NOFFZ
TECHNOLOGIES

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UWT

UNIVERSAL WIRELESS TESTER

A ONE-SIZE FITS ALL NON-SIGNALING RF TEST PLATFORM

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(USA)

Toenisvorst
(Germany)

Austin
(USA)

Munich
(Germany)

Belgrade
(Serbia)

Querétaro
(Mexico)

Budapest
(Hungary)

Juárez
(Mexico)

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(China)

EXPERIENCE GLOBAL EXCELLENCE IN TESTING & AUTOMATION

At NOFFZ Technologies, our dynamic innovation and unwavering commitment to customer service have made us a global leader in testing & automation systems. With a worldwide network of locations in USA, Mexico, Germany, Hungary, Serbia, and China, we provide local expertise and prompt support to industries such as automotive, telecommunication, smart homes, medical technology, and semiconductors. Our market-leading technologies, combined with our international team of experts, ensure the successful implementation and operation of our cutting-edge solutions. Experience global excellence in testing & automation with NOFFZ Technologies today.

PRODUCT

Applications: High-Channel Count Production and Validation Test

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UWT configuration with 2 RF transceivers, 32-port **UMX** and additional **PXI instruments**

READY FOR FUTURE REQUIREMENTS WITH UWT: BUILD SYSTEMS ON AN OPEN PLATFORM

New wireless technologies such 5G, 802.11be, V2X, BLE and UWB are increasingly used across industries. Validation and production test of wireless devices in automotive, industrial IoT, smart personal devices, medical sensors and many others require a fast and flexible test system optimized for the high antenna counts, high-unit volumes and extensibility for the future. NOFFZ and NI have partnered to create the Universal Wireless Tester (UWT) – a one-size fits all non-signaling RF test platform.
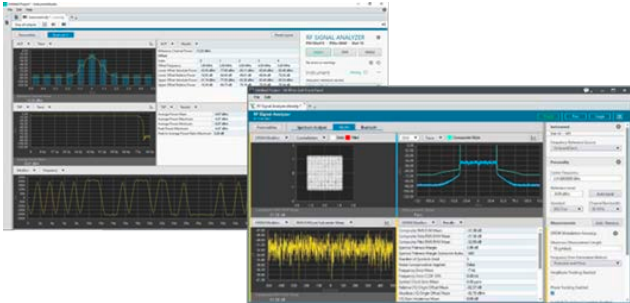
UWT software eco-system based on NI RFmx

UWT configuration with a dual-channel VST and a 32-port UMX

APPLICATION CHALLENGES

> Flexibility and long-term support – Legacy, current, and future wireless standards

> High RF port count– DUT connection with 8+ antennas or batch testing

> Cost-efficiency– Combine fast test times, high instrument utilization, and competitive cost-per-RF-port

THE NOFFZ ADVANTAGE

> Minimize downtime with automatic re-routing between test ports and instruments, allowing production to continue during maintenance and calibration

> Reduce test time through parallel DUT testing, automatic RF port routing, and automatic resource sharing NI RFmx Soft Front Panel for real-time interactive measurements

> Reduce total cost of test through a faster test time, high port count, signal conditioning integrated in the RF switch, and system scalability, extensibility to frequencies above 6 GHz

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SPECIAL FEATURES

Use the PXIe-5860 Multi-channel VST
to cover frequencies from 50MHz to 9GHz, use the latest transceiver from NI Emerson. There are 2x independent transceivers in a 2-slot PXI form factor, optimized for automated testing, at the best cost per channel.

Configure the number of transceivers
for the required RF test throughput independently from the RF port count. Should you need 4, 8, 32, 64, or 128 RF ports, you can combine it with 1, 2, 4, or 8 transceivers to reach the desired test time.

Maximize test throughput using the co-operative transceiver mode
to allow automatic routing from any transceiver to any RF port where there is a measurement request, supporting highly efficient, multi-up, parallel test sequences and eliminate down-time during maintenance and calibration.

System level offerings include RF chambers, Test racks from Validation to Production
to connect active antennas and apply the required load, simulate antenna failure, supply phantom voltage, and measure DC current. Optional routing of low-level signals through built-in LNA.

NI PXIe-5860 – Multi-channel Vector Signal Transceiver (VST) upto 9 GHz

NI PXIe system with different transceiver options

NOFFZ **UMX Control Software**

Complete system based on NOFFZ **UTP 5070 RF Test** Adapter

TECHNICAL DATA

Software Options

Waveform Playback	Default
Connectivity test license	**Bluetooth 5.x/6.x** – DTM, OTA (4x) non-signaling test **Wi-Fi 7/8** (802.11ac/ax/be), DSRC (802.11p) non-signaling test
Cellular test license	**2G – 5G, NB-IoT, NTN, C-V2X** non-signaling test
Ultrawide-band test license	**UWB** non-signaling test

Transceiver Options

Number of Transceivers	**1 – 8** (co-operative mode)
instantaneous Bandwidth	**1 GHz**
Transceivers for 9kHz - 6 GHz	**NI PXIe-5841** (For legacy device testing)
Transceivers for 100MHz - 9GHz	**NI PXIe-5860** (Cost effective for production test)
Extension for 5 - 12GHz support	**NI PXIe-5830** (Supporting the upper UWB channels)
Support for 30MHz - 26.5GHz 23 - 54GHz (mmWave Head required)	**NI PXIe-5842** (Supporting frequencies up to 54 GHz)

Switching Options

Switching upto 8GHz (compact upto 64/128 ports)	**UMX 32-port / UMX 64-port** (with UMX Extender)
Switching upto 12GHz (modular platform 1-128 ports)	**BXM** - 2x4 blocking matrix to control 4x port modules **SPAT/SP8T** port modules – cascade upto 32-ports
DC front-end / LNA path Available for all switches)	Selectable LNA path for Over-the-Air testing Selectable front-end termination (open/short/ESD or custom load) Measure DC current through built-in BiasT

System Components

Computing	Embedded Controller (NI PXIe-8862)
PXI Chassis	9-slot PXIe chassis with OCXO (NI PXIe-1092) 18-slot PXIe chassis with OCXO (NI PXIe-1098)

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