The Talos-BA2x series of integrated hardware/software kits include everything you need to quickly and easily evaluate a BA2x Embedded Processor IP core in your own environment. The evaluation kits are built on the versatile Terasic DE0-Nano Development and Education board, which uses an Intel Cyclone IV 4C22 FPGA. The DE0-Nano board is delivered pre-configured with a BA2x Embedded Processor IP core.

Users can choose from representative BA2x embedded processors and the peripherals that are connected to it. In all cases a 64kB Quick Access Memory is attached to the BA2x processor. Off-the-shelf configurations include UART, GPIO, I2C and SPI interface controllers; and a watchdog timer. These are connected to the processor via an AMBA bus fabric (i.e. AHB or AXI interconnect and a bridge to APB bus). Different peripheral configurations can be made available upon request.

Part of the evaluation kit is the extended GNU C/C++ toolset (i.e. GCC & GDB) for the BA2 processor, ported libraries and FreeRTOS example, all packaged and available under the Eclipse-based Beyond Studio™ integrated development environment (IDE). A Beyond Debug Key supporting the IEEE 1149.1 and IEEE 1149.7 standard JTAG signal set—plus proprietary One-Wire Debug and Two-Wire Debug protocols—is also included in the Talos-BA2x evaluation kit.

A Talos-BA2x kit allows users to run their own performance, power, or code benchmarks, interface the processor with their own hardware system, and fully exercise and evaluate the processor to determine how well it will satisfy their specific project requirements.

About BA2x Embedded Processor IP Cores

The BA2x Embedded Processor cores are silicon-proven, royalty-free, easy to program, and technically competitive with traditional 32-bit processor choices. They all implement the variable length BA2™ instruction set architecture which yields extremely dense code. This extreme code density helps reduce memory and cache sizes, enables fewer operations and longer sleep times, and cuts system-level energy consumption.

The family includes processors using one to five pipeline stages, which can be equipped with hardware multiplier, divider, multiply-accumulate, or floating-point units. These can be delivered pre-integrated with the customer’s choice of bus fabric and peripherals.

Software development is facilitated by the Eclipse-based Beyond Studio IDE and a rich ecosystem of ported libraries, operating systems, and development boards.

BA2x embedded processors have been production proven since 2009 in numerous ASICs and SoCs for the consumer electronics, automotive, network and defense markets from tier-1 and smaller companies,

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