# AHB-SBS
## AHB Subsystem

The AHB-SBS is an integrated, verified, AMBA® 3.0 interconnect and peripherals subsystem ready for embedded applications using processors with AHB bus interfaces such as the BA22-DE, BA22-CE, ARM Cortex-M0/M0+/M1/M3/M4, and several RISC-V processors.
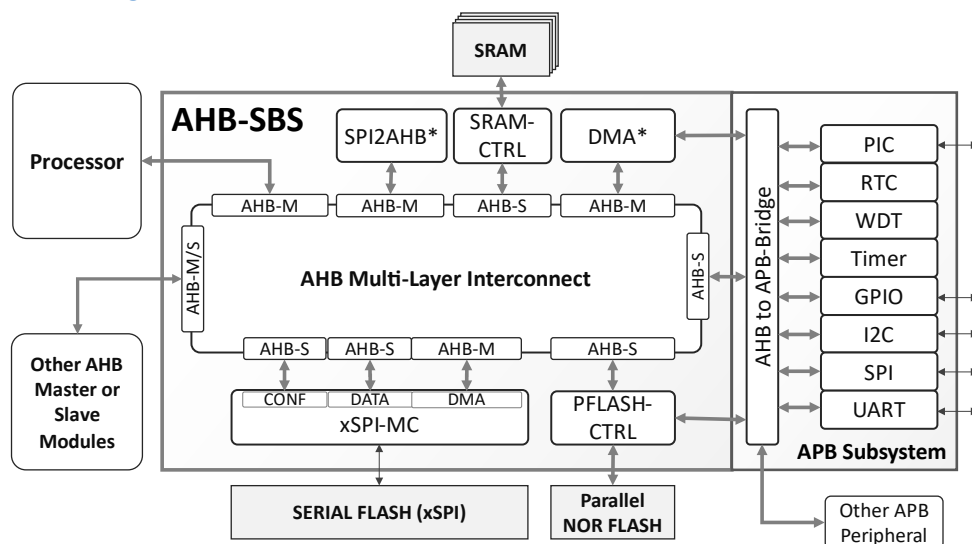
The AHB subsystem is available in two versions: Base and Extended. The **Base** version (AHB-SBS-BASE) integrates a 32-bit multilayer AHB fabric with an xSPI Flash Memory Controller, an SRAM controller and a set of APB peripherals. This version allows the host processor to boot directly from the flash and execute code from the flash (eXecute In Place - XIP), or from an on-chip shadow SRAM. Furthermore, it provides access to the essential microcontroller peripherals, such as serial interfaces and timers.

The Extended version, the AHB-SBS-EXT, adds a DMA controller, an SPI-to-AHB bridge, and an external memory controller, suitable for accessing off-chip parallel NOR-flash devices or SRAMs.

The AHB-SBS was designed with industry best practices, and its reliability and low risk have been proven through both rigorous verification and customer production. It is delivered in human-readable Verilog source code, along with comprehensive documentation for each module, example drivers, and software exercising all the peripherals.

This subsystem can be mapped to any Intel, Lattice, MicroSemi, or Xilinx programmable device, or to any ASIC technology, provided sufficient silicon resources are available. Please contact CAST Sales to get accurate characterization data for your specific implementation requirements.

## Block Diagram



* Available only in extended version

## Integration and Customization Services

CAST engineers can provide integration and verification services to help you further reduce your time to market. Extremely experienced with both system hardware and custom software development, they are ready to work with you at any stage of the design process from architecture to implementation to system level verification to production readiness. Contact CAST Sales to learn more.

www.cast-inc.com • info@cast-inc.com
CAST, Inc. Contents subject to change without notice.
Trademarks are the property of their respective owners.

Engineered by
BEYOND
SEMICONDUCTOR