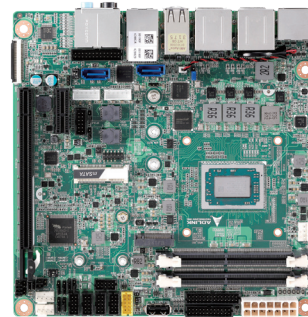


AmITX-RZ-G

Mini-ITX Embedded Board with AMD® Ryzen™ APU

Features

- AMD® Ryzen™ Embedded V1000 / R1000 processor family
- Up to 32GB dual SODIMM socket DDR4
- PCIe x16, PCIe x1, M.2 and Mini-PCIe expansion (V series)
- 4x DisplayPort (V series)



AMD® Ryzen™ Embedded V1000 Series



AMD® Ryzen™ Embedded R1000 Series

Specifications

• Processor & System

APU

AMD® Ryzen™ Embedded V1000 Processors
 AMD® Ryzen™ Embedded V1807B 3.33GHz (3.8GHz Boost), 54W (4C/11CU)
 AMD® Ryzen™ Embedded V1605B 2.0GHz (3.6GHz Boost), 25W (4C/8CU)

AMD® Ryzen™ Embedded R1000 Processors
 AMD® Ryzen™ Embedded R1606G 2.6GHz (3.5GHz Boost), 25W (2C/3CU)
 AMD® Ryzen™ Embedded R1505G 2.4GHz (3.3GHz Boost), 25W (2C/3CU)

Memory

Dual channel ECC 3200/2400MHz DDR4 memory up to 32 GB in dual vertical SODIMM sockets (R series: 2400MHz)

BIOS

AMI EFI in 16MB SPI BIOS
 SPI BIOS socket onboard and SPI header for external BIOS, dual BIOS support

TPM2.0

ISLB9665TT2.0

Board Management Controller

Supports: voltage monitoring, system and CPU temperature monitoring, smart fan control, logistics and forensic information, general purpose I²C, watchdog timer

Debug Header

40-pin multipurpose flat cable connector. Use in combination with DB-40 debug module providing BIOS POST code LEDs, BMC access, SPI BIOS flashing, power testpoints, debug LEDs

• I/O Interfaces

Expansion Slots

1x PCIe x16 Gen3 slot (V series: PCIe x8 signal; R series: PCIe x4 signal)
 1x PCIe x1 Gen3 slot (PCIe 3.0)
 1x full-size Mini-PCIe slot (for MSATA device)
 1x M.2 (M key, 2242/2260/2280, support NVMe, PCIe 3.0 x2 signal; R series W/O SATA interface)
 1 SPI header for external BIOS

Serial ATA

2x SATA 6 Gbps ports (Jumper select NA/3.3V/5V for SATA1 and SATA2 to deliver power by SATA pin7; Default is NA)
 2x SATA power connector

USB

4x USB 3.0 and 4x USB 2.0 on rear I/O
 2x USB 2.0 on header
 1x USB 2.0 on vertical connector with space for dongle

Serial Ports

1x RS-232/422/485 on internal header
 3x RS-232 on internal headers
 1x CCTALK x2 on internal header

Digital IO

8 GPIO on internal feature connector

• Audio

Audio Codec

Realtek® ALC888S

Interfaces

7.1 channel audio via 5 jacks and S/PDIF output on rear I/O
 7.1 channel audio signals and S/PDIF output on internal header

Specifications

• Display

Graphics core

"Vega" GPU with up to 11 Compute Units

DisplayPort

Up to 4x DisplayPort v1.2 with max resolution of 3840x2160@60Hz
4x DisplayPort (V series) , 3x DisplayPort (R series)

• Ethernet

Controller: 2x Intel® i211AT Ethernet controller (R series: 1x controller)

Interface: PCI Express x1 Bus

Wake On LAN: Yes

• Power

Standard Input: ATX = 12V ±5%/5Vsb ±5% from internal header

AT = 12V ±5% from internal header

Peripherals output: Onboard headers for fan and SATA power

• Mechanical and Environmental

Form Factor: Mini-ITX

Dimensions: 170 mm x 170 mm (L x W)

