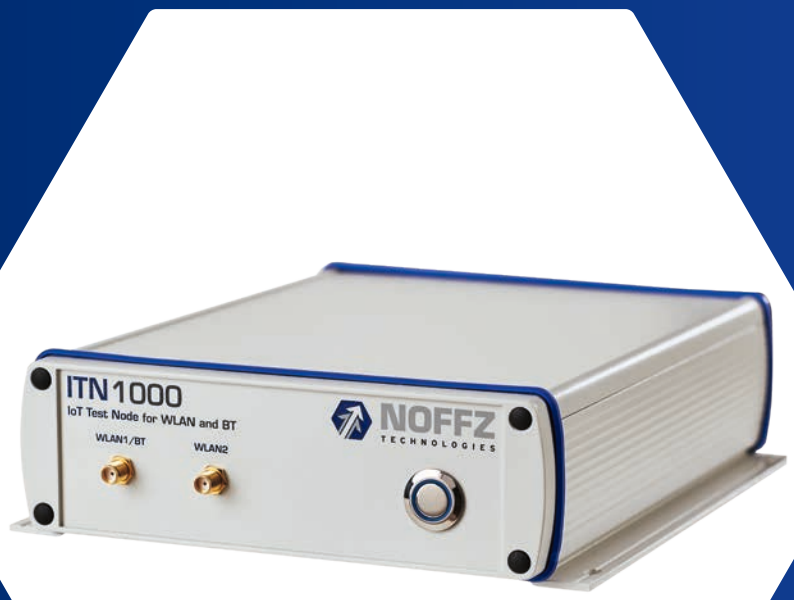
NOFFZ TECHNOLOGIES

ITN 1000

IoT TEST NODE

INDUSTRIAL RF AND WIRELESS APPLICATION TEST SOLUTION



PRODUCT

Applications: Application Level Functional RF Test for Production and Validation

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IoT Test Node for WLAN and Bluetooth™ with SMA connectors for RF and Ethernet (PoE) to control

FEATURES AND HIGHLIGHTS

Development, prototyping, validation and production testing of wireless devices in the world of IoT need low cost, easy-to-use test eqipment that supports the latest standards.

- Spends only a fraction of the cost compared to traditional instrumentation
- Wi-Fi 6E: 802.11ax/ac/n/a/g/b, 2x2 MIMO, 2/5/6 GHz
- Bluetooth™: 5.2 BDR/EDR/BLE
- Compact, industrial form factor and connections
- Conducted or radiated measurements for multiple DUTs
- Automate test cases in any sequencer or custom script

INDUSTRIAL WI-FI ACCESS POINT, CLIENT SIMULATOR AND BLUETOOTH™ PEER DEVICE

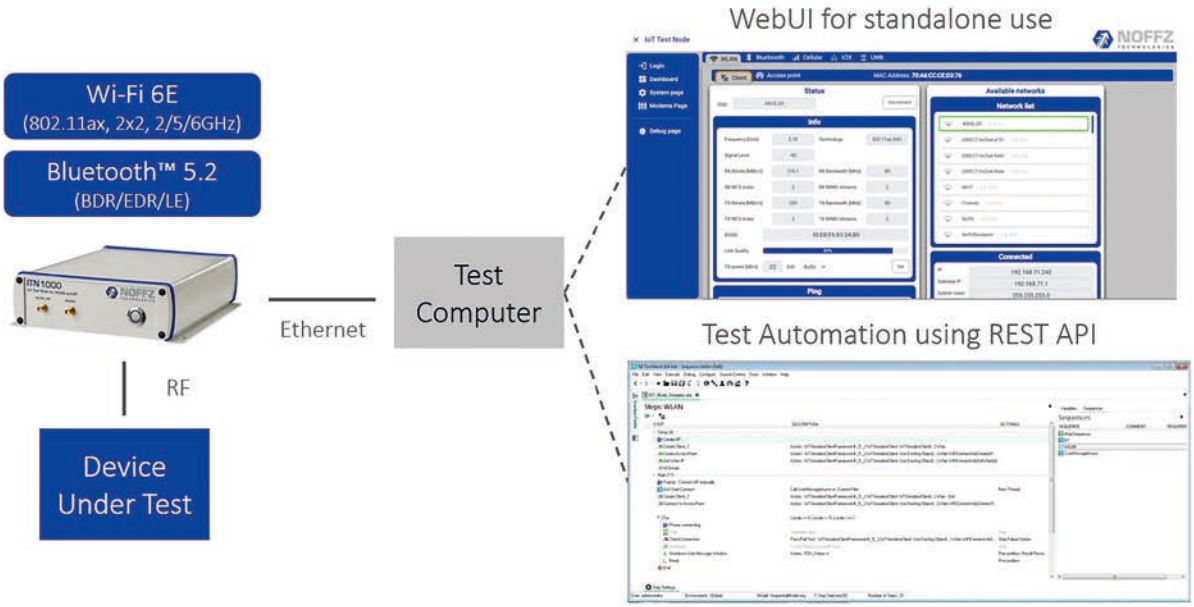
When the final application firmware is loaded to your device, and there is no need to run parametric tests with expensive instrumentation again, but you need more control, reliability and engineering level access to parameters than a Wi-Fi router or BT dongle can provide, then the IoT Test Node is your perfect test tool.

