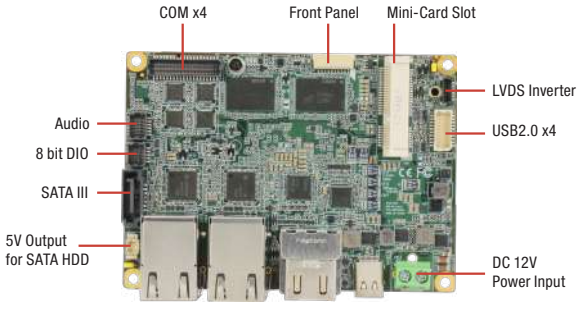
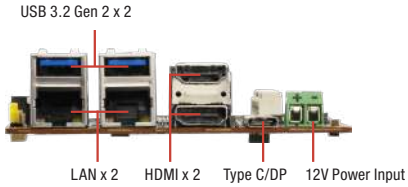
PICO-V2K4

Pico-ITX Board with AMD RYZEN™ V2000 embedded Processor Family





Features

- **AMD RYZEN™ V2000 embedded Processor Family (V2718/V2516)**
- **LPDDR4x onboard memory, up to 32 GB**
- **Intel® i226, 10/100/2500Base x 1**
- **Intel® i210, 10/100/1000Base x 1**
- **HDMI x 2 (4Kx2K, 2.0b x 1, 1.4 x 1)**
- **Type C to DP x 1; LVDS/eDP x 1**
- **M.2 2280 M key (PCIE x4 GEN3/SATA) x 1**
- **Full size mPCIe/mSATA x 1**
- **USB 3.2 Gen 2 x 2, USB 3.2 Gen 2 Type C x 1 , USB 2.0 x 4**
- **RS-232/422/485 x 4**

Gigo LAN · LPDDR4 · USB 2.0 · USB 3.2 Gen 2 · HDMI

Specifications

System	
Form Factor	PICO-ITX
CPU	AMD RYZEN™ V2000 embedded Processor Family V2718 (8C/16T, 1.70GHz, 25W) V2516 (6C/12T, 2.10GHz, 25W)
Chipset	Integrated with AMD RYZEN™ V2000 embedded Processor
Memory Type	Onboard LPDDR4x 3733, Dual Channel, Non-ECC (Max.32GB)
BIOS	UEFI
Wake on LAN	Yes
Watchdog Timer	255 Levels
Security	TPM2.0
RTC Battery	Lithium Battery 3V/240mAh
Dimension	3.94" x 2.84" (100mm x 72mm)
Gross Weight	0.18 lbs (0.08 kg)
OS Support	Windows 10 (64 bit) Linux Ubuntu 20.04.3/Kernel 5.18.0-4449-amd+
Power	
Power Requirement	+12V
Power Supply Type	AT/ATX
Connector	Phoenix 2-pin Connector (Default) Lockable DC Jack Connector (colay)
Power Consumption	V2718, LPDDR4x 32GB, NVMe64GB 4.24A @ +12V(TYPICAL) V2718, LPDDR4x 32GB, NVMe64GB, 4.82A @ +12V(MAX)
Display	
Controller	AMD Radeon 6, 7 Graphics (Renoir)
LVDS/eDP	LVDS x 1 (18/24bit) 1024 x 768 @60Hz eDP1.3 x 1, 3840 x 2160 @60Hz (Optional)
Display Interface	Type C to DP x 1, 3480 x 2160 @60Hz HDMI 2.0 x 1, 3480 x 2160 @60Hz HDMI 1.4 x 1, 3480 x 2160 @30Hz
Multiple Display	Up to 4 Simultaneous Displays
Audio	
Codec	Realtek ALC269 (Optional)
Audio Interface	Line-In / Line-Out / Mic (Optional, audio function not available for WiTAS SKU)
Speaker	—
External I/O	
Ethernet	Intel® i225/i226 2.5GbE, RJ-45 x 1 Intel® i210 1GbE, RJ-45 x 1
USB	USB3.2 Gen2 Type C x 1 USB3.2 Gen2 x 2
Serial Port	—
Video	DP x 1 (Via Type C) HDMI 2.0 x 1, HDMI 1.4 x 1
Internal I/O	
USB	USB2.0 x 4
Serial Port	COM1~4 (RS232/422/485, support 5V/12V/RI)
Video	LVDS/eDP x 1(Default: LVDS)
SATA	SATA 6.0 Gb/s x 1, +5V SATA Power Connector x 1 Onboard NVME SSD (Optional, up to 128GB, PCIE[x2])
Audio	Audio Header (Optional, audio function not available for WiTAS SKU)
DIO/GPIO	GPIO 8-bit
SMBus/I2C	I2C/SMBus x 1 (Default: SMBus)
Fan	4pins Smart Fan x 1
Front Panel	HDD LED, PWR LED, Power Button, Buzzer, Reset
Others	—
Expansion	
Mini PCIe/mSATA	Full-Size mSATA/mPCIe x 1 (Default: mPCIe, select with HW BOM)
M.2	M.2 2280 M-Key x 1 (PCIe 4.0 [x4]/SATA, Default: PCIe [x4], select with BIOS)
Others	—
Environment & Certification	
Operating Temp	32°F ~ 140°F (0°C ~ 60°C) WiTAS 2 -40°F ~ 185°F (-40°C ~ 85°C)
Storage Temp	-40°F ~ 185°F (-40°C ~ 85°C)
Operating Humidity	0% ~ 90% relative humidity, non-condensing
MTBF (Hours)	407,784
EMC	CE/FCC Class A

