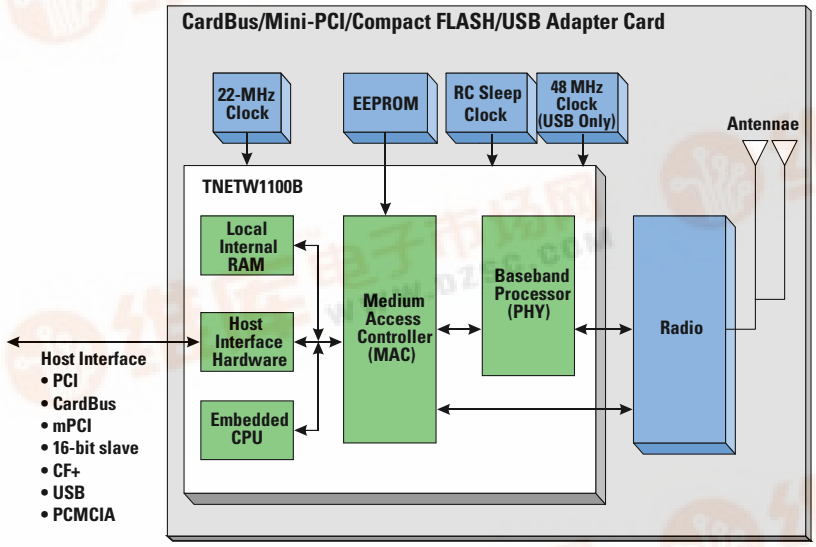
查询TNETW1100B供应商 捷多邦，专业PCB打样工厂，24小时加急出货

Product Bulletin

WLAN Solutions: TNETW1100B Embedded Single-Chip MAC and Baseband Processor



TI's TNETW1100B Embedded Single-Chip (MAC and Baseband Processor)

Key Features

- Extremely low-power, small size, exceptional performance (transfer rates and range) for embedded and mobile WLAN applications
- Standby mode of <2 mW is lowest in the industry
- Up to 25-percent more battery life in PDAs vs. competitive solutions
- Uses up to 75-percent less energy in a laptop vs. competitive solutions
- Host interfaces for WLAN stations and access points: 32-bit CardBus, PCI, USB 1.1, CompactFLASH Plus, PCMCIA and 16-bit generic slave
- Supports 1, 2, 5.5, 11 and 22 Mbps transfer rates
- Advanced receiver design overcomes interference, multipath and noise
- For 802.11b Wi-Fi compliant applications
- Space saving 12-x 12-mm BGA package
- Embedded Station Driver Development Kit (eSTADK) designed specifically to meet the needs of embedded applications.

The TNETW1100B from Texas Instruments (TI) combines the low power consumption, small size and superior transfer rates and range that are needed for embedded wireless local area networking (WLAN) in applications like laptop computers, cell phones, Internet appliances and personal digital assistants (PDA). The single-chip medium access controller (MAC) and baseband processor is fully compliant with the Wi-Fi (IEEE 802.11b) standard and is intended for Wi-Fi applications. Drawing on its decades-long experience with low-power operation in wireless telecommunications, TI optimized the TNETW1100B with Extra Low Power (ELP) technology, enabling a breakthrough standby power consumption of less than 2 milliWatts (mW) at the chip level yielding a 10 times reduction

chipsets. With these power-saving features, system designers can avoid undesirable compromises like a second battery, large bulky batteries or unacceptably short usage times.

To save valuable board space in portable and consumer electronic systems, the TNETW1100B comes in a space-saving 12-x 12-mm, 179-pin ball grid array (BGA) package, which takes up 44 percent less board space than its predecessor. For existing designs, the TNETW1100B also comes in a 16-x 16-mm BGA package that is pin-for-pin compatible with its predecessor.

