perisens

Make our over 12 years of experience in radar evaluation work for you and get in touch with us!

We also offer customer specific solutions for development and End-of-Line testing of radar sensors.

For more information, please contact our specialists!

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Radar Target Simulator (RTS)

Solutions for Radar Measurement in R&D and Production

dynRTS and staRTS

- **Laboratory and End-of-Line (EoL) tests of radar sensors**
- **Future proof:** Both automotive radar bands (77/79G)
- **5 GHz of simultaneous bandwidth**
- Simulation of target properties in
  - Range / Distance
  - RCS / Attenuation
  - Velocity / Doppler
- **Resolution (separability) analysis** in range (5 mm steps) and velocity domain with offset target
- **Analog technology:** Transparent behavior - suitable for all radar modulation types
- **Moving target simulation:** e.g. evaluation of emergency breaking systems
- **Remote control** via Ethernet with LXI
- **Calibrated IF output/input:** Signal analysis & generation at intermediate frequency
- **Radar Signal Analyzer (RSA)** with 2 GHz bandwidth for FMCW analysis (optional)

minRTS and RFC

- **Laboratory and End-of-Line (EoL) tests of radar sensors**
- **Future proof:** Both automotive radar bands (77/79G)
- **5 GHz of simultaneous bandwidth**
- Simulation of target properties in
  - Range / Distance with exchangeable cartridges
  - RCS / Attenuation
- **Single target** with customized distance as **exchangeable glass fiber cartridge**
- **Analog technology:** Transparent behavior - suitable for all radar modulation types
- **USB connection:** plug & play
- **Calibrated IF output/input:** Signal analysis & generation at intermediate frequency
- Also available as **frequency converter (RFC)** without radar target

76-81 GHz band (5 GHz BW)	**Frequency range (instantaneous BW)**	76-81 GHz band (5 GHz BW)
Monostatic, WR12 flange, vertical polarization (horizontal with external twist)	**RF input configuration**	Monostatic, WR12 flange, vertical polarization (horizontal with external twist)
R&D: 1 moving + 1 offset / EoL: up to 4 non-moving targets	**Number of targets**	1 static
R&D: up to 400 m (in 4^1...4^6 steps) offset: 0 to 5 m from main (5 mm steps) EoL: customer specified	**Target distance**	Customer defined >3m (as exchangeable cartridge)
75 dB range (0.25/0.5 dB steps)	**Variable target size**	30 dB range (0.5 dB steps)
up to ±100 m/s (0.002 m/s steps)	**Target velocity**	-
Main target: ±2 dB, typ. (±3 dB, typ.)	**Gain flatness for 1 GHz BW @76.5-79 GHz (@79-80.5 GHz) $f_{(c,radar)}$**	±2 dB, typ. (±3 dB, typ.)
±1 dB, typ.	**RCS accuracy @highest RCS setting**	±1 dB, typ.
>30 dBc, typ.	**Spurious suppression in Doppler**	>30 dBc, typ.
-90 dBc/Hz@100 kHz offset, typ.	**Phase Noise at 77 GHz**	-90 dBc/Hz@100 kHz offset, typ.
25	**Weight in kg**	3
483 x 450 x 177 (W x L x H)	**Dimensions in mm**	179 x 216 x 100 (W x L x H)
Radar Signal Analyzer (RSA)	**Options**	Customized cartridge
✔	**Radar target simulation**	✔ (only minRTS)
✔	**Calibrated Down-Converter (for Signal Analysis)**	✔
✔	**Calibrated Up-Converter (for Interference Test)**	✔