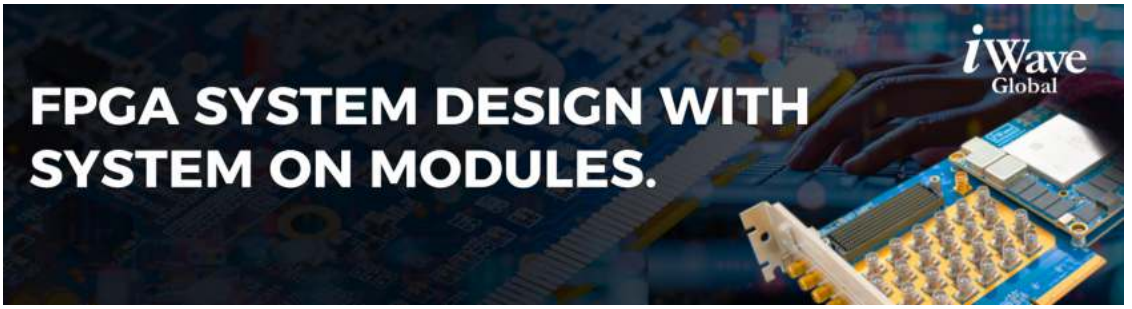

FPGA System Design with System on Modules

Hardware designers previously were considering a "chip-down" architecture for most product designs, where specific silicon devices are chosen, and a fully customized circuit board is developed for the application. While this does produce a highly optimized implementation, it can take significant development time and cost to reach production readiness. To save the expense and time of a chip-down development, design teams are now considering a more integrated solution such as Multi-Chip Module (MCM), System-in-Package (SIP), Single-Board Computer (SBC), or a System-on-Module (SoM).

An FPGA SoM supports high-speed transceiver blocks, and multiple communication protocols, including Ethernet, USB, and PCIe, ensuring seamless connectivity and integration into various systems. The System on Module (SoM) approach gives product designers and solutions architects a head start. Through an FPGA SoM, component sourcing is simplified, leading to more predictable design-cycles and business results.

Read more to find out how System on Modules can speed up your complex FPGA System Design.

>>AMD FPGA SoM Selection Guide: Click here to access the System on Module selection guide from iWave for the AMD Adaptive SoC and FPGAs. An extensive portfolio providing scalability with the Zynq UltraScale+ MPSoC, Zynq UltraScale+ RFSoC, Versal AI Edge Series, Kintex, and Virtex UltraScale+ series.

>>Altera FPGA SoM Selection Guide: Click here to access the SoM selection guide for the System on Modules powered by the Altera FPGA, with the portfolio consisting of Agilex™ 5, Agilex™ 7, Arria® 10, and Stratix® 10 powered System on Modules.

Latest News from iWave on FPGA System on Modules

iWave is now an Intel Titanium Partner

With the extensive portfolio of Intel FPGA System on Modules and extensive FPGA ODM expertise, we have now been upgraded to the highest partner level of Titanium Partner.

intel partner Titanium

Altera Agilex™ 5 FPGA SoM Enabling AI Solutions

Agilex™ 5 is the first FPGA to be integrated with AI fabric. Integrated with an enhanced DSP with AI Tensor block, the Agilex™ 5 offers advanced connectivity features such as High-speed GTS transceivers up to 28.1 Gbps and PCI Express (PCIe) 4.0 ×8, Display Port and HDMI Output. Explore iW-RainboW-G58M, the System on Module built on the powerful Agilex™ 5 FPGA.

AMD Versal AI Edge System on Module

The smallest Versal AI Edge powered System on Module supports a breadth of connectivity options, such as 32Gbps high-speed transceiver blocks, 40G multi-rate Ethernet, PCIe, and native MIPI support for vision sensors which are a must for advanced AI applications. Versal AI Edge based System on Module is compatible with an extensive series of chips: VE2302/VE2202/VE2102/VE2002.

AMD Zynq UltraScale+ RFSoC SoM for radio telescopes and SDR

The ZU49DR RFSoC SoM features the industry's highest RF channel count with 16 Channel RF-DACs at 10Gsps and 16 Channel RF-ADCs at 2.5Gsps. The Zynq UltraScale+ RFSoC offers high-performance analog-to-digital conversion, real-time signal processing capabilities, and extensive bandwidth coverage, making it an ideal solution for designing radio telescope backend receivers.

Ultra Low Latency Streamer for Video Streaming

Live video broadcasting and streaming demands low latency. ULL Streamer from iWave supports a range of video streaming protocols such as RTMP, and UDP/RTP, enhancing compatibility and facilitating seamless integration with various streaming platforms and devices. The ULL Streamer Encoder and Decoder system stands as a cutting-edge solution, seamlessly managing the intricate process of processing and transmitting raw video data from the source to the end user.

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