The IMST 24 GHz FMCW Radar Development Kit DK-sR-1200e consists of a Graphical User Interface (GUI) called SenTool and the Radar Module sR-1200e. 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:

- **Configuration** of the Radar and the interface.
- **Radar Selection** out of several connected Radars.
- High level measurement modes as **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 update** via Ethernet interface.
- Implementation of **User-Defined-Functions**.
## TECHNICAL DATA sR-1200e

### GENERAL
- **Modulation:** FMCW / CW
- **Operating Frequency:** 24.0GHz - 24.25GHz (ISM band)
- **Number of Channels:** 1 Tx, 2 Rx (with I/Q demodulator each)
- **Data Interface:** Ethernet (with PoE)
- **Certification:** CE-Approval

### ANTENNA
- **Antenna Type:** Integrated Patch Antenna
- **Antenna Characteristics:** 65° Azimuth, 24° Elevation
- **Antenna Polarization:** linear

### MEASUREMENT
- **Min. Measurement Range:** 0.6m (@ ISM band)
- **Max. Measurement Range:** 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):** 10dBm - 19dBm (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)
- **Weight:** 280g (with cable)
- **Mounting:** 4 Mounting Holes (5mm)
- **Connection Cable and Connector:** CAT-6 with RJ45 Female Plug (Ethernet)
- **Protection Code for Housing:** IP65