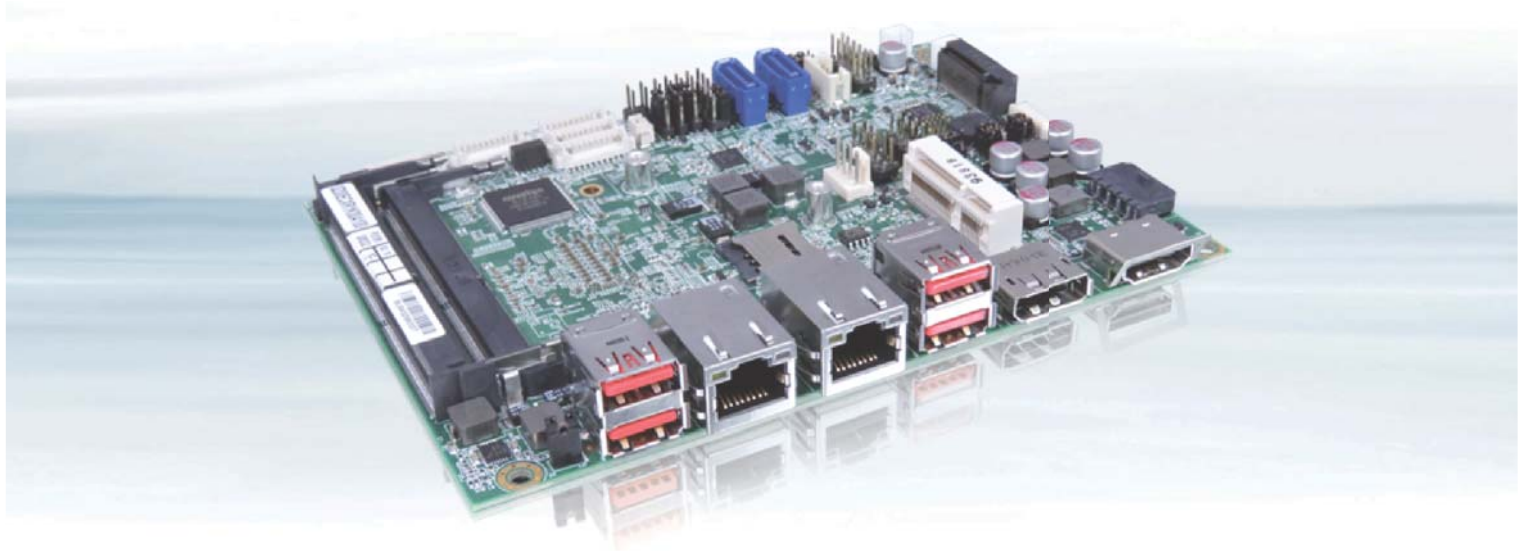


# 3.5"-SBC-VR1000

## IDEAL FOR GRAPHICS INTENSIVE APPLICATIONS

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### 3.5" SINGLE BOARD COMPUTER WITH AMD RYZEN™ V1000 / R1000 SERIES PROCESSORS

- ▶ 1x LVDS, 1x DP, 1x HDMI 2.0 for triple display support
- ▶ 2x GbE LAN for Ethernet
- ▶ Up to 4x USB 3.1, up to 6x USB 2.0, 2x RS232/422/485, 2x RS232 for peripherals
- ▶ 8-bit DIO for device / signal control
- ▶ 2x SATA 3.0, 1x mPCIe, 1x M.2 Key M for storage & expansion

POSSIBILITIES START HERE



# 3.5"-SBC-VR1000

## 3.5" SINGLE BOARD COMPUTER WITH AMD RYZEN™ V1000 / R1000 SERIES PROCESSORS

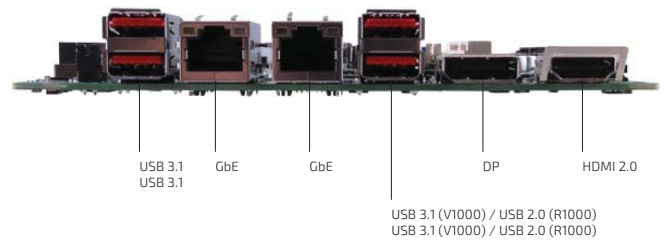
Kontron 3.5"-SBC-VR1000 is a 3.5" single board computer powered by AMD Ryzen™ V1000 / R1000 Series processors, which features excellent 4K playback under a fanless and low-power embedded design. It is a power efficient option for a wide range of compute-intensive graphics applications, such as digital signage, digital casino gaming, industrial control & automation, medical imaging,

networking and thin clients.

