

CAST Adds I3C Secondary Controller Core to MIPI IP Product Line

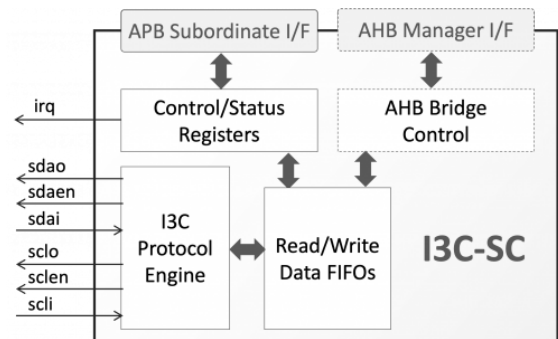
New MIPI I3C Basic core enables fast, low-power, royalty-free, I2C-compatible, interfaces or an I3C-to-AHB Bridge for sensors and microcontroller designs

Woodcliff Lake, New Jersey — March 8, 2024 — Semiconductor intellectual property provider CAST today announced a new IP core that implements a secondary controller that serves as a controller or a target for a MIPI I3C BasicSM interconnection bus.

The new [I3C-SC MIPI I3C Basic Secondary Controller](#) is compliant with the latest specification and is easy to integrate and use in any I3C[®] bus topology. It can coexist and communicate with legacy I2C devices and can operate as such in an I3C or I2C network.

As a controller, the core can be an additional or the sole controller managing an I3C bus. As a target, the core processes controller commands to interface with I3C Basic devices without needing firmware support, can use I3C dynamic or I2C static addressing, and includes Hot-Join, In-Band Interrupts, and other time- and resource-saving features.

When operating as a target, the core normally communicates with the host processor via an AMBA[®] APB Subordinate interface. It can alternatively — and the company believes uniquely — act as a bridge between the I3C and AMBA AHB buses, autonomously converting I3C commands to transfers on its AHB manager port. This gives the remote I3C bus controller access to the local AHB bus, enabling features such as remote over I3C, monitoring, configuration, debugging, firmware updates, and data exchange.



The [MIPI I3C Basic](#) interface specification that the core implements is technically identical to MIPI I3C, except it has a somewhat reduced feature set and RAND-Z licensing. The latter means customers can implement systems with the I3C-SC Core without needing to be a MIPI Alliance member and paying the royalties associated with MIPI I3C.



The I3C-SC core was developed by CAST partner [Silesia Devices](#) and it incorporates their many years of experience with I2C and MIPI I3C. The high-quality, reliable, and low-risk core was developed following CAST's strict standards for design and productization.

As with other IP cores from CAST, high quality, easy integration and use, and responsive technical support add up to *A Better IP Experience* for system architects and developers choosing the I3C-SC MIPI I3C Basic Secondary Controller.

About CAST

Computer Aided Software Technologies, Inc. (CAST) is a silicon IP provider founded in 1993. The company's ASIC and FPGA IP product line includes microcontrollers and processors; compression engines for data, images, and video; interfaces for automotive, aerospace, and other applications; various common peripheral devices; and comprehensive SoC security modules. Learn more by visiting www.cast-inc.com.

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