Operating Temperature

Standard: 0°C to +60°C

Certifications

CE, FCC Class A

Relative Humidity

40° C @ 95% RH Non-condensing, Non-operating

Ordering Information

• AmITX-RZ-G/V1605B

Mini-ITX gaming MB with AMD Ryzen™ Embedded V1605B processor

• AmITX-RZ-G/V1807B

Mini-ITX gaming MB with AMD Ryzen™ Embedded V1807B processor

• AmITX-RZ-G/R1505G

Mini-ITX gaming MB with AMD Ryzen™ Embedded R1505G processor

• AmITX-RZ-G/R1606G

Mini-ITX gaming MB with AMD Ryzen™ Embedded R1606G processor

Optional Accessories

• 30-20876-1000

COM Port Cable, 1 Port, 25cm

• 30-20874-1000

USB 2.0 Cable, 2 ports, 20cm

• 32-20809-0000-A0

AMD APU Cooler, H=64.4mm, 54W

• 32-20583-1010

AMD APU Cooler, H=35mm, 35W

Packing List

• 30-20872-0000

ATX/AT Power Cable

• 30-20875-0000

SATA Dual Power Cable

• 30-10057-0600

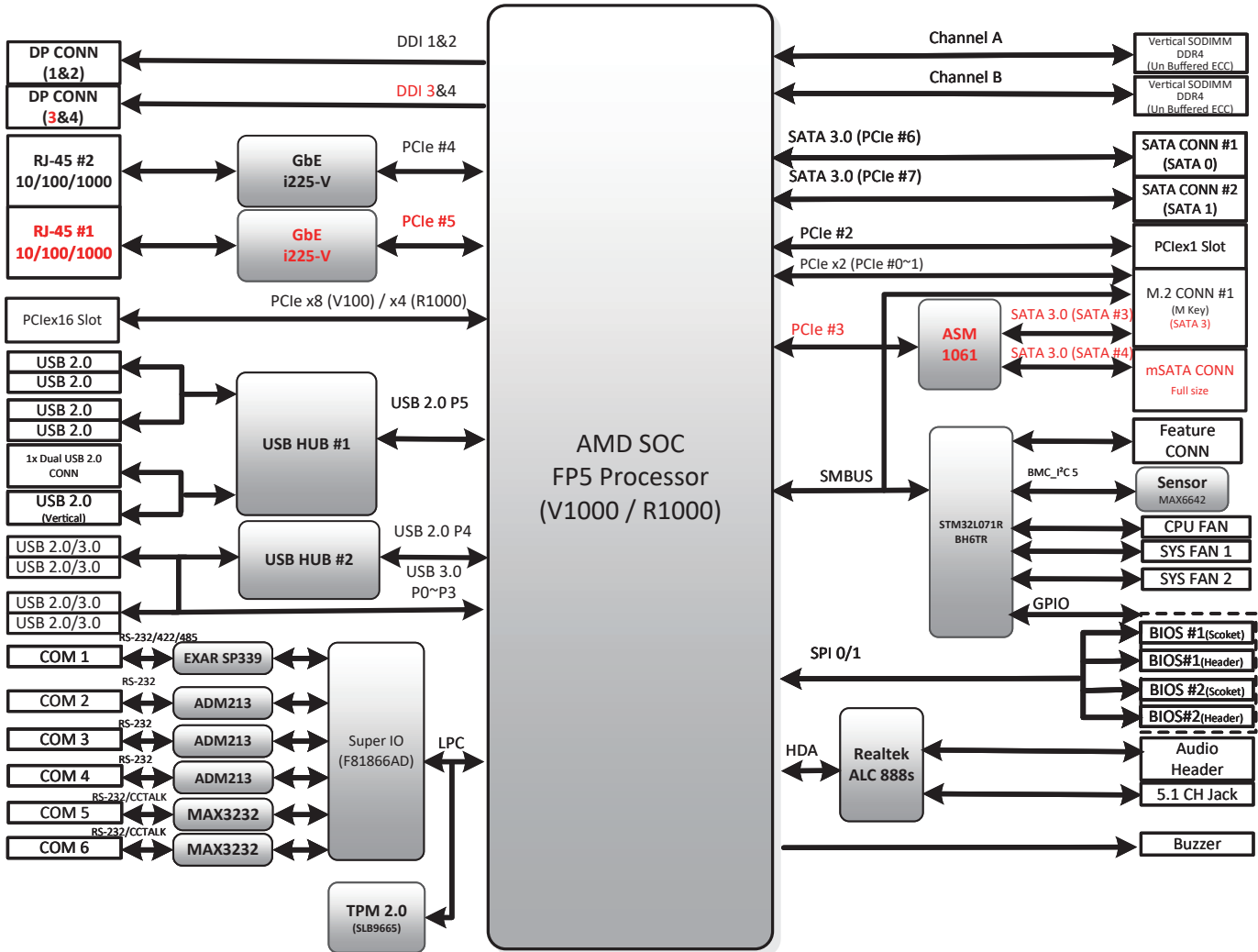
SATA Cable

• 34-25316-1010

Rear I/O Shield

AmITX-RZ-G

Functional Diagram



Features marked in red are only available with AMD® Ryzen™ Embedded V1000 Series