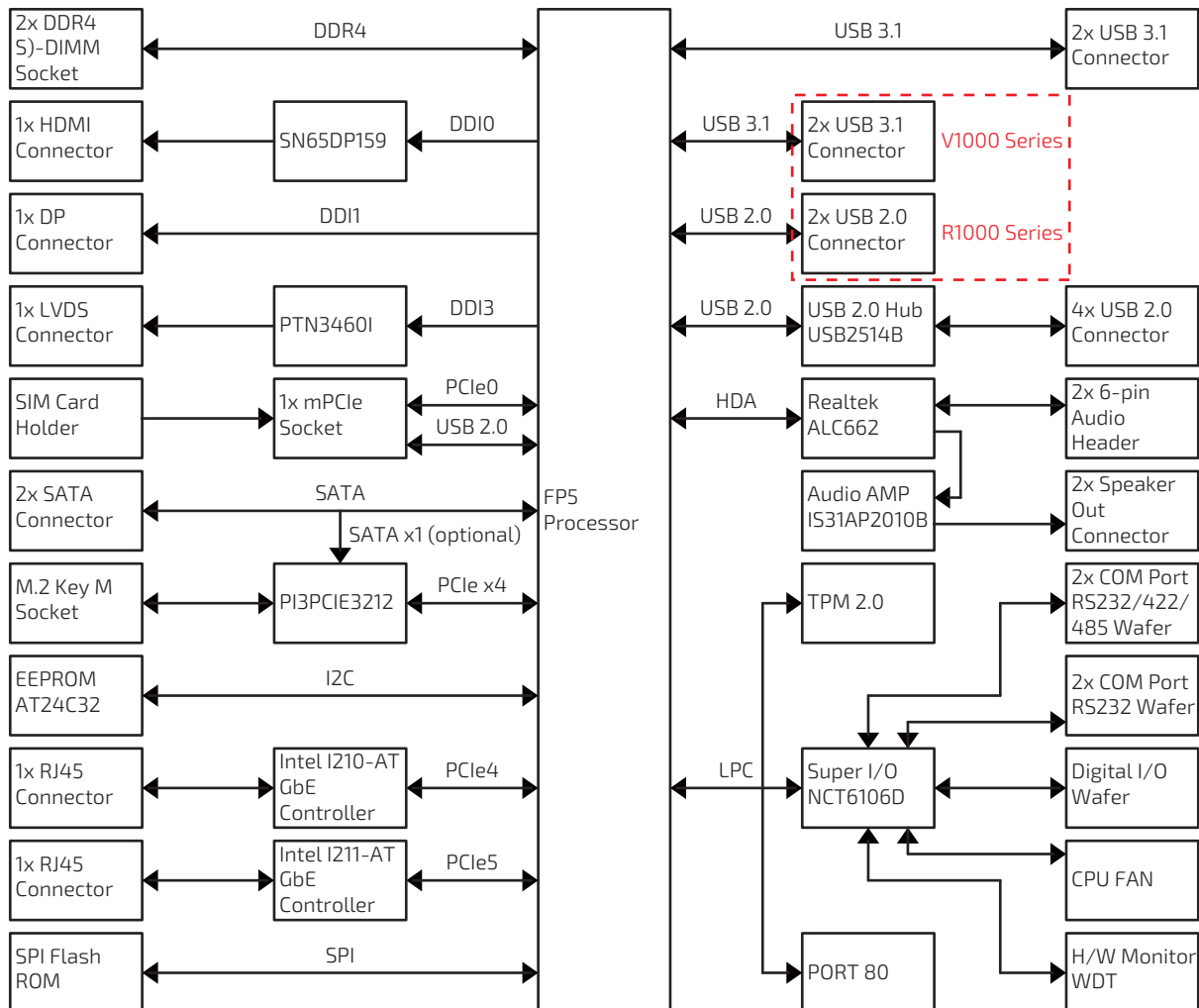
In addition, 3.5"-SBC-VR1000 supports TPM 2.0 security for data protection and M.2 NVMe SSD which features much lower latency, compact form factor and high reliability. It can help integrators to easily develop a securer and smaller edge computing device.

