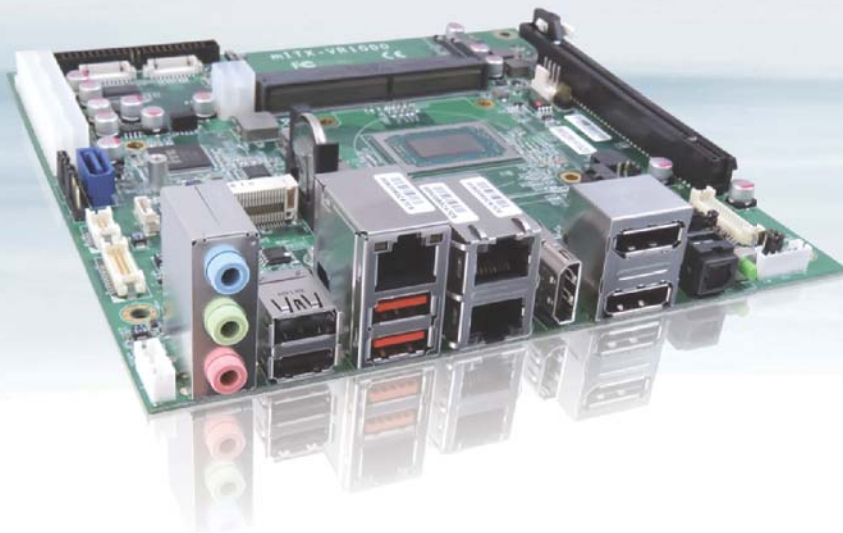


mITX-VR1000

QUADRUPLE DISPLAY SUPPORT



MINI-ITX INDUSTRIAL MOTHERBOARD WITH AMD RYZEN™ V1000 SERIES AND R1000 SERIES PROCESSORS

- ▶ 1x LVDS, up to 2x DP, 1x HDMI 1.4 for display output
- ▶ Up to 3x GbE LAN for Ethernet
- ▶ 2x USB 3.1, 4x USB 2.0 for USB device connection
- ▶ EC Controller for 1x RS232/422/485, 1x RS232, 18-bit GPIO
- ▶ 1x SATA 3.0, 1x mPCIe, 1x M.2 Key B, 1x PCIe x16 for storage & expansion

mITX-VR1000

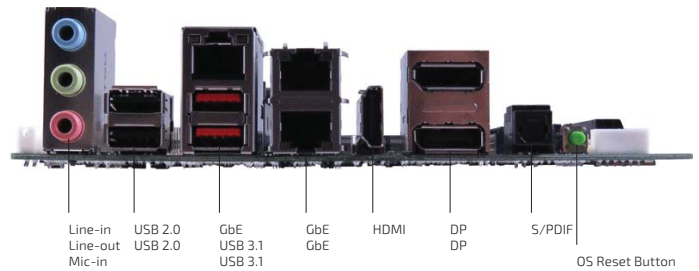
MINI-ITX INDUSTRIAL MOTHERBOARD WITH AMD RYZEN™ V1000 SERIES AND R1000 SERIES PROCESSORS

mITX-VR1000 is a Mini-ITX form factor motherboard equipped with AMD Ryzen™ V1000 Series and R1000 Series processors, which are perfect for digital casino gaming, medical display, thin clients, industrial PCs and other applications requiring extraordinary visual interface with efficient power consumption. Depending on variants, mITX-VR1000 can power four independent displays at once.

