New System-on-Module Provides a Combination of Useful Features for Embedded Systems Development

The SoM1-SoC includes a Low-power FPGA with a 64-bit Linux-capable RISC-V processor

CHESHAM, BUCKINGHAMSHIRE, UNITED KINGDOM, January 22, 2024 /EINPresswire.com/ -- Introducing the SoM1-SoC, a groundbreaking System-on-Module (SoM) powered by the Microchip PolarFire® SoC FPGA. This innovative module combines a low-power FPGA with a 64-bit, Linux-capable RISC-V processor, delivering an unparalleled level of security, performance, and efficiency for embedded systems development.

You can find full information in Sundance's latest blog post.

SoM1-SoC empowers developers

The heart of SoM1-SoC is the MPFS460T-1FCVG1152E device, boasting an impressive array of features, including 461K logic cells, 20 high-speed transceivers, two PCIe hard blocks, 136 MSS IOs, 180 HSIO, and 288 GPIOs. This module is a powerhouse, offering abundant resources to meet the demands of complex embedded systems.
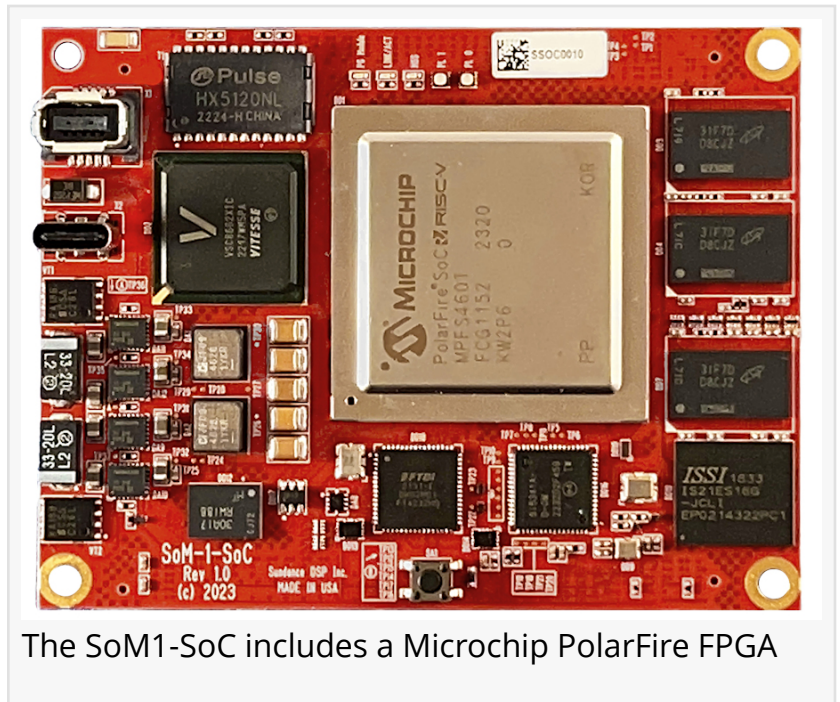
Key Features of SoM1-SoC:
- 4GB 32-bit wide DDR4-3200 for MSS
- 8GB 64-bit wide DDR4-3200 for FPGA fabric
- 16GB eMMC 5.1 flash storage
- 10/100/1000 Ethernet PHY with RGMII interface
- USB type C connector for power, UART, JTAG, and high-speed data transfer
- Harting iX industrial ethernet connector for 1Gbps networking

- 2 RGB LEDs for user applications

When paired with the [SE301](#), SoM1-SoC's capabilities expand further, unlocking access to an FMC HPC connector, 4 lanes of PCIe, high-speed networking via SFP+, a DisplayPort for terminal output, SATA for data storage, and a robust inter-module connection featuring 4 transceivers and a multitude of GPIO.

Sundance's SoM1-SoC is a feature-rich SoC that provides users with a high level of flexibility. The module can operate as a standalone device, simplifying development by enabling

The SoM1-SoC includes a Microchip PolarFire FPGA

users to connect via a USB-C cable, which serves as a power supply, UART, JTAG, and high-speed data transfer to a host system.

Applications:

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> With its unmatched combination of features, flexible connectivity options, and user-friendly design, the SoM1-SoC empowers developers to bring their ideas to life in ways never before possible."
>
> *Flemming CHRISTENSEN,*
> *Sundance*

SoM1-SoC is poised to make a significant impact in various application areas, including:

Industrial Automation:
With robust industrial connectors and high-speed networking capabilities, SoM1-SoC is an ideal solution for demanding industrial automation applications.

Communications:
The module's 20 high-speed, low-power transceivers make it well-suited for communication systems, enabling high-speed data transfer with reliability.

Embedded Computing:
SoM1-SoC's combination of a powerful FPGA and a Linux-capable RISC-V processor makes it a versatile choice for embedded computing applications.

Data Storage:
The inclusion of eMMC and SATA support makes SoM1-SoC a compelling option for applications that require reliable data storage solutions.

IoT (Internet of Things):
The module's compact size, USB-C connectivity, and networking capabilities make it an excellent choice for IoT applications, providing a seamless integration experience.

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