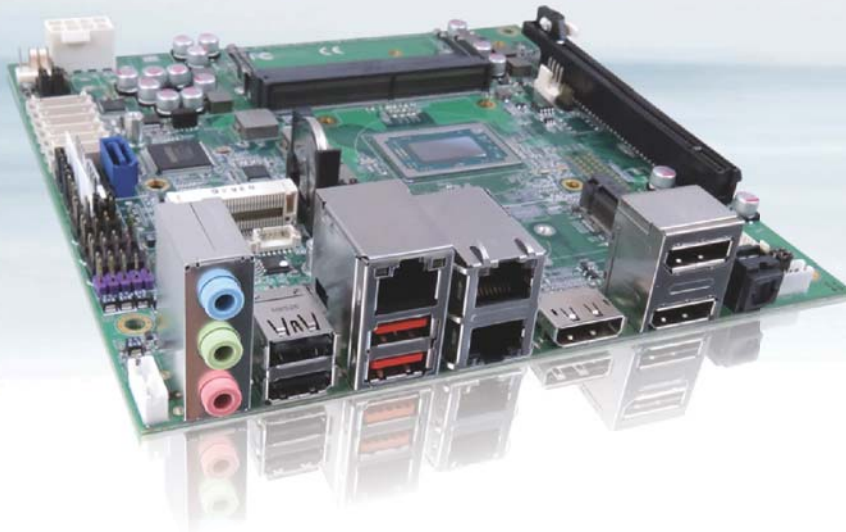


# mITX-VR1000 V2.0

## QUADRUPLE DISPLAY SUPPORT

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

- ▶ 1x LVDS & 1x DP++ & 2x DP / 2x DP++ & 2x DP for quadruple display support
- ▶ 3x GbE LAN for Ethernet
- ▶ 2x USB 3.1, 5x USB 2.0, 2x RS232/422/485, 4x RS232, 8-bit DIO for peripherals
- ▶ 1x SATA 3.0, 1x mPCIe, 1x M.2 Key B, 1x M.2 Key M for storage & wireless
- ▶ 1x PCIe x16 (x8 signal) for application-specific expansion

# mITX-VR1000 V2.0

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

mITX-VR1000 V2.0 is a Mini-ITX motherboard equipped with AMD Ryzen™ V1000 Series processors, perfect for digital casino gaming, medical imaging, industrial control & automation or other similar applications.

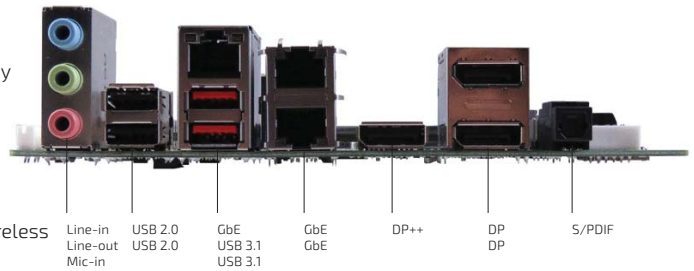
Integrating excellent performance of up to 4 CPU cores and 11 GPU cores, mITX-VR1000 V2.0 can power four independent displays.

With three GbE LAN ports mITX-VR1000 V2.0 can deliver sufficient traffic flow for huge data volumes.

