Product Bulletin

WLAN Solutions: 802.11b/g USB 2.0 Adapter Reference Design and Support

Texas Instruments' (TI) TNETW1450 media-access controller (MAC) reference design package delivers all the benefits of USB 2.0 to OEM and ODM design teams developing 802.11b/g products for the entire spectrum of PC form factors. In addition, when used with DSL and cable residential gateways that integrate TI solutions, the TNETW1450 delivers increased data rates and enhances interoperability.

Production-Ready Hardware Design Kit

TI's Hardware Design Kit (HDK) for developing USB 2.0 adapter products is a production-optimized solution based on the TNETW1450 802.11b/g MAC/baseband processor, the TNETW3422, a highly optimized 2.4-GHz single-chip radio frequency (RF) transceiver, and the TNETW3426 Radio Frequency Front End (RFFE) that supports the 802.11b/g standards. This platform significantly reduces board size, utilizing 60 percent less components than competitive solutions.

Time-To-Market Advantage

OEMs and ODMs reap a big time-to-market advantage with this TI WLAN chipset. TI delivers full support from project inception until your product enters volume manufacturing. Our reference design program for USB 2.0 adapter solutions rests on a solid foundation of production-ready hardware.

The TNETW1450 includes all optimized design and test tools intended to eliminate interoperability issues and reduce design time. Design time is further reduced by addressing the highest level of security and Quality of Service (QoS), including Wi-Fi® Protected Access2 (WPA2) and Cisco® Compatible Extensions Program 2 (CCX 2.0).

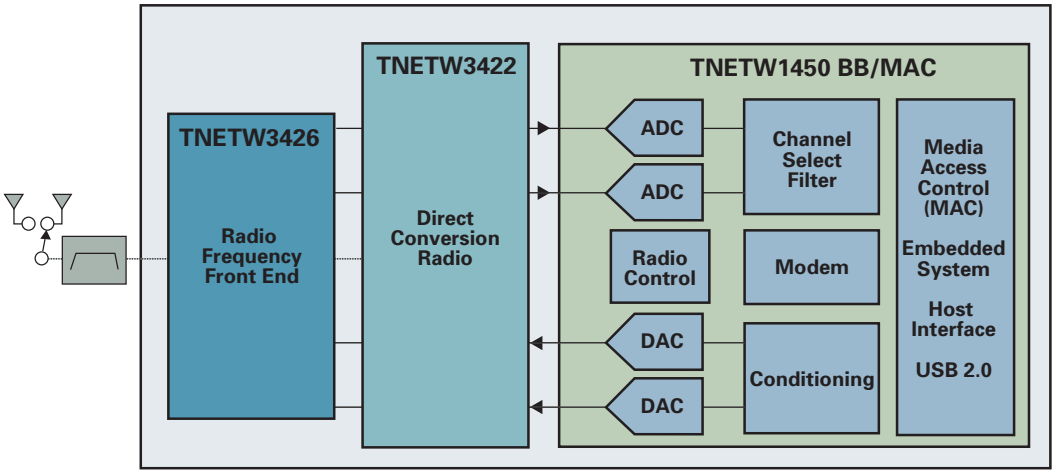
G++™ Technology

TI's TNETW1450 chipset feature G++™ technology which enables whole house coverage and faster than ever throughput. G++ technology features TX output power up to 23 dBM and industry-leading RX sensitivity which provides 2x extended range. Network robustness is improved using unique techniques to minimize interference from products such as microwaves, cordless phones and neighboring wireless networks. The software also features an enhanced 125 Mbps mode, enabling TCP/IP throughput of 36 Mbps in real world environments.

Components of USB Reference Design

Full Hardware Design Kit

- Schematics in OrCAD® and PDF formats
- Bill of materials
- Data sheets
- Hardware design manual
- Layout example (Protel, Gerber files and PDF plots)
- Example mechanical drawing for a USB dongle
- Sample manufacturing diagnostics files
- Applicable application notes on technology issues



Feature	Benefit
World-Class Performance	• Best 802.11b/g range/rate performance vs. competition • Most consistent performance in real-world environments
G++™ Technology	• **Range:** 2x extended range • **Rate:** 50% greater throughput • **Robustness:** Superior performance in the presence of interference
WPA2/WPA Security	• Highest standardized security solution
USB 2.0, WHQL, Wi-Fi, 802.11b/g	• Fully certified solution that meets industry standards and ensures full compatibility with any system in the market
Manufacturability	• Complete set of hardware and software tools to speed time to market • Most optimized BOM, small board size and efficient design allow for low-cost solutions
Enhanced User Experience	• Fully functional application for turnkey customization • Easy-to-read access to main dashboard • Streamlined installation options for easier customization • Selectable profiles

Comprehensive Software Tools

- Windows® Software Package (WSP) Version 7.2
- Complete Windows Hardware Quality Lab (WHQL) driver suite
- "Designed for Windows XP," WHQL, Wi-Fi and UL/FCC certified
- Configuration utility and site survey tools
- Windows driver application programming interface (API) guide
- Radio control utility for testing
- EEPROM programming utility
- Manufacturing API

Windows Software Package Highlights Highest Security

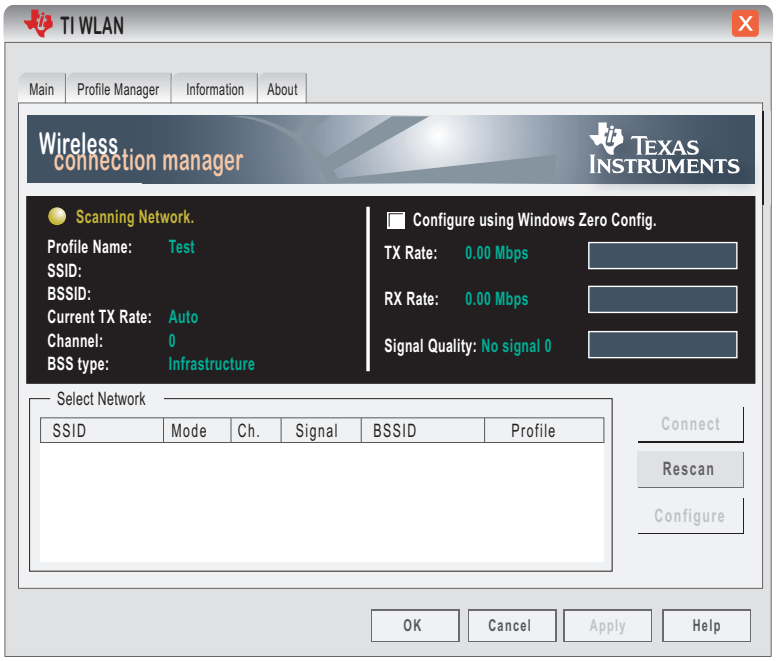
- Wi-Fi Protected Access 2.0 (WPA2)
- Two generations beyond WEP
- Backwards compatible with WPA
- Based upon the IEEE 802.11i standard
- FIPS-compliant AES encryption algorithm provides strongest level of encryption fit for enterprise and government use

Cisco Enterprise Interoperability

- CCX 2.0 - Interoperability with the number one enterprise AP vendor

Turnkey Solutions

- Certified solutions that can be easily turned to products
- Full Microsoft® OID support
- Complete documentation set



For More Information

For more information on TI's WLAN USB 2.0 adapter reference design program, visit **www.ti.com/wlan**

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