### PRODUCT HIGHLIGHTS

- ▶ AMD Ryzen™ V1000 / R1000 Series Processors
- ▶ 2x DDR4 S0-DIMM memory socket
- ▶ 1x LVDS, 1x DP, 1x HDMI 2.0 for triple display support
- ▶ 2x GbE LAN for Ethernet
- ▶ 4x USB 3.1, 4x USB 2.0 for USB device connection (V1000 models)
- ▶ 2x USB 3.1, 6x USB 2.0 for USB device connection (R1000 models)
- ▶ 2x RS232/422/485, 2x RS232 for serial device connection
- ▶ 8-bit DIO for device / signal control
- ▶ 2x SATA 3.0 for storage device
- ▶ 1x mPCIe for WLAN / Bluetooth / WWAN expansion
- ▶ 1x M.2 Key M for NVMe SSD support
- ▶ TPM 2.0 support



### BLOCK DIAGRAM



## TECHNICAL INFORMATION

<b>SYSTEM</b>	<b>PROCESSOR</b>	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) AMD Ryzen™ R1606G (Dual Core, 4M Cache, up to 3.50 GHz, FP5, 15 W TDP) AMD Ryzen™ R1505G (Dual Core, 4M Cache, up to 3.30 GHz, FP5, 15 W TDP) 2x DDR4 2400 SO-DIMM up to 32 GByte
	<b>MEMORY</b>	
<b>VIDEO</b>	<b>GRAPHICS</b>	AMD Radeon™ Vega 8 (V1605B) AMD Radeon™ Vega 3 (V1202B, R1606G & R1505G)
	<b>DISPLAY INTERFACE</b>	1x LVDS (24-bit, 2-ch, 1920 x 1200 @ 60 Hz) 1x DP (4096 x 2160 @ 60 Hz, on rear) 1x HDMI 2.0 (3840 x 2160 @ 60 Hz, on rear)
	<b>MULTIPLE DISPLAY</b>	Triple Display
<b>AUDIO</b>	<b>AUDIO CODEC</b>	Realtek ALC662
	<b>AUDIO INTERFACE</b>	2x Speaker-out (3 W, by header) 1x Line-in (by header) 1x Line-out (by header) 1x Mic-in (by header)
<b>NETWORK CONNECTION</b>	<b>ETHERNET</b>	2x GbE LAN (RJ45 on rear, Intel® I210-AT, Intel® I211-AT)
<b>PERIPHERAL CONNECTION</b>	<b>USB</b>	4x USB 3.1 (Type A on rear, for V1000 models) 2x USB 3.1 (Type A on rear, for R1000 models) 4x USB 2.0 (by header, for V1000 models) 6x USB 2.0 (2x Type A on rear, 4x by header, for R1000 models)
	<b>SERIAL PORT</b>	2x RS232/422/485 (by header)
	<b>OTHER I/Os</b>	2x RS232 (by header) 1x 8-bit DIO (by header)
<b>STORAGE &amp; EXPANSION</b>		2x SATA 3.0 (1x shared w/ M.2 Key M) 1x mPCIe (half size, mixed w/ PCIe x1 / USB 2.0) 1x M.2 Key M (Type 2280 / 2242, mixed w/ PCIe x4 / SATA 3.0, NVMe support) 1x Micro SIM Card Holder (connected to mPCIe)
<b>POWER</b>	<b>CONNECTOR</b>	1x4-pin pitch 3.0 mm Wafer
	<b>INPUT VOLTAGE</b>	DC 12 V
<b>FIRMWARE</b>	<b>BIOS</b>	AMI uEFI BIOS w/ 64 Mb SPI Flash
	<b>WATCHDOG</b>	Programmable WDT to generate system reset event
	<b>H/W MONITOR</b>	Voltages, Temperatures
	<b>REAL TIME CLOCK</b>	Processor integrated RTC
	<b>TPM</b>	Supported (Infineon SLB 9665 TPM 2.0)
<b>SYSTEM CONTROL &amp; MONITORING</b>	<b>FP 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 activity LED 1x Header for SATA activity LED
<b>COOLING</b>	<b>FAN</b>	1x Wafer for CPU Smart Fan
<b>SOFTWARE</b>	<b>OS SUPPORT</b>	Windows 10
<b>MECHANICAL</b>	<b>DIMENSION (L x W)</b>	ECX (146 mm x 105 mm / 5.75" x 4.13")
<b>ENVIRONMENTAL</b>	<b>OPERATION TEMPERATURE</b>	0 °C ~ 60 °C / 32 °F ~ 140 °F
	<b>STORAGE TEMPERATURE</b>	-20 °C ~ 80 °C / -4 °F ~ 176 °F
	<b>HUMIDITY</b>	0 % ~ 95 %
<b>CERTIFICATION</b>	<b>EMC &amp; SAFETY</b>	CE, FCC Class A

## GLOBAL HEADQUARTERS

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