

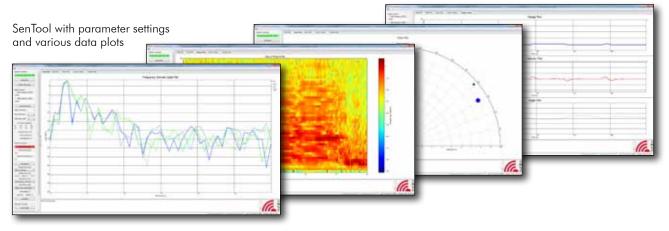
## **24 GHz FMCW-RADAR KIT** DEVELOPMENT KIT DK-sR-1030e WITH EXTERNAL ANTENNA A-sR-1032 AND PC-SOFTWARE SenTool

The IMST 24 GHz FMCW Radar Development Kit **DK-sR-1030e** constists of a radar module, the external patch antenna **A-sR-1032**, and the Graphical User Interface (GUI) called **SenTool. SenTool** makes it easy to configure the sensor and to measure, visualize and analyze the data of the radar in several different plots. Also the provided high level algorithms Human Tracker and Range Finder can be adjusted and run. The measured data can easily be saved and also be replayed afterwards. **SenTool** offers a wide range of functions.



## FUNCTIONS:

- **Configuration** of the Radar and the interface.
- Radar Selection out of several connected Radars.
- High level measurement modes like Human Tracking and Range Finding.
- Measurement Monitoring in different presentation forms: Time Domain, Frequency Domain, Phase Domain, Polar Plot, History Plot, Range Plot.
- Storing and Restoring of measurement data in binary or ASCII format.
- Offline Viewing of measurement data without connection to the Radar.
- Animated or Static display of recorded data.
- Magnifying View.
- Firmware udate via Ethernet interface.
- Implementation of User-Defined-Functions.





## TECHNICAL DATA DK-sR-1030e

Modulation:	FMCW / CW
Operating Frequency:	24.0GHz - 24.25GHz (ISM band)
Number of Channels: Data Interface:	1 Tx, 2 Rx (with I/Q demodulator each) Ethernet (with PoE)
	Ethernet (with PoE)
INTERFACE TO EXTERNAL ANTENNAS	
Three RF Connectors:	RPC-2.92, 50 Ohm, DC to 40 GHz, female
Connector Compatibility:	APC-3.5, GPC-3.5, SMA, RPC-3.5, K
Three Coax Adapters:	2.9mm Male-Male, DC to 40 GHz
EXTERNAL ANTENNA "A-sR-1032"	
Antenna Type:	external Patch Antenna
Antenna Characteristics:	90° Azimuth, 24° Elevation
Antenna Gain: Antenna Polarization	9 dBi linear
MEASUREMENT WITH EXTERNAL ANTEN	
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Min. Measurement Range: Max. Measurement Range:	0.6m (@ ISM band) 307m (@ ISM band)
Range Resolution:	max. 0.6m (@ ISM band)
Max./Min. Speed (theoretical):	±3200m/s
Speed Resolution:	6.25m/s (@ 24GHz, CW Mode)
Angle Measurement Accuracy:	2° - 3°
FMCW PERFORMANCE	
Frequency Ramp Duration:	1ms - 100ms
Typical Update Rate:	10Hz - 200Hz (depending on application)
Output Power (EIRP):	-2dBm - 7dBm (tunable)
TEMPERATURE	
Min. Operating Temperature:	-40°C
Max. Operating temperature:	60°C (@ duty cycle < 50%)
Power Supply	
Operation Voltage:	44V - 54V (PoE)
Standby Power:	3.0W
Operating Power:	4.5W
HOUSING	
Dimensions (L x W x H):	98mm x 87mm x 42.5mm (Housing) 114mm x 87mm x 42.5mm (with Bushing)
Weight:	280g (with cable)
Mounting:	4 Mounting Holes (5mm)
Connection Cable and Connector:	CAT-6 with RJ45 Female Plug (Ethernet)
Housing:	No specific Protection



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