

RF SOLUTIONS

FOR CELLULAR, GNSS, WIFI,
BLUETOOTH SIGNALING AND NON-SIGNALING TEST



PRODUCT

Validation and Production test for: Telematics Control Units, Intelligent Antenna Modules, ADAS & autonomous driving decision units



FAST > FLEXIBLE > FOCUSED

CONNECTIVITY TESTING

STAND-ALONE TOOLS TO TARGET SIGNALING AND NON-SIGNALING TEST REQUIREMENTS



UNIVERSAL WIRELESS TESTER (UWT)

Specifically designed for high RF channel counts in mass production testing, the Universal Wireless Tester (UWT) covers modern cellular and connectivity standards (5G, C-V2X/V2X, 802.11.ax) for non-signaling verification. Additional waveform generation capabilities for global positioning and radio extend the technology coverage for test applications also in early device under test life cycles, e.g. product validation.

Smart generation and measurement software allow high speed and reliable testing based on modular PXIe hardware from National Instruments (NI). Instrument sharing and measurement task scheduling is brought to a new level utilizing the Universal Switch Matrix (UMX), which provides up to 32 bidirectional RF ports with additional DC load emulation and voltage/current measurement capabilities. Different modular hardware configurations allow to scale the UWT up to four individual Vector Signal Transceivers (VST) and four UMX, covering 128 logical RF channels.



UTP RF Suite

The UTP RF Suite as an easily extendable framework, consisting of different plugins for instrument and chipset control, as well as user-friendly tools for configuration and analysis, has been specifically created to overcome the first hurdles of RF non-signaling testing. It already supports a variety of different chipsets from different vendors for cellular as well as connectivity testing, utilizing multiple instruments.



sUTP 5018 BASE STATION EMULATOR (BSE)

Covering cellular technologies from 2G to 4G by default, also software extensions for 5G and C-V2X are available. Four individual streams allow multi antenna scenarios and high data throughput. Together with the external signal distribution, multiple units can be verified in parallel. The hardware is extendable to also cover wireless connectivity technologies.



sUTP 5017 GNSS SIMULATOR

Next to multi band GNSS signals for GPS, GLONASS, Galileo and Beidou, also additional signals for SBAS or RTK can be generated. Additional interference and jamming options can optionally be used for security evaluation.



FUTURE-PROOF TOOLKIT

Our toolkits are prepared for upcoming challenges such as 5G NR, Beidou Phase III and other wireless requirements of the future

UTP 7033 RF RACK

Multiple units are tested in parallel for long time periods enduring different environmental factors, during validation testing. The UTP7033 RF-Rack, a turn-key solution for modern automotive units with high channel count and high technology bandwidth, has been created for this purpose, but also for development or production scenarios. Core components of the test rack (600x1600x800 mm) are the NOFFZ sUTP 5018 Base Station Emulator (with optional WLAN/BT/BTLE and V2X/C-V2X extensions) for parallel cellular signaling testing, the NOFFZ sUTP 5017 GNSS Simulator for positioning signal streaming and the compact RF distribution for high channel counts with included antenna diagnosis and measurement functionalities.

In comparison to other test solutions on the market, the UTP 7033 RF Rack provides a compact design for a fully automated parallel test of multiple units with high RF channel counts, covering all modern technologies at once. The integrated switching, step attenuation and antenna diagnosis functionalities provide flexible and easily extendable signaling scenarios, occupying only a small footprint. Due to the parallel test capabilities of all included signaling and distribution devices, the price keeps reasonable even for high unit and channel counts.



UTP 9011

The reduction of test times and costs is a challenge that all innovative test system companies are facing, especially in the areas of IoT and connected devices. To face those challenges NOFFZ has developed the UTP 9011 test station for multi-DUT and multi-standard testing. Based on the UWT, the sUTP 5018 Basestation and the sUTP5017 GNSS Simulator the UTP 9011 is capable of handling multiple DUT independently. This allows for parallel signaling and non-signaling test of:

- > GNSS
- > WLAN
- > Bluetooth
- > Cellular (2G, 3G, 4G, 5G)

Additional PXI chassis inside the UTP 9011 allow the usage of multiple measurement devices, e.g. DMM, DAQ, DIO and many more. Due to the flexible adapter concept, multiple variants of the devices can be tested at the same time. The shielded adapters provide state-of-the-art RF attenuation and can be adapted to typical DUT requirements regarding dimensions and connections.



Noffz Technologies GmbH has extensive knowledge of over 4000 product specific test systems produced in the last 30 years.

We want to also help you in being successful with your testing challenges. Please contact us for further details on how we can support you.



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