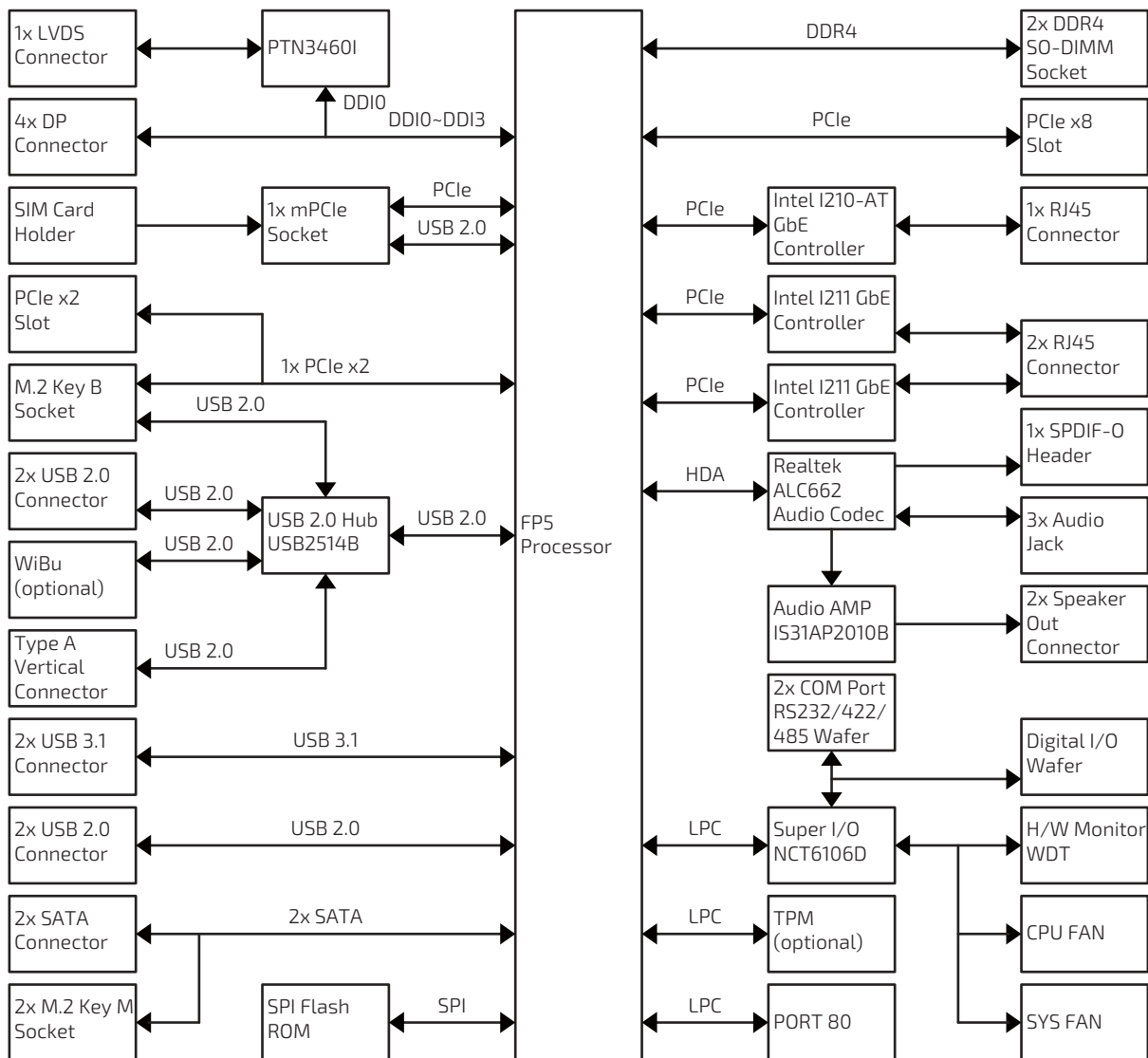
Finally, mITX-VR1000 V2.0 reserves one SATA 3.0, one mPCIe, one M.2 Key B, one M.2 Key M and one PCIe x16 (x8 signal) sockets, allowing users to flexibly expand storage media, wireless connection and application-specific functions.

