWIDTH = 2,6 GHz

Range Resolution	0.058 m
Max. Distance (@ 1024 Bins)	59 m
Distance Accuracy	tbc
Selectable Number of Bins	max. 2048
Typical Ramp Time	102.4 μ s (1024/10 MHz)

POWER SUPPLY

Operation Voltage	+24 V DC (18 to 36 V)
Operating Power	12 W
Max. Power	tbc
Operating Temperature	tbc

HOUSING

Dimensions (L x W x H)	145 x 92 x 55 mm
Weight	300 g
Protection Code for Housing	none

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