WANDA PDA concept design

Key features:

- Integrates TI tri-band GSM/GPRS, WLAN 802.11b and Bluetooth® wireless technologies into a single PDA concept design
- Complete hardware and software concept design allows manufacturers to get to market in as few as 100 days
- Highly integrated solution with smallest PDA form factor today
- Low power consumption and efficient coding for outstanding battery life
- Modular design for flexible and tailored product configurations
- TI DSP technology enables unique, high performance applications such as an accelerated multimedia player, digital camera and security features

PRODUCT BULLETIN

Texas Instruments' (TI) new tri-wireless PDA concept design, code named "WANDA," for Wireless Any-Network Digital Assistant, is the industry's first to integrate wireless LAN (WLAN) 802.11b, Bluetooth® and GSM/GPRS technologies to enable simultaneous phone calls, web browsing, mobile commerce or printing via Bluetooth. It also includes DSP accelerated Windows Media™ Audio and Video support which dramatically improves performance, while reducing power consumption, for mobile devices. This high level of integration has also allowed TI to offer the smallest PDA form factor concept design today, reducing parts count and board space, saving manufacturers time and money. In addition to TI's wireless technology, WANDA is powered by a TI OMAP™ processor and Microsoft® Pocket PC operating system (OS) and provides the high performance, low power consumption needed to meet the needs of the wireless connectivity market.

TI, along with its partners, has done the majority of the work for PDA manufacturers. A manufacturer using this WANDA design can bring a robust wireless PDA to market in as few as 100 days. In addition, a modular design enables manufacturers to quickly and easily create multiple PDA configurations targeted at specific market segments and price points.

Wireless integration and Pocket PC make the WANDA concept design the best platform to deploy new and unique applications to drive simultaneous application usage and allow network operators to see an increase in their ARPU (Average Revenue per User).

Accelent Systems Inc., a leading enabler of embedded devices, designed the WANDA PDA concept design based on TI specifications. As a TI Independent OMAP Technology Center and a Gold-level member of Microsoft's Windows Embedded Partner Program, Accelent provided its valuable engineering services and Pocket PC OS expertise to help manufacturers get to market quickly with this robust, power-efficient new design based on TI's OMAP platform.

A complete wireless solution

The WANDA concept design offers a complete solution allowing manufacturers to introduce a wireless PDA in as few as 100 days. TI's wireless GSM/GPRS tri-band technology along with WLAN and Bluetooth in the same device enables the manufacturer to support any wireless connectivity market segment. The WANDA PDA concept design incorporates a complete portfolio of features, allowing a manufacturer to quickly develop a full-featured PDA design:

Wireless connectivity from TI
Tri-band GSM/GPRS
802.11b
Bluetooth

TI OMAP1510 application processor
TMS320C55x™ DSP and
TI-enhanced ARM925

Memory
M-Systems 32/64-MB MDOC/NAND Flash
64-MB SDRAM

Display
240 x 320 QVGA transreflective
0.24 mm pitch
HR TFT touch sensitive

Keyboard/buttons
Four programmable
Dial and End call
Two volume
Power, backlight, reset and record
Navigation pad

Communication ports
USB
IrDA SIR

Indicators
Yellow LED for power/charge
Orange LED for event alarm, message, email
Vibration for event alarm, message, email or incoming call

Audio
Built-in microphone, speaker (speakerphone and audio playback)
Handsfree earphone/microphone jack
Stereo headphone jack

Camera
VGA - 640 x 480 (0.3 M Pixel)
YUV format output

SD/MMC expansion support

USB and Infrared synchronization support

Special Features
Backup/restore facility (persistent storage)
Voice recorder
Speakerphone

Battery Usage
300 hours PDA Standby Time (all radios off)
210 hours PDA/GSM Standby Time
200 hours PDA/WLAN Standby Time
12 hours PDA/GSM Talk Time
9.5 hours PDA/GPRS Browse Time
8.5 hours PDA/WLAN Browse (GSM Standby)
3.5 hours PDA/GSM Talk/WLAN Browse/Bluetooth® Transfer
Battery: Lithium Polymer, 3.6 V at 1900 mAh capacity
Battery usage figures are estimated

Charging via USB and AC adapter

Physical Dimensions
117.7 mm (H) x 74.4 mm (W) x 20 mm (Thick), excluding antenna
Weight: 174 g

Benefits of the WANDA concept design

In addition to providing the manufacturer a faster time to market with complete wireless integration, WANDA also offers:

Modular Design
Design flexibility
Design multiple products for specific market segments

New application possibilities
OMAP1510 provides high performance with low power consumption DSP accelerated Windows Media™ Audio and Video
Security features
Other applications being developed by TI OMAP Developer Network members

Proven, world class technology
OMAP platform and TI wireless technology chosen by leading device manufacturers
Small form factor reducing parts count by 25% compared to existing PocketPC wireless PDA devices

To find out more about TI's WANDA PDA Concept Design, contact your local TI field sales representative or visit www.ti.com/wanda

TEXAS INSTRUMENTS