### ▶ PRODUCT HIGHLIGHTS

- ▶ AMD Ryzen™ V1000-Series Processors
- ▶ 2x DDR4 SO-DIMM
- ▶ 1x LVDS & 1x DP++ & 2x DP / 2x DP++ & 2x DP for quadruple display
- ▶ 3x GbE LAN for Ethernet
- ▶ 2x USB 3.1, 5x USB 2.0 for USB device connection
- ▶ 2x RS232/422/485, 4x RS232 for serial device connection
- ▶ 8-bit DIO for signal / device control
- ▶ 1x SATA 3.0, 1x mPCIe, 1x M.2 Key B, 1x M.2 Key M for storage & wireless
- ▶ 1x PCIe x16 (x8 signal) for application-specific expansion



### ▶ BLOCK DIAGRAM



► TECHNICAL INFORMATION

<b>SYSTEM</b>	<b>PROCESSOR</b>  <b>MEMORY</b>	AMD Ryzen™ V1807B (Quad Core, 4M Cache, up to 3.80 GHz, FP5, 45 W TDP) AMD Ryzen™ V1756B (Quad Core, 4M Cache, up to 3.60 GHz, FP5, 45 W TDP) AMD Ryzen™ V1605B (Quad Core, 4M Cache, up to 3.60 GHz, FP5, 15 W TDP) AMD Ryzen™ V1202B (Dual Core, 4M Cache, up to 3.20 GHz, FP5, 15 W TDP) 2x DDR4 3200 SO-DIMM up to 32 GByte (V1807B & V1756B) 2x DDR4 2400 SO-DIMM up to 32 GByte (V1605B & V1202B)
<b>VIDEO</b>	<b>GRAPHICS</b>  <b>DISPLAY INTERFACE</b>  <b>MULTIPLE DISPLAY</b>	AMD Radeon™ Vega 11 (V1807B) AMD Radeon™ Vega 8 (V1756B & V1605B) AMD Radeon™ Vega 3 (V1202B) 1x LVDS (24-bit, 2-ch, 1920 x 1200 @ 60 Hz)   - 1x DP++ (on rear, 4096 x 2160 @ 60 Hz)   2x DP++ (on rear, 4096 x 2160 @ 60 Hz) 2x DP (on rear, 4096 x 2160 @ 60 Hz)   2x DP (on rear, 4096 x 2160 @ 60 Hz) Quadruple display
<b>AUDIO</b>	<b>AUDIO CODEC</b> <b>AUDIO INTERFACE</b>	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) 2x S/PDIF (1x on rear, 1x by header)
<b>NETWORK CONNECTION</b>	<b>ETHERNET</b>	3x GbE LAN (RJ45 on rear, 2x Intel® I211-AT, 1x Intel® I210-AT)
<b>PERIPHERAL CONNECTION</b>	<b>USB</b>  <b>SERIAL PORT</b>  <b>OTHER I/Os</b>	2x USB 3.1 (Type A on rear) 5x USB 2.0 (2x Type A on rear, 3x by header) 2x RS232/422/485 (by wafer) 4x RS232 (by wafer) 8-bit DIO (by wafer)
<b>STORAGE &amp; EXPANSION</b>		1x SATA 3.0 1x mPCIe (full size, mixed w/ PCIe x1, USB 2.0) 1x M.2 Key B (type 2242/ 2280, mixed w/ USB 2.0/PCIe x2, NVMe support) 1x M.2 Key M (type 2280) 1x PCIe x16 (x8 signal) 2x SIM Cage (1x Micro type linked to M.2 Key B, 1x by wafer linked to mPCIe)
<b>POWER</b>	<b>INPUT VOLTAGE</b> <b>CONNECTOR</b>	DC 12 V 2x4-pin ATX Connector
<b>FIRMWARE</b>	<b>BIOS</b> <b>WATCHDOG</b> <b>H/W MONITOR</b> <b>REAL TIME CLOCK</b> <b>TPM</b> <b>WiBU</b>	AMI uEFI BIOS w/ SPI Flash Programmable WDT to generate system reset event Voltages, Temperatures SoC integrated RTC Supported (Infineon SLB9665 TPM 2.0) Optional
<b>SYSTEM CONTROL &amp; MONITORING</b>	<b>FRONT PANEL HEADER</b>	1x Header for Reset button, HDD LED & External Speaker 1x Header for Power button, Power LED & SM bus 1x Header for mPCIe activity LED 1x Header for M.2 Key B activity LED
<b>COOLING</b>	<b>FAN</b>	1x Wafer for CPU Smart Fan 1x Wafer for System Smart Fan
<b>SOFTWARE</b>	<b>OS SUPPORT</b>	Windows 10
<b>MECHANICAL</b>	<b>DIMENSION (L x W)</b>	Mini-ITX (170 mm x 170 mm / 6.70" x 6.70")
<b>ENVIRONMENTAL</b>	<b>OPERATION TEMPERATURE</b> <b>STORAGE TEMPERATURE</b> <b>HUMIDITY</b>	0 °C ~ 60 °C / 32 °F ~ 140 °F -20 °C ~ 80 °C / -4 °F ~ 176 °F 0 % ~ 95 %
<b>CERTIFICATION</b>	<b>EMC &amp; SAFETY</b> <b>GREEN</b>	CE, FCC Class B, UL RoHS, REACH