Packing List

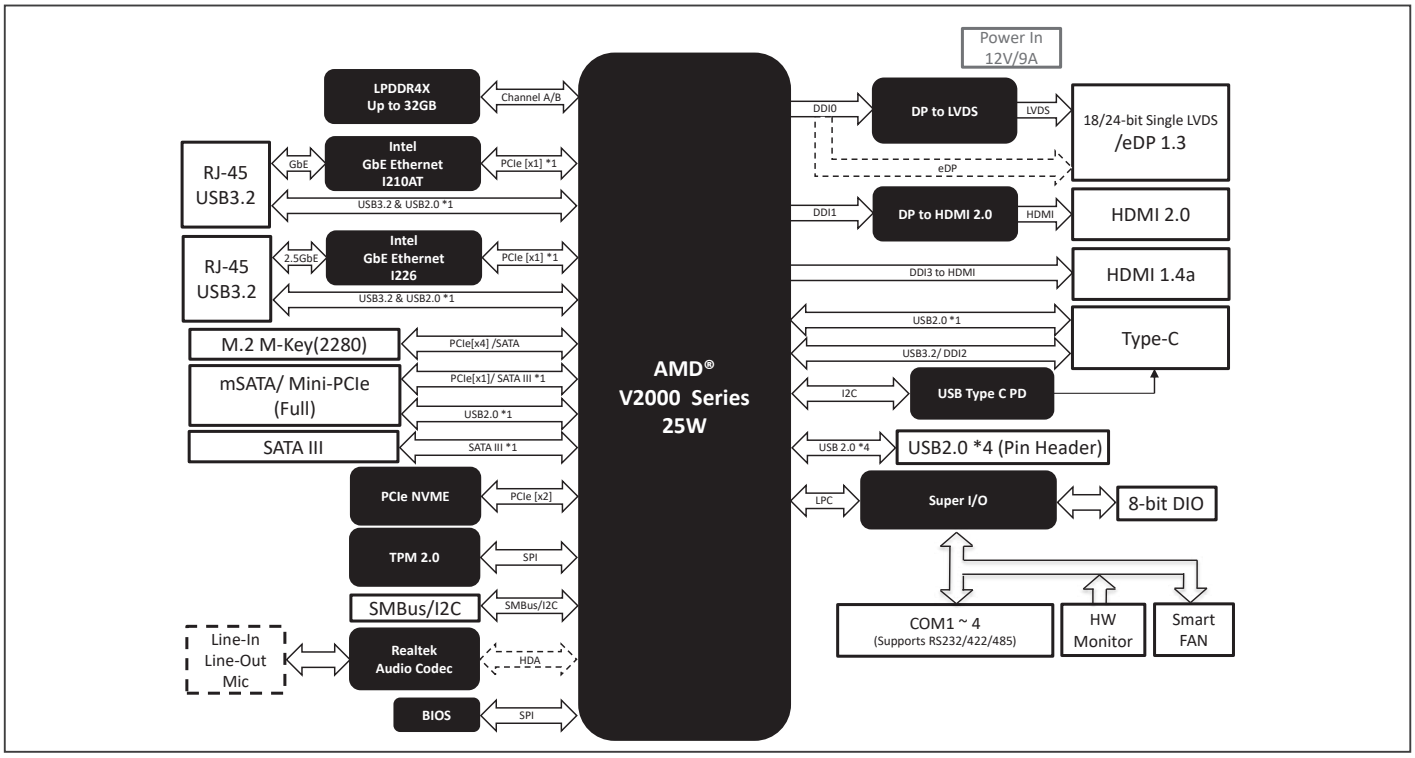
- **PICO-V2K4**

Optional Accessories

Part Number	Description	Qty.
170X000287	Front Panel Cable.100mm	1
170X000317	COM Cable.4ports.150mm	1
170X000390	USB2.0 Cable.4 ports.120mm	1
1709070500	SATA CABLE.50cm	1
170X000322	SATA Power Cable.60mm	1
170X000156	Audio cable.250mm	1
PICO-V2K4-FAN01	CPU Cooler.100*72*24mm.AL Fin+CU Block.4800rpm.Smart FAN	1
PICO-V2K4-HSP01	Heat Spreader.AL Fin+CU Block.100*72*10.7mm	1
PER-P30D-A10	120W, DC-DC Converter, 9~36V input, 12V output, Rev A1.0, 30 x 72mm	1