IoT Test Node is designed for automated test. You can reach all functions through a modern, platform-independent API, but for benchtop applications, just use the WebUI out of the box.

WebUI for easy access, prototyping and benchtop application

APPLICATION AREAS

- Automated Validation Test
- EMC Lab, Environmental Monitoring
- Field Return Analysis
- End-of-Line Production Test
- HIL Simulation
- R&D Application Development
- Education and many more



SPECIAL FEATURES

Connect to an IoT Node and start testing immediately

- No installation required
- Plug the Ethernet cable to your PC
- Establish RF connection over-the-air or via cable
- Visit the WebUI for configuration and quick test
- Drag and drop API calls to a sequencer for automated testing

Validation and Production Test

- Already tested on board level, but need a final check after assembly at the EoL production test stage?
- Need an industrial "counterpart device" when running long-term monitoring tests in validation?
- Place a compact, low-cost IoT Test Node to the rack and automate test cases with minimal effort

Parallel test multiple clients and access points

- Create a wireless AP and test up to 8 clients in parallel
- Simulate a Wi-Fi Client and test multiple APs in series
- Add custom RF switching front-end or use it over-the-air

APPLICATION MATRIX

	Configure	Connect	Act	Measure
WLAN	Create a custom **Access Point** (standard, band, channel, bandwidth)	Connect and authenticate **one or more** Wi-Fi **clients**	Start a download or upload **stress test** session	Signal quality (%), **Tx/Rx data rate (Mbit/s)**, Rx level (dBm), **PER (%), MCS index**
Bluetooth™	**Scan** for devices in classic or low energy mode, **read proximity** (RSSI)	Complete **pairing** and setup your profile (A2DP, GATT, SPP, HFP)	Start **audio**, data **streaming** session or ping BLE devices	PER (%), **RSSI (dBm), Link Quality (%),** HCI Messaging

TECHNICAL DATA

WLAN	
Standards	IEEE 802.11 a/b/g/n/ac/ax
Bandwidth	20 MHz / 40 MHz / 80 MHz / 160 MHz
MIMO	2x2
Frequency Ranges	2.412 GHz – 2.484 GHz | 5.150 GHz – 5.850 GHz | 5.925 – 7.125 GHz
Data Rates	802.11b: 11 Mbps 802.11a/g: 54 Mbps 802.11n: MCS0-15 802.11ac: MCS0-9 802.11ax: HE0-11
Bluetooth	
Standards	Bluetooth V5.2 (BR/EDR/HS/LE Compliant)
Data Rates	1 Mbps, 2 Mbps and 3 Mbps
Physical Specifications	
RF Performance	Tx Power uncertainty: +/- 2 dBm Frequency accuracy: +/- 20 ppm **Rx Sensitivity** (PER <10 %): @160 MHz, MCS-11 ax: -53 dBm | @20 MHz, MCS-9 ac: -69 dBm
Interfaces on Front Panel	**WLAN1/BT:** Female SMA connector for the primary WLAN stream and BT; Operating on all WLAN bands (2.4/5/6 GHz) **WLAN2:** Female SMA connector for the secondary WLAN stream in case of 2x2 MIMO; Operating on all WLAN bands (2.4/5/6 GHz) Rounded push button with LED
Interfaces on Back Panel	**2x Ethernet,** ETH1 with Power over Ethernet (PoE) **DC power:** 2.5 mm inner diameter barrel jack
Dimensions	Without mounting brackets: W 170 x H 52 x D 221 mm With mounting brackets: W 188 x H 57 x D 221 mm
Weight	0.5 kg
Temperature	Maximum operating temperature range of -40 °C to 80 °C Maximum environmental temperature is 35 °C
Operating Voltage	Unregulated 8 V to 60 V (12 V, 2 A recommended) PoE on ETH1: active 802.3 at, supply power requirement 24 W CAUTION: Do not use DC power source and PoE at the same time, as it can damage the device!

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