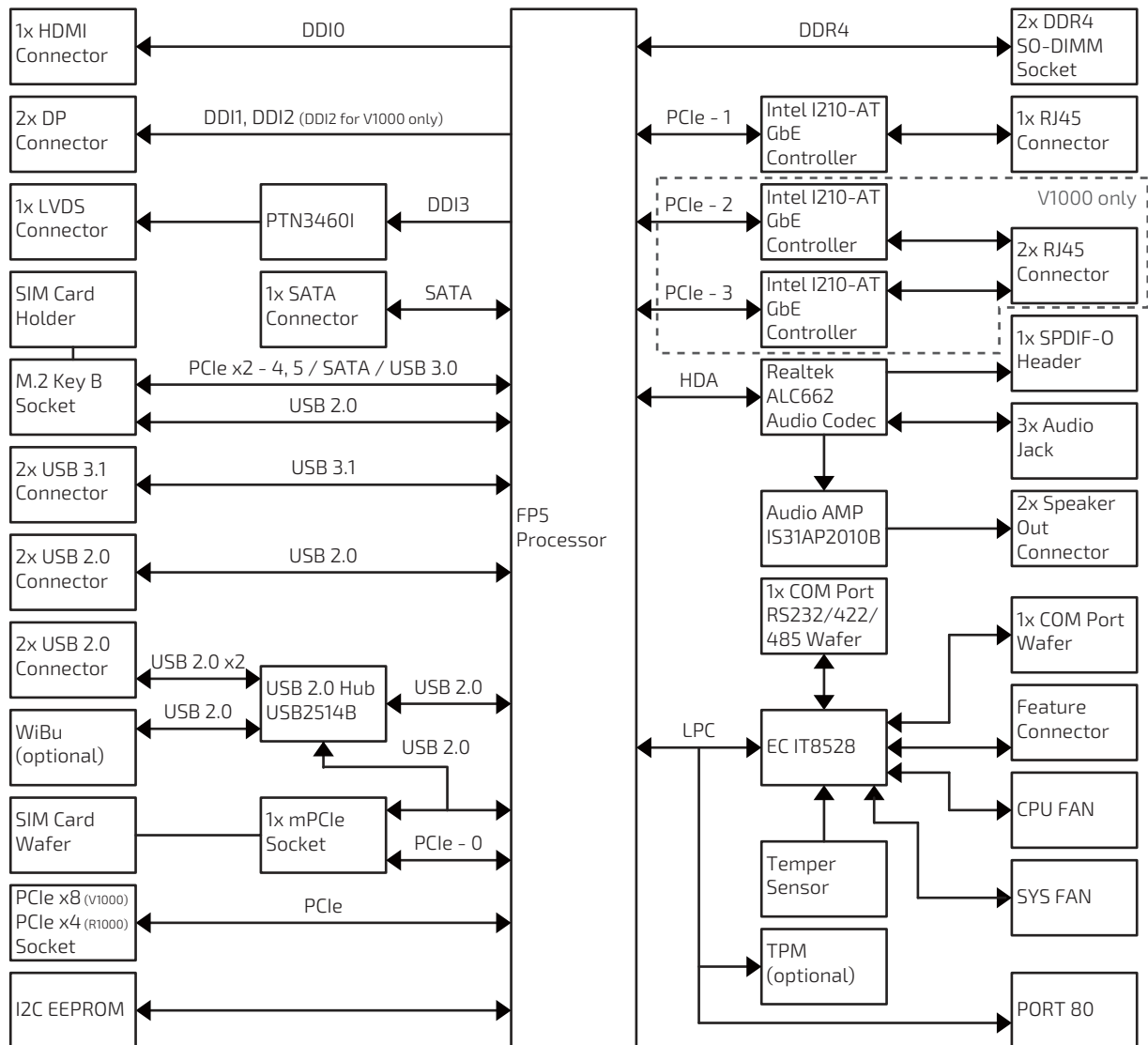
Furthermore, up to three GbE LAN ports supported help to deliver sufficient traffic flow for huge data volumes. mITX-VR1000 reserves one mPCIe, one M.2 Key B and one PCIe x16 slot allowing users to expand SSD capacity, wireless connectivity and / or application-specific interfaces.

▶ PRODUCT HIGHLIGHTS

- ▶ AMD Ryzen™ V1000 Series and R1000 Series Processors
- ▶ 2x DDR4 SO-DIMM
- ▶ 1x LVDS, up to 2x DP, 1x HDMI 1.4 for display output
- ▶ Up to 3x GbE LAN for Ethernet
- ▶ 2x USB 3.1, 4x USB 2.0 for USB device connection
- ▶ EC Controller for 1x RS232/422/485, 1x RS232, 18-bit GPIO
- ▶ 1x SATA 3.0 for storage
- ▶ 1x mPCIe for WLAN or WWAN expansion
- ▶ 1x M.2 Key B for SSD or WWAN expansion
- ▶ 1x PCIe x16 for application-specific expansion



