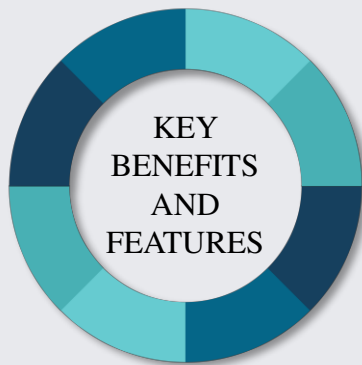
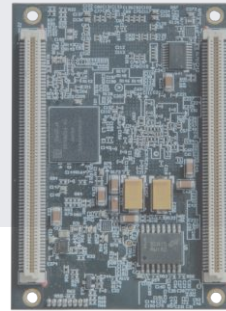


SoM – System on Module

Part # CMSV_A1_PF254_XX



System on Module (SoM) - based on the World's first Multi-core RISC-V based PolarFire® SoC FPGA from Microchip.



- Powerful Processing sub-system on a 55 X 75mm PCB, with 64bit low power multi (4+1) Core processor, FPGA, DRAM, Flash, Wi-Fi on-board.
- All other SoC interface connectivity on B2B connector
- BSP/Linux Ported
- SDK Ready to start application development
- All processing resource on SoM
- Power efficient RISC-V core & FPGA
- Custom Carrier board for Specific Products and applications.
- Support available for Hardware/Software and FPGA

SoM Information

| | |
|------------------|-------------------|
| Model Name | CMSV_A1_PF254_XX |
| Mech. Dimensions | 55 x 75mm |
| SoC | MPFS250T: FCVG484 |

SoC Main Features

1x 64-bit RV64IMAC monitor/boot core
4x 64-bit RV64GC Application cores

FPGA Fabric 254K logic elements (4-input LUT + DFF)
784 Math blocks (18x18 MACC)

Crypto processor, Secure boot, Memory Protection.
16 SerDes lanes of 12.7 Gbps
PWM,UART,I2C MDIO,SPI,RMII,SGMII,XAUI

Memory

| | |
|-----------|------------------|
| RAM | 2GB LPDDR4 |
| Flash | 8GB eMMC |
| SPI Flash | 128 MB SPI Flash |

Connectivity

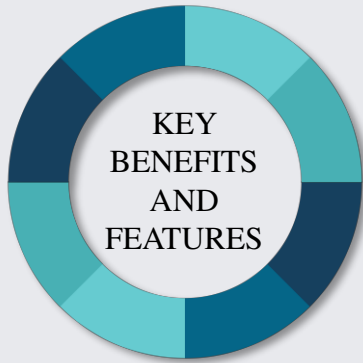
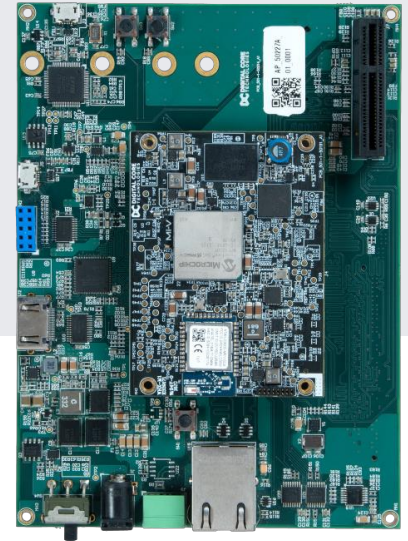
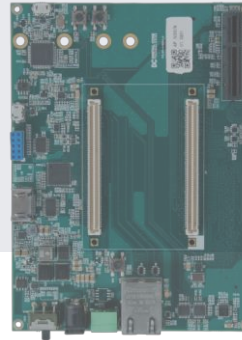
| | |
|--------------|-------------------------|
| Wi-Fi /BT | On board |
| GbE ethernet | x 1 (On B2B connector) |
| USB 2.0 | x 1 (On B2B connector) |
| PCIe | x 4 (On B2B connector) |
| Power | 5V DC |

Carrier Board

Part # CMCGA1_G1F1_XX



Carrier board for PolarFire based
System On module
CMSV_A1_PF254_XX



- CMCGA1_G1F1_XX is a stackable Carrier board to PolarFire SoC SoM CMSV_A1_PF254_XX.
- The Carrier board and SoM is stacked using a 140 Pin (x2) B2B connector.
- The Mechanical Dimension of the carrier board is 150 x 110mm.
- SoM and Carrier combination can be used for quick development and validation.
- The major application include Defence, IoT, Automotive, Embedded Vision etc.
- Carrier board can be customized for custom Products and applications.

SPECIFICATIONS

| | |
|------------------|----------------|
| Model Name | CMCGA1_G1F1_XX |
| Mech. Dimensions | 150 *110 mm |

INTERFACES

| | |
|-----------|---|
| Ethernet | 1Gbps x1 |
| PCIe | PCIe Gen 2 x4 |
| M.2 Key B | PCIe M.2 Interface (PCIe x1) - Selectable |
| USB | USB 2.0 x1 |
| I2C | I2C x1 |
| HDMI | HDMI 1.4a x1 |
| FMC | FMC LPC |
| CAN | CAN x1 |
| GPIO | General Purpose IO x4 |
| Switch | User Defined Switches x2 |
| Led | User Defined Led x2 |
| Reset | SoC Reset |

DEBUG/PROGRAMMING

| | |
|-------------|-----------------------------|
| Debug | USB to UART debug interface |
| Programming | JTAG interface in SoM |

POWER

| | |
|---------------|--------|
| Input voltage | 12V DC |
|---------------|--------|