

SBC-3.5-RV1000

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

## Full connectivity on powerful AMD Ryzen™ platform



#### HIGHLIGHTS



CPU

AMD Ryzen  $^{\text{TM}}$  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

(i) Available in Industrial Temperature Range



MEMORY

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







#### MAIN FIELDS OF APPLICATION

FEATURES







Coffee & Vending

Industrial Automation

┌ Video

Digital Signage

#### AMD Ryzen<sup>TM</sup> Embedded V1807B with AMD Radeon<sup>TM</sup> 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<sup>TM</sup> Embedded **V1605B** with GPU AMD Radeon™ Vega 8, Quad Core Dual Thread @ 2.0GHz (3.6 Boost), TDP 12-25W Processor AMD Ryzen™ Embedded **V1202B** with GPU AMD Radeon™ Vega 3, Dual Core Dual Thread @ 2.3GHz (3.2 Boost), TDP 12-25W AMD Ryzen<sup>TM</sup> Embedded R1000 family SoCs: AMD Ryzen™ Embedded **R1606G** with GPU AMD Radeon<sup>TM</sup> 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 2x DDR4 ECC and non-ECC SODIMM Slots Memory Support DDR4-2400 memories (DDR4-3200 with V1807B and V1756B), up to 32GB total GPU AMD Radeon<sup>TM</sup> VEGA with up to 11 Compute Units DirectX® 12 supported Graphics H.265 (10-bit) decode and 8-bit video encode

4 independent displays supported (3 with R1000 SoCs)

4x DP++ connectors (only 3 working with R1000 SoCs

VP9 decode

Video

Interfaces

AMD Ryzen™ Embedded V1000 family SoCs:

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/ lx power connector
로 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



#### FEATURES $\begin{array}{l} +12 \mathrm{V}_{\mathrm{DC}} \div +24 \ \mathrm{V}_{\mathrm{DC}} \\ \mathrm{RTC} \ \mathrm{battery} \end{array}$ Supply Microsoft® Windows 10 (64-bit) Operating 0°C ÷ +60°C (Commercial version) Operating

146 x 102 mm (3.5" form factor)

-40°C ÷ +85°C (Industrial version, only for future SoCs in

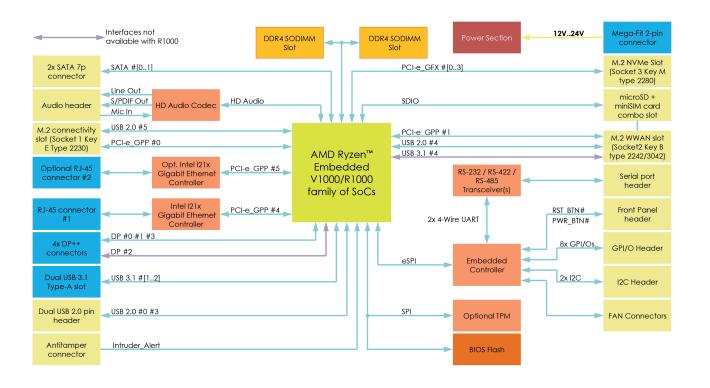
extended temperature range and with TDP ≤25W)

\*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**

Temperature\*

Dimensions





# Streamline and expedite your edge computing implementations

#### **EDGEHOG OS**

A flexible operating system that adapts to your needs, thanks to the customization tool and Docker support. Reliability and security are built-in through a dual-partition system and native integration with Exein's robust Al-based protection.

### **DATA ORCHESTRATION**

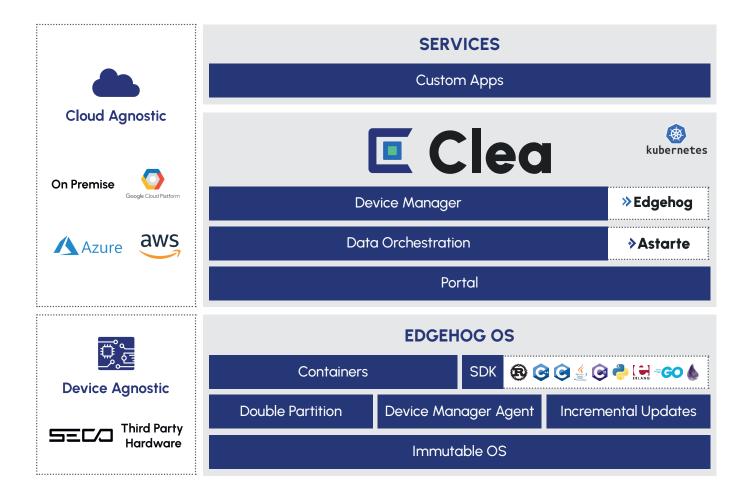
Integrate third-party services, simplify data flows and analysis, and enhance business efficiency by enabling easy and fast utilization of AI.

#### **DEVICE MANAGER**

Update, configure, and manage remote devices. Optimize time and costs to maximize operational efficiency and security without the need for costly field interventions.

### **PORTAL**

Analyze data from remote devices, customize the user experience with applications tailored to user needs, and manage user rights, company access, and tenant privileges.



Scan to know more about our solution

**EDGEHOG OS** 



**CLEA DOCS** 



