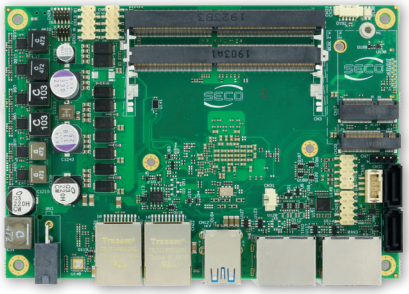
Single Board Computer

MERIDA

3.5” SBC with AMD Ryzen™ Embedded R1000 / V1000 family of SOCs

Full connectivity on powerful AMD Ryzen™ platform



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HIGHLIGHTS

CPU
AMD Ryzen™ Embedded V1000 and R1000 processors

CONNECTIVITY
2x GbE; M.2 WWAN and WLAN slots; 2x USB3.0; 2x USB 2.0; 8x GPI/Os

GRAPHICS
AMD Radeon™ Vega GPU with up to 11 Compute Units

MEMORY
Two DDR4 SO-DIMM Slots supporting DDR4-3200/2400 ECC and non-ECC Memory

Available in Industrial Temperature Range

AMD

Windows 10 Linux

MAIN FIELDS OF APPLICATION

- Digital Signage - Infotainment
- Edge Computing
- Gaming
- HMI
- Industrial Automation and Control

FEATURES

Processor	AMD Ryzen™ Embedded V1000 family SoCs: • AMD Ryzen™ Embedded **V1807B** with AMD Radeon™ Vega 11 Graphics, Quad Core Dual Thread @ 3.35GHz (3.8 Boost), TDP 35-54W • AMD Ryzen™ Embedded **V1756B** with AMD Radeon™ Vega 8 Graphics, Quad Core Dual Thread @ 3.25GHz (3.6 Boost), TDP 35-54W • AMD Ryzen™ Embedded **V1605B** with GPU AMD Radeon™ Vega 8, Quad Core Dual Thread @ 2.0GHz (3.6 Boost), TDP 12-25W • AMD Ryzen™ Embedded **V1202B** with GPU AMD Radeon™ Vega 3, Dual Core Dual Thread @ 2.3GHz (3.2 Boost), TDP 12-25W AMD Ryzen™ Embedded R1000 family SoCs: • AMD Ryzen™ Embedded **R1606G** with GPU AMD Radeon™ Vega 3, Dual Core Dual Thread @ 2.6GHz (3.5 Boost), TDP 12-25W • AMD Ryzen™ Embedded **R1505G** with GPU AMD Radeon™ Vega 3, Dual Core Dual Thread @ 3.25GHz (3.6 Boost), TDP 12-25W
Max Cores	4
Memory	2x DDR4 ECC and non-ECC SODIMM Slots Support DDR4-2400 memories (DDR4-3200 with V1807B and V1756B), up to 32GB total
Graphics	GPU AMD Radeon™ VEGA with up to 11 Compute Units DirectX® 12 supported H.265 (10-bit) decode and 8-bit video encode VP9 decode 4 independent displays supported (3 with R1000 SoCs)
Video Interfaces	4x DP++ connectors (only 3 working with R1000 SoCs
Video Resolution	DP++: Up to 4096 x 2160

Mass Storage	M.2 NVMe slot (Socket 2 Key M Type 2280), PCI-e x4 interface microSD Card slot (combo with miniSIM slot) 2x SATA 7p M connectors w/ 1x power connector
Networking	Up to 2 x Gigabit Ethernet ports M.2 WWAN slot (Socket 2 Key B Type 2242/3042) for Modems M.2 Connectivity Slot (Socket 1 Key E Type 2230)
USB	2 x USB 3.0 Host ports on USB 3.0 Type-A sockets 2 x USB 2.0 Host ports on internal pin header 1 x USB 3.0 (V1000 SoCs) / USB 2.0 (R1000 SoCs) Host port on WWAN M.2 slot 1 x USB 2.0 Host port on M.2 Connectivity Slot
Audio	HD Audio codec Line Out + Microphone + S/PDIF Out interfaces on internal pin header
PCI-e	1 x PCI-e x4 port on M.2 NVMe Slot 1 x PCI-e x1 port on M.2 WWAN Slot 1 x PCI-e x1 port on M.2 Connectivity Slot 2x PCI-e x1 on Gigabit Ethernet Controllers
Serial Ports	2 x RS-232/RS-422/RS-485 UARTS, on internal Pin Header
Other Interfaces	miniSIM slot for M.2 modems (combo with microSD slot) 8 x GPI/Os connector FAN connector Switch / LED Front Header connector 2x I2C on internal pin header Antitamper connector Optional TPM 1.2 or 2.0 onboard
Power Supply	+12V_{DC} ÷ +24 V_{DC} RTC battery
Operating System	Microsoft® Windows 10 (64-bit) Linux

MERIDA

3.5” SBC with AMD Ryzen™ Embedded R1000 / V1000 family of SOCs

FEATURES

Operating Temperature*	0°C ÷ +60°C (Commercial version) -40°C ÷ +85°C (Industrial version, only for future SoCs in extended temperature range and with TDP ≤25W)
Dimensions	146 x 102 mm (3.5” form factor)

*Measured at any point of SECO standard heatspreader for this product, during any and all times (including start-up). Actual temperature will widely depend on application, enclosure and/or environment. Upon customer to consider application-specific cooling solutions for the final system to keep the heatspreader temperature in the range indicated.

BLOCK DIAGRAM