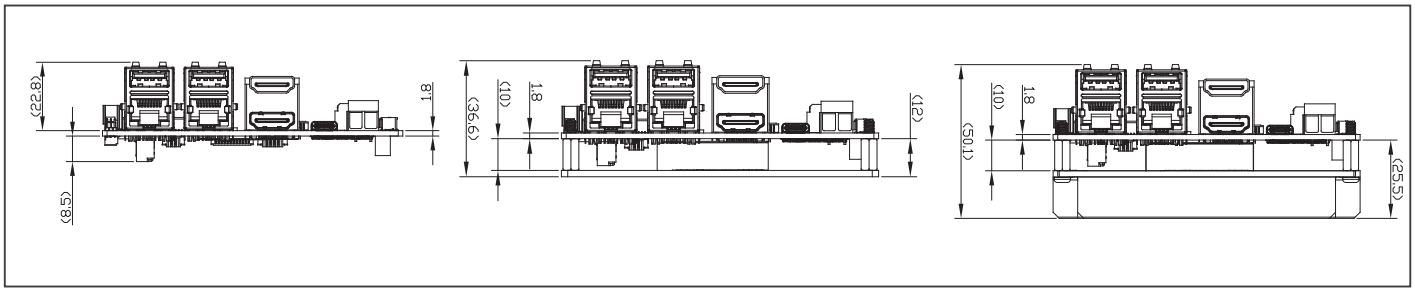
Note: All specifications are subject to change without notice.

Block Diagram



Dimension

Unit: mm



Ordering Information

Part number	CPU	Memory	Display	Storage	LAN	USB	RS-232/ 422/485	Expansion slot	Power	Operating Temp	Audio	Others
PICO-V2K4-A11-0002	V2516	4GB	Type C to DP x 1 HDMI x 2 LVDS x 1	SATAIII x 1	GbE x 1 2.5GbE x 1	USB 2.0 x 4 USB3.2 Gen 2 x 2 USB 3.2 Gen 2 Type C x 1	4	M.2 2280 M-key x 1 mini-PCIe(Full) x 1	+12V (Terminal block)	0~60˚C	—	SMBUS x 1 TPM2.0
PICO-V2K4-A11-0003	V2516	8GB	Type C to DP x 1 HDMI x 2 LVDS x 1	SATAIII x 1 Onboard NVME SSD 64GB x 1	GbE x 1 2.5GbE x 1	USB 2.0 x 4 USB3.2 Gen 2 x 2 USB 3.2 Gen 2 Type C x 1	4	M.2 2280 M-key x 1 mini-PCIe(Full) x 1	+12V (Terminal block)	0~60˚C	—	SMBUS x 1 TPM2.0
PICO-V2K4-A11-0004	V2718	8GB	Type C to DP x 1 HDMI x 2 LVDS x 1	SATAIII x 1	GbE x 1 2.5GbE x 1	USB 2.0 x 4 USB3.2 Gen 2 x 2 USB 3.2 Gen 2 Type C x 1	4	M.2 2280 M-key x 1 mini-PCIe(Full) x 1	+12V (Terminal block)	0~60˚C	—	SMBUS x 1 TPM2.0
PICO-V2K4-A11-0005	V2718	16GB	Type C to DP x 1 HDMI x 2 LVDS x 1	SATAIII x 1	GbE x 1 2.5GbE x 1	USB 2.0 x 4 USB3.2 Gen 2 x 2 USB 3.2 Gen 2 Type C x 1	4	M.2 2280 M-key x 1 mini-PCIe(Full) x 1	+12V (Terminal block)	0~60˚C	—	SMBUS x 1 TPM2.0
PICO-V2K4-A11-0006	V2718	32GB	Type C to DP x 1 HDMI x 2 eDP x 1	SATAIII x 1	GbE x 1 2.5GbE x 1	USB 2.0 x 4 USB3.2 Gen 2 x 2 USB 3.2 Gen 2 Type C x 1	4	M.2 2280 M-key x 1 mini-PCIe(Full) x 1	+12V (Terminal block)	0~60˚C	—	SMBUS x 1 TPM2.0
PICO-V2K4W2-A11-0006	V2718	32GB	Type C to DP x 1 HDMI x 2 eDP x 1	SATAIII x 1	GbE x 1 2.5GbE x 1	USB 2.0 x 4 USB3.2 Gen 2 x 2 USB 3.2 Gen 2 Type C x 1	4	M.2 2280 M-key x 1 mini-PCIe(Full) x 1	+12V (Terminal block)	-40~85˚C	—	SMBUS x 1 TPM2.0