Comprehensive solution for Bluetooth(tm) systems on a chip

ARC International announces the availability of BlueForm&#153. This is a comprehensive integrated package of hardware and software intellectual property (IP), development tools, and application software for building Bluetooth&#153 system-on-chip (SoC) products based on the user-customizable ARCtangent&#153 microprocessor.
Integration of Bluetooth functionality is a point-and-click procedure with the ARChitect&#153 configuration tool, which lets developers quickly add a Bluetooth baseband controller, a 10/100Mbps Ethernet MAC, UARTs, and other features to the ARCtangent-A4 processor core. ARC's BlueForm also includes the required Bluetooth software stacks, a real-time operating system (RTOS), application software such as MP3, and a BlueRF&#153 compatible radio interface.
The user-customizable nature of the BlueForm components allows developers to differentiate their products at the hardware level rather than just in software. The hardware design is technology-independent synthesizable IP, so customers can gain a commercial advantage and cut costs by manufacturing their chips at virtually any semiconductor foundry.
The BlueForm platform is based on the 32-bit ARCtangent user-customizable processor core, a Bluetooth baseband controller, and peripheral IP. All of the hardware runs on the FPGA-based ARCangel&#153 3 prototyping system and is compatible with the MetaWare software-development suite, also included. The processor and Bluetooth hardware IP is fully synthesizable RTL, supplied as unencrypted source code, and typically requires about 64k gates. Also included are the Bluetooth v1.1 lower- and upper-protocol stacks and a range of Bluetooth profiles.
Designers can use the ARChitect configuration tool to optimize the ARCtangent-A4 processor's caches, instruction set, registers, I/O buses, interrupts, local memories, and other features, matching the hardware to the application. With the ARChitect tool, designers can also add and configure the peripherals, such as UARTs, the Ethernet MAC, and a BlueRF&#153 compliant radio interface.
The ARChitect tool automatically generates the RTL files and synthesis scripts for the baseband controller, processor, and peripherals, ready for logic synthesis with an industry-standard design compiler. ARC Cores delivers the Bluetooth protocol software and device drivers as C source code, allowing programmers to develop the application software in parallel with the chip design. The ARCangel 3 prototyping system includes a Bluetooth-compliant radio module.

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