## ▶ ORDERING INFORMATION

ARTICLE	DESCRIPTION
miTX-VR1000 V2.0-V1807	AMD Ryzen™ V1807B, 1x LVDS, 1x DP++, 2x DP
miTX-VR1000 V2.0-V1756	AMD Ryzen™ V1756B, 1x LVDS, 1x DP++, 2x DP
miTX-VR1000 V2.0-V1605	AMD Ryzen™ V1605B, 1x LVDS, 1x DP++, 2x DP
miTX-VR1000 V2.0-V1202	AMD Ryzen™ V1202B, 1x LVDS, 1x DP++, 2x DP
miTX-VR1000 V2.0-V1807-4DP	AMD Ryzen™ V1807B, 2x DP++, 2x DP
miTX-VR1000 V2.0-V1756-4DP	AMD Ryzen™ V1756B, 2x DP++, 2x DP
miTX-VR1000 V2.0-V1605-4DP	AMD Ryzen™ V1605B, 2x DP++, 2x DP
miTX-VR1000 V2.0-V1202-4DP	AMD Ryzen™ V1202B, 2x DP++, 2x DP

### ACCESSORIES

ARTICLE	PART NO.	DESCRIPTION
I/O SHIELD (3X DP) #	0F0000000001200L	Sus 304 Stainless Steel, T = 0.2 mm, for model w/ 3x DP
I/O SHIELD (4X DP) #	0F0000000001500L	Sus 304 Stainless Steel, T = 0.2 mm, for model w/ 4x DP
USB 2.0 CABLE *	0C5040000000110L	2.54 mm 2x5P to 2x USB connectors, L = 340 mm
COM PORT CABLE *	0C50200000005130L	D-SUB 9P (male) to 1x10P 1.25 pitch, L = 350 mm
DIO CABLE *	0C50200000003360L	1x10P 1.25 pitch, L = 200 mm
SATA POWER CABLE *	0C50200000005260L	2.54 pitch 1x4P to 1.27 pitch 1x15P, L = 460 mm
SATA CABLE *	0C50200000004240L	With lock 1.27 pitch 1x7P, L = 460 mm
AUDIO CABLE *	0C50200000005530L	A2546H-2x6P (DP2.54) to PJ-2509CTPC-5-L x2 (Audio Jack w/ detect pin), L = 400 mm
DC JACK CABLE *	0C5029003000130L	ATX 2x2P 4.2 pitch to DC Jack, L = 300 mm
25 W COOLER *	0H05XX000002310L	Cooler with Thermal Pad, for model w/ up to 25 W TDP processor
54 W COOLER *	0H05XX000002290L	Cooler with Thermal Pad, for model w/ up to 54 W TDP processor

(\* : Optional)

(# : I/O Shield is supplied depending on order configuration)

## ▶ GLOBAL HEADQUARTERS

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