ARM®

# BLUETOOTH™

UPDATE — APRIL 2001

## BLUETOOTH V1.1

*The Bluetooth Special Interest Group (SIG) has recently approved Version 1.1 of the Bluetooth Core and Profiles Specifications. The new version supercedes Version 1.0 and enables significantly greater interoperability between different Bluetooth implementations, ensuring the long term future success of the technology in all products areas.*

*The Bluetooth SIG now boasts more than 2,100 members, including ARM as an associate member, comprising world leaders in the telecommunications, computing, and network industries.*

## ARM'S BLUETOOTH 'NETWORK'

**Chip Summary**

| Vendor | Part No | CPU | Product |
|---|---|---|---|
| Alcatel | MTC60110 | ARM7TDMI | Bluetooth controller |
| Atmel | AT76C551 | ARM7TDMI | Bluetooth controller |
| CSR | BC03 | ARM | BlueCore 03 (planned) |
| Lucent | W7400 | ARM7TDMI | Baseband controller |
| OKI | L7051 | ARM7TDMI | Baseband controller |
| Philips | VWS26002/3 | ARM7TDMI | Baseband processor |
| Sony | CXD3206 | ARM7TDMI | Baseband controller |
| TI | BSN6030 | ARM7TDMI | Baseband controller |
| Zeevo | TC2000 | ARM7TDMI | Transceiver (integrated baseband & RF) |

*ARM-powered Bluetooth silicon and IP solutions continue to grow and develop. Currently announced devices are shown in the accompanying table (above) with several more announcements expected in Q2.*



## NOKIA B/T PHONE

Nokia recently unveiled its first Bluetooth solution, the Nokia Connectivity Pack featuring an ARM powered Connectivity Battery for the Nokia 6210 mobile phone and a Connectivity Card with a PC Card adapter. Users of the existing Nokia 6210 will be able to make their devices compatible with a Nokia Connectivity Battery with a software upgrade.

# HSDT200 ARM® Emulation Board from SIDSA

SIDSA has recently launched the HSDT200 ARM Emulation Board for embedded ASIC prototyping and software integration.

The solution delivers a unique PCB with an ARM7TDMI core and Verilog source code, AMBA™ on-chip bus compatible peripherals (bus decoder, memory controllers, timers, UART and PIC), and enables ASICs for Bluetooth applications to be easily debugged and emulated at speed. Physical connectors such as USB, PCI, IrDA, PCMCIA and Smartcard are complemented by optional IPs. For example, the USB IP can be used for master, slave or hub and includes low-level drivers for the ARM7TDMI core. The HSDT200 works with standard ARM development tools and can also be used for software development.

# Toshiba to Commercialize Bluetooth Baseband LSI

Toshiba Corporation has announced a Bluetooth baseband LSI (Large Scale Integration) offering high levels of interoperability where multiple Bluetooth-enabled devices are networked together.

The new Bluetooth baseband LSI is fabricated with 0.18 CMOS process technology and has a 1.5V power supply. It incorporates an ARM7TDMI processor, embedded SRAM and a PCM digital audio interface.

Along with the new LSI, Toshiba will also provide its own companion RF IC and a 4M NOR-type flash ROM IC to store protocol software. In developing the new LSI, Toshiba has adopted Bluetooh core circuit technology from Nokia, which has achieved highly reliable interoperability between multiple Bluetooth-enabled platforms.

Toshiba plans to produce three million units a month by 2002.

# Zeevo Launches Single Chip Solution

Zeevo, Inc., has recently announced the availability of its single-chip Bluetooth solution, the TC2000™. The 0.18µm CMOS single-chip Bluetooth product and inclusive development environment will ease development and implementation of Bluetooth applications and significantly improve time-to-market.

The TC2000 is based on an ARM7TDMI core supported with 64 Kbytes of on-chip RAM. Two versions of the chip are available, the TC2000P-4 with 4 Mbits of Flash memory and the TC2000M-E with an external memory bus interface. The TC2000 user interface includes USB version 1.1 (12 Mbits/sec), high speed UART (9600 - 921.6 Kbits/second), and 8 General Purpose I/O (GPIO).

ZEEVO

# Silicon Wave Launches Reusable Bluetooth IP

Silicon Wave, Inc., recently announced the availability of their Bluetooth qualified Odyssey Baseband and Software as reusable IP through a newly formed IP licensing program. Together with the world's first Bluetooth qualified RadioModem, the SiW1502, customers can now quickly integrate this reusable IP into their own ARM-based silicon.

"The only way to achieve the industry goal of $5 in the next few years is to integrate the baseband IP into the host processor," said Ken Sherman, senior product manager at Silicon Wave. "We have made this possible through our new IP licensing program and expect these integrated products to be sampling this year".

Silicon Wave™

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