NOFFZ TECHNOLOGIES

UWT

UNIVERSAL WIRELESS TESTER

THE MOST FLEXIBLE NON-SIGNALING RF TEST SOLUTION

PRODUCT

Applications: High-Channel Count RF Test for Production and Validation

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

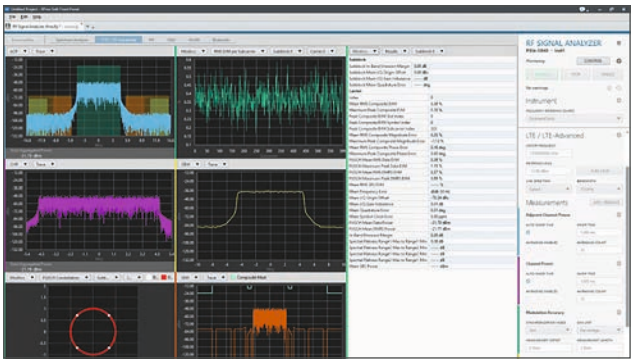
READY FOR FUTURE REQUIREMENTS WITH UWT: BUILD SYSTEMS ON AN OPEN PLATFORM

Test requirements change rapidly and require the reuse, reallocation, or expansion of resources. Especially in the validation and production testing of wireless devices in the automotive industry, industrial IoT, smart personal devices and medical sensors, fast and flexible test systems are crutial.

This is exactly what NOFFZ and NI have jointly developed together the **UWT – Universal Wireless Tester –** a non-signaling RF test platform.

The concept is enabled by the **UMX – Universal Switch Matrix,** which is an 8 x 32 RF switch matrix with built-in DC load emulation and voltage/current measurement block. It is designed for high antenna counts and high volumes with future expandability and accommodates technologies such as C-V2X, 5G, 802.11be, BLE and UWB.

Are you ready to measure new technologies by selecting transceivers that support 6 GHz WiFi channels, 10 GHz UWB or 5G NR in the mmWave range?



NI RFmx Soft Front Panel for real-time interactive measurements

APPLICATION ADVANTAGES

- Flexible, with long-term support for legacy, current and future wireless standards
- Scalable number of RF ports for DUT connections with more than 8 antennas or batch tests
- Automatic RF port routing and resource sharing to reduce test time
- Signal conditioning integrated in RF switch (UMX)
- Expandable to frequencies above 8.5 GHz
- Cost efficiency through shorter test times, high device utilization and competitive cost per RF port
- Minimized downtime by automatically rerouting between test ports and instruments

SPECIAL FEATURES

Use the UMX with a built-in DC load emulation

- to connect active antennas and apply the required load
- to simulate an antenna failure
- to supply phantom power and measure DC current
- to optionally route low level signals through the built-in LNA

NOFFZ **UMX –**
Universal RF port module

Configure the number of transceivers

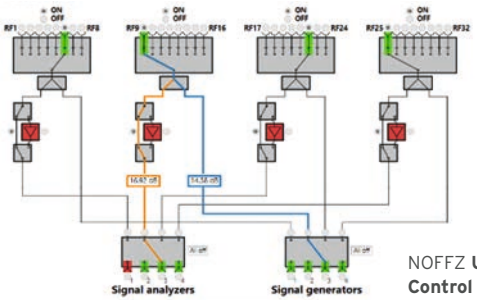
- to implement the required RF test throughput independently of the RF port count
- to reach the desired test time

Therefore the chassis can be equipped with 1–4 transceivers, providing 4, 8, 32, 64 or even 128 RF ports.

NI **PXIe system** with different transceiver options

Maximize test throughput using the cooperative transceiver mode

- automatic routing from any transceiver to any RF port where there is a measurement request
- highly efficient, multi-up, parallel test sequences
- eliminate downtime during maintenance and calibration



NOFFZ **UMX**
Control Software

TECHNICAL DATA

	UWT-08	UWT-11/42	UWT-12e/44e
Software Options			
Waveform Playback	Default	Default	Default
Bluetooth 5.x			
WiFi 6 (802.11a/b/g/n/ac/ax)			
Cellular (2G-5G)	Optional		
Transceiver Options			
Number of Transceivers	1–4	1–4 (cooperative mode)	1–4 (cooperative mode)
Maximum Bandwidth	1 GHz, optional extension to 2 GHz (NI PXIe-5842)		
Supported Transceivers <8.5 GHz	NI PXIe-5841 (Legacy support: NI PXIe-5646R)		
Support for WiFi 6E, UWB, NR n96	VST upgrade to 8.5 GHz, optional extension up to 12 GHz (NI PXIe-5830)		
Support for 5G NR FR2 (mmWave)	Optional extension up to 54 GHz (NI PXIe-5842)		
Switching Options			
Switching	UMX 8-port	UMX 32-port UMX 64-port (dual 32-port)	UMX 64-port UMX 128-port (with UMX Extender)
DC Front-end / LNA path	All ports		
System Components			
Computing	Embedded Controller (NI PXIe-8861)		
PXI Chassis	9-slot PXIe chassis with OCXO high-precision clock (NI PXIe-1092), optional extension to 15-slot chassis (NI PXIe-1095)		

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