▶ BLOCK DIAGRAM



► TECHNICAL INFORMATION

SYSTEM	PROCESSOR	AMD Ryzen™ V1807B (Quad Core, 4M Cache, up to 3.80 GHz, FP5, 45 W up to 54W TDP) AMD Ryzen™ V1756B (Quad Core, 4M Cache, up to 3.60 GHz, FP5, 45 W up to 54W TDP) AMD Ryzen™ V1605B (Quad Core, 4M Cache, up to 3.60 GHz, FP5, 15 W up to 25W TDP) AMD Ryzen™ V1202B (Dual Core, 4M Cache, up to 3.20 GHz, FP5, 15 W up to 25W TDP)
	MEMORY	2x DDR4 3200 SO-DIMM up to 32 GByte (V1807B & V1756B) 2x DDR4 2400 SO-DIMM up to 32 GByte (V1605B & V1202B)
VIDEO	GRAPHICS	AMD Radeon™ Vega 11 (V1807B) AMD Radeon™ Vega 8 (V1756B & V1605B) AMD Radeon™ Vega 3 (V1202B)
	DISPLAY INTERFACE	1x LVDS (24-bit, 2-ch, 1920 x 1200 @ 60 Hz) 2x DP (on rear, 4096 x 2160 @ 60 Hz, for models w/ V1000) 1x DP (on rear, 4096 x 2160 @ 60 Hz, for models w/ R1000)
	MULTIPLE DISPLAY	1x HDMI 1.4 (on rear, 3840 x 2160 @ 30Hz) Quadruple display (for models w/ V1000) Triple display (for models w/ R1000)
AUDIO	AUDIO CODEC AUDIO INTERFACE	Realtek ALC662 2x Speaker-out (3W) 1x Line-in (on rear) 2x Line-out (1x on rear, 1x by header) 2x Mic-in (1x on rear, 1x by header) 1x S/PDIF (on rear)
NETWORK CONNECTION	ETHERNET	3x GbE LAN (RJ45 on rear, Intel® I210-AT, for models w/ V1000) 1x GbE LAN (RJ45 on rear, Intel® I210-AT, for models w/ R1000)
PERIPHERAL CONNECTION	USB	2x USB 3.1 (Type A on rear)
	SERIAL PORT	4x USB 2.0 (2x Type A on rear, 2x by header)
	OTHER I/Os	1x RS232/422/485 (by header) 1x RS232 (by header) 18-bit GPIO (by header)
STORAGE & EXPANSION		1x SATA 3.0 1x M.2 Key B (type 2242/ 2280, w/ USB 3.0, SATA & PCIe x2, NVMe support) 1x mPCIe (full size, mixed w/ PCIe x1, USB 2.0) 1x PCIe x16 (x8 signal for V1000, x4 signal for R1000) 2x SIM Cage (1x Micro type linked to M.2 Key B, 1x by wafer linked to mPCIe)
POWER	CONNECTOR & INPUT VOLTAGE	2x12-pin ATX connector (DC +5 V / +12 V / +3.3 V / 5 VSB) 2x2-pin ATX connector (DC 12 V)
FIRMWARE	BIOS WATCHDOG H/W MONITOR REAL TIME CLOCK TPM WiBU	AMI uEFI BIOS w/ SPI Flash and I2C EEPROM memory Programmable WDT to generate system reset event Voltages, Temperatures SoC integrated RTC Supported (Infineon SLB9665 TPM 2.0) Optional
SYSTEM CONTROL & MONITORING	BUTTON, SWITCH & INDICATOR	1x Power Button (by header) 1x Reset Button (by header) 1x Software (OS) Reset Button (on rear) 1x Power LED (on rear) 1x Storage LED (by header) 1x mPCIe Activity LED (by header) 1x M.2 Key B LED (by header)
COOLING	FAN	1x Wafer for CPU Smart Fan 1x Wafer for System Smart Fan
SOFTWARE	OS SUPPORT	Windows 10, Linux
MECHANICAL	DIMENSION (L x W)	Mini-ITX (170 mm x 170 mm / 6.70" x 6.70")
ENVIRONMENTAL	OPERATION TEMPERATURE	0 °C ~ 60 °C / 32 °F ~ 140 °F (Standard) -40 °C ~ 85 °C / -40 °F ~ 185 °F (Extreme)
	STORAGE TEMPERATURE	-20 °C ~ 80 °C / -4 °F ~ 176 °F (Standard) -55 °C ~ 85 °C / -67 °F ~ 185 °F (Extreme)
	HUMIDITY	0 % ~ 95 %
CERTIFICATION	EMC & SAFETY GREEN	CE, FCC Class A, UL RoHS, REACH

► ORDERING INFORMATION

ARTICLE	DESCRIPTION
mITX-VR1000-V1807	AMD Ryzen™ V1807B
mITX-VR1000-V1756	AMD Ryzen™ V1756B
mITX-VR1000-V1605	AMD Ryzen™ V1605B
mITX-VR1000-V1202	AMD Ryzen™ V1202B

ACCESSORIES

ARTICLE	PART NO.	DESCRIPTION
I/O SHIELD	0F0000000001100L	Sus 304 Stainless Steel, T = 0.2 mm
SATA CABLE*	0C5020000004240L	With lock 1.27 pitch 1x7P, L = 460 mm
COOLER*	0H05XX000002340L	Copper-core aluminum extrusion heatsink with fan, 60 mm x 60 mm x 10 mm

(* : Optional)