



BA2x-AHB-PP

Platform IP for BA22-Based Systems

The BA2x-AHB-PP provides the essential IP cores and infrastructure software needed for systems using processors in the BA2x family. Ready for software development out of the box but also easy to customize and extend, it serves as a basic platform for the rapid development of a variety of system-on-chip (SoC) applications.

The platform is well suited to a variety of BA2x-based SoC designs. It includes the multi-master and arbitration features of the high-performance AHB bus, and a bridge to the slower APB peripherals bus. The architecture makes it straightforward to add additional IP cores or custom logic to either bus. The platform includes synthesizable HDL cores for the AHB and APB buses, plus various commonly used peripherals.

Applications

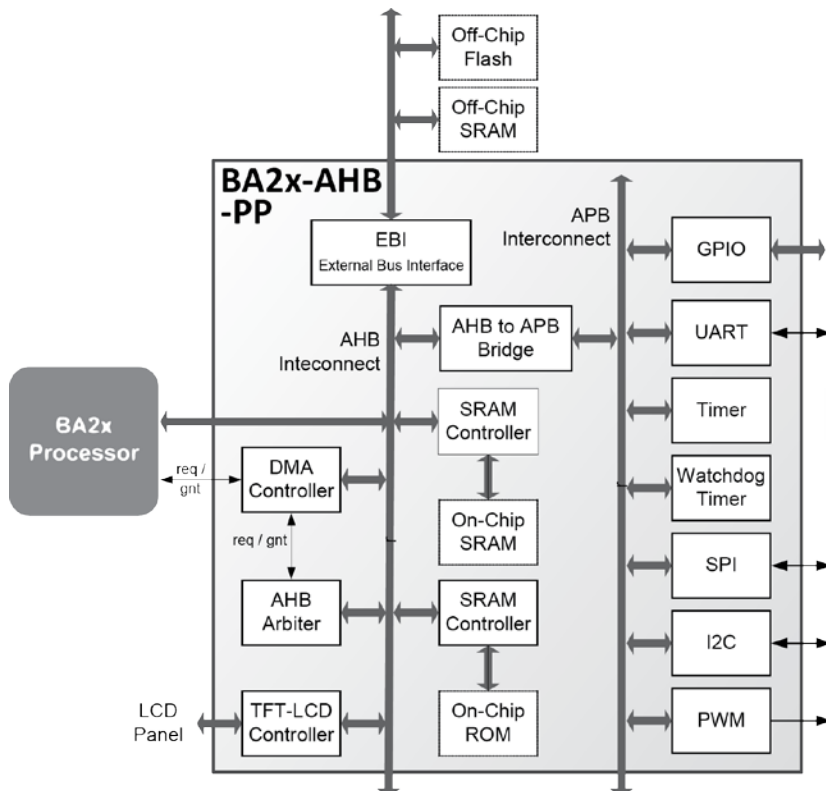
The platform is suitable for small microcontrollers and mixed-signal controllers for a variety of applications, including factory automation, automotive systems, hand-held devices, motor controls, and intelligent toys.

Options and Bundles

The BA2x-AHB-PP modules are offered pre-integrated with the BA22 processor individually, in any combination, or in predefined bundles (see details in the sidebar).

Block Diagram

This shows all the available bus and peripheral cores.



Features

- Integrated IP cores and software subsystem provides basic infrastructure for many SoC applications
- Platform saves significant time over acquiring and integrating separate modules
- Immediately begin software development and test
- Software device drivers, boot code, and complete user documentation included
- Easily add custom logic or additional IP cores to tailor or expand the system

BA2x-AHB-PP Modules

- AMBA Bus Infrastructure
 - AHB Arbiter
 - AHB-to-APB Bridge
 - Channel and address decoders, and data multiplexers
- AHB Peripherals
 - Internal SRAM Controllers for on-chip SRAM and ROM
 - External Bus Interface (EBI) and SDRAM controller
 - TFT/LCD Controller
- APB Peripherals:
 - Watchdog Timer
 - Timer/Counter
 - Real Time Clock
 - Pulse Width Modulator
 - Serial Peripheral Interface (SPI) Master/Slave
 - I2C Master
 - 16550 UART with FIFOs
 - General Purpose I/O (GPIO)
 - Parallel Port

BA2x-AHB-PP Bundles

- BA2x-AHB-PP BASE
 - AHB and APB bus infrastructure cores
 - GPIO, UART, Timer, EBI
- BA2x-AHB-PP AHB
 - AHB bus infrastructure cores
 - AHB Peripherals listed above
- BA2x-AHB-PP APB
 - APB bus infrastructure cores
 - APB Peripherals listed above
- BA2x-AHB-PP-AHB APB
 - AHB and APB infrastructure cores
 - All peripherals

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