NTS SERVICE SPOTLIGHT

WIRELESS DEVICE TESTING

NTS has a unique depth of experience in wireless technologies from large infrastructure equipment to handheld wireless devices. NTS can evaluate transmitting equipment within the frequency range 9 kHz to 220 GHz. Excellent test capabilities are available in many NTS facilities and include multiple shielded and anechoic chambers.

ZIGBEE CERTIFICATION

NTS has been selected by the ZigBee Alliance to perform compliance and certification for ZigBee devices based on the IEEE 802.15.4 standard. NTS has years of experience performing the various ZigBee standard and profile certifications, including PHY, MAC, ZCP, Smart Energy, Home Automation, Remote Control, and Light Link, among others. At NTS we realize, based on real experience, the challenges associated with certification of emerging technologies. Product maturity, clarity of specifications, and many other issues have an impact on a successful certification process. Although the certification process have been generally perceived as rigid and difficult to complete, NTS has placed every effort into making the process as flexible and as seamless as possible. The major part of those efforts has been invested in the development of automated test tools, including our Smart Energy and Home Automation tools, to allow manufacturers to gain insight into the fundamental behaviors of their implementations and perform pre-testing before committing to the entirety of certification tests.

Walk-in chambers allow for temperature, humidity and combined environmental tests on large test specimens

NTS can evaluate products that make up a wireless network

We have the latest technology in wireless test equipment

This approach allows NTS' clients to save time and money by gaining early warning of the potential issues with the product.

TYPE APPROVAL

As a respected engineering and evaluation firm, NTS has the ability to not only perform the evaluation, but can assist you in presenting the engineering documentation to multiple agencies around the globe. Our vast experience in dealing with regulatory agencies worldwide allows for streamlined type approval certification reviews. Our staff includes experienced and trained certification review engineers that are always up on the latest policy and rule changes. Our focus is on making sure the detail of the testing and documentation preparation is correct the first time. This strategy has proven to reduce the need for clarification and follow up from the certification body and thus reduce the time to market.

EMI/EMC/ESD, ELECTRICAL AND PRODUCT SAFETY

NTS offers extensive capabilities and experience for conducting Electromagnetic Compatibility (EMC), Product Safety and Electrical testing on many types of wireless equipment operating in most any environment. Several fully anechoic and three meter semi-anechoic FCC-listed chambers, plus a 10m semi-anechoic test chamber is available.

ENVIRONMENTAL, EARTHQUAKE, VIBRATION

NTS provides state-of-the-art environmental test facilities for all types of equipment including multiple rack systems, shelf level products and indoor and outdoor equipment. NTS engineering expertise can shorten your time to market.

HIGHLIGHTS AND PRIMARY TEST CAPABILITIES

RF/Wireless

Spectrum analysis capability 20Hz - 220GHz. Generation, demodulation, and analysis of digitally modulated signals including GSM, CDMA, CDMA 2000, EVDO,W-CDMA, Bluetooth, WLAN, and WiMax. Statistical power analysis systems for wideband, digitally modulated systems.

Climate chambers for frequency and power stability testing of base station equipment. Capability to test multi-channel booster, repeater, and in-building antenna distribution systems.

Primary Specifications

- IEEE 802.15.4 ZigBee
- FCC Transmitter specifications: FCC Part 15, 22, 24, 25, 27, 74, 80, 90, 101
- R&TTE Directive harmonized standards: EN 300 113, EN 300 220, EN 300 328, EN 300 330, EN 300 440, EN 301 124, EN 301 751, EN 301 753, EN 301 893
- Industry Canada Transmitter specifications: RSS 118, 119, 123, 125, 128, 129, 131, 132, 133, 195, 210, 213, 310

NTS has the experienced staff to evaluate a range of technologies

EMI/EMC

- Radiated Susceptibility 3V/m-200V/m, 10kHz to 40GHz
- Lightning-Multiple Stroke, Multiple Burst, and Indirect
- RF Emissions and Immunity, AC Power Fault, Surge, ESD and EFT
- 10 Meter Semi-Anechoic, 40' x 40' Semi-Anechoic chambers
- FCC standards: Part 15, Subpart B
- R&TTE Directive standards: EN 301 489-1 to 32
- Industry Canada standards: ICES-003

Environmental

- Verizon ITL Approved

Test capabilities include: Seismic, Fire, Mix Flow Gas, Altitude, Hygroscopic Dust, Vibration, Shock,Wind-driven Rain, Solar Radiation, Temperature, Humidity and much more

Telecom Interface Conformance

- Fully automated telecom interface testing to worldwide standards includes:
- Compliance testing
- Pre-compliance testing
- Production testing
- Primary Interfaces: Analogue PSTN, xDSL, VoIP, T1, E1, ISDN PRI

Primary Specifications

- FCC Part 68, TIA-968-A (USA), CS-03 (Canada), AS/ACIF S002, S003, S004 (Australia), TBR 4, 12, 13, 21, 37, 38 (Europe), JATE (Japan)

ABOUT NTS

Every hour of every day, NTS is fully invested in helping you build better, stronger, safer, more reliable products, and bring those products to market quickly and efficiently. Our test, inspection and certification services cover environmental, dynamics, EMC, wireless, product safety, materials, ballistics and much more. NTS engineers and technicians have exceptional knowledge of all test and conformity requirements in both domestic and international arenas. Our client partners in Aerospace, Defense, Telecom and Energy rely on NTS to make sure they're putting their best products forward, and so can you.

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