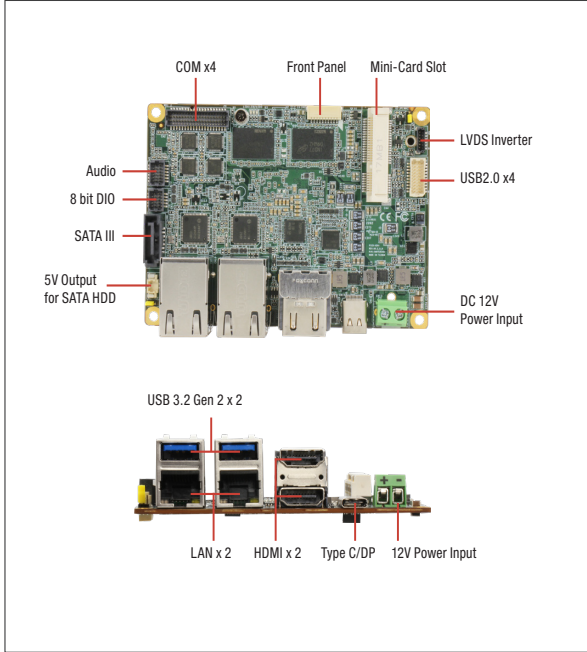


# PICO-V2K4

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

Pico-ITX Boards



## 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



VIDEO	Type C to DP x 1 HDMI 2.0b x 1, 4K x 2K 60Hz HDMI 1.4 x 1, 4K x 2K 30Hz (3840 x 2160)
<b>INTERNAL I/O</b>	
USB	USB2.0 x 4
SERIAL PORT	COM1~COM4 (RS232/422/485, supports 5V/12V/RI)
VIDEO	eDP or LVDS x 1 (eDP 1.4: 3840x2160, 60Hz; LVDS: 12V/3.3V, 18-24 bit, single channel)
SATA	SATA III x 1 +5V SATA Power Connector x 1 Onboard NVME SSD (Optional, up to 128GB, PCIe x 2, by BOM)
AUDIO	Audio Header x 1 (Optional)
DIO/GPIO	8-bit
SMBus/I2C	SMBUS/I2C x 1 (SMBUS as default, I2C selected by HW BOM)
Touch	—
FAN	4pins Smart Fan x1
SIM	—
Front Panel	HDD LED, PWR LED, Power Button, Buzzer, Reset
Others	—
<b>EXPANSION</b>	
Mini PCI-E/mSATA	mini-PCIe(Full) x 1 (PCIe [x1] x 1/ USB2.0 as default, mSATA selected by HW BOM)
M.2	M.2 2280 M-key (PCIe Gen3 x 4 as default, SATA selected by BIOS) x 1
Others	—
<b>ENVIRONMENT &amp; CERTIFICATION</b>	
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

## Specifications

<b>SYSTEM</b>	
FORM FACTOR	PICO-ITX
CPU	AMD RYZEN™ V2000 embedded Processor Family V2718 (8C/16T, 1.7~4.15 GHz,TDP 10-25W) V2516 (6C/12T, 2.1~3.95 GHz,TDP 10-25W)
CHIPSET	AMD RYZEN™ V2000 embedded Processor Family
MEMORY TYPE	LPDDR4x 3733 MHz onboard memory
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 5.11
<b>POWER</b>	
POWER REQUIREMENT	+12V
POWER SUPPLY TYPE	AT/ATX
CONNECTOR	Phoenix 2-pin Connector (Default) Lockable DC Jack Connector (colay)
POWER CONSUMPTION	V2718, LPDDR4x onboard 32GB, 4.24A @ +12V(TYPICAL) V2718, LPDDR4x onboard 32GB, 4.82A @ +12V(MAX)
<b>DISPLAY</b>	
CONTROLLER	AMD Radeon 6, 7 Graphics (Renoir)
LVDS/eDP	eDP or LVDS x 1 (eDP 1.4: 3840x2160, 60Hz; LVDS: 12V/3.3V, 18-24 bit, single channel)
Display Interface	