In addition to its breakthrough low-power consumption and reduced space requirements, the TNETW1100B achieves high performance in terms of data transfer rates and range. The device is capable

to 30-percent data throughput improvement allowing higher speeds at greater distances. The TNETW1100B also supports the optional Packet Binary Convolutional Coding (PBCC™) modulation scheme with rates up to 22 Mbps—twice the speed of 802.11b.

Easy Integration Into Stations and Access Points

The TNETW1100B supports the host and I/O interfaces needed for both 802.11 station and access point applications. These include 32-bit Cardbus, PCI, USB 1.1, Compact-

找PDF 维库一下 pdf.dzsc.com

To achieve better performance in noisy environments or settings with interference, the TNETW1100B's baseband processor has a multipath performance enhancement with an advanced receiver design, which provides a delay spread tolerance of greater than 500 nanoseconds (ns). To ensure security comparable with wired LANs, the TNETW1100B has Wired Equivalent Privacy (WEP) in hardware. The built-in WEP accelerator ensures that the security protocol will not adversely affect the system throughput. Software driver upgrades will include support for upcoming WLAN security enhancements.

Embedded Station Driver Development Kit

To enable customers' time-to-market, TI will offer a Driver Development Kit specifically targeted at embedded applications. This tool, called the eSTADK, will be fully optimized for mobile hand-held applications such as cell phones or PDAs.

The eSTADK Operating System will be Windows® CE.

For More Information

Visit us at: **www.ti.com/wlan**

TNETW1100B Features	***Benefits***
Extensive Hardware and Software Features	
• Industry's lowest intra-beacon doze power consumption	• Extends battery life, avoids compromise tradeoffs like additional batteries or limited usage times.
• Small 12-x 12-mm BGA package	• Smaller footprint saves board space in compact mobile system enclosures.
• High-performance data throughput rates	• Provides up to 30-percent improvement in CCK 11Mbps performance (greater throughput at longer distances) over other solutions plus PBCC™ mode providing 22 Mbit/sec. saving power by shortening communication times and returning to doze mode faster.
• Single-chip MAC and baseband processor	• Reduces bill of material, reducing overall system cost.
• 32-bit, 44-MHz ARM CPU	• Powerful processing to maintain high throughput rates.
• 64 Kb of internal RAM	• Eliminates need for external RAM, reducing BOM costs.
• Direct memory access (DMA) to host memory in PCI and CardBus mode	• Stores data in noncontiguous buffers, which reduces copy operations and saves system bandwidth for other tasks.
• Antenna diversity support automatic	• Selection of best antenna improves signal strength, increasing throughput by reducing re-transmissions.
Comprehensive Development Packages	
• Complete hardware design kit (HDK)	• Reference design that includes schematics, layout, gerber files and radio control utility to enhance immediate hardware development.
• Windows® Software Package	• Complete set of Windows® Network Driver Interface Specifications (NDIS) drivers shorten time-to-market.
• Manufacturing test support	• 32-bit Windows® library supporting CardBus applications and allows for direct integration into volume manufacturing test program.
• TI test system facility	• Provides in-house test using FCC, Wi-Fi and WHQL test suites as well as TI-designed performance test suites.
Standards Compliancy	
• Fully tested hardware reference design	• Intended for Wi-Fi compliant applications.
• Drivers based on tested reference design	• Drivers are already WHQL-approved.
• Stamped with Windows® XP logo	• Enhanced user confidence, knowing product was designed for Windows® XP.

Important Notice: The products and services of Texas Instruments Incorporated and its subsidiaries described herein are sold subject to TI's standard terms and conditions of sale. Customers are advised to obtain the most current and complete information about TI products and services before placing orders. TI assumes no liability for applications assistance, customer's applications or product designs, software performance, or infringement of patents. The publication of information regarding any other company's products or services does not constitute TI's approval, warranty or endorsement thereof.

B032102

Real World Signal Processing, the black/red banner and PBCC are trademarks of Texas Instruments Incorporated.
All other trademarks are the property of their respective owners.

© 2002 Texas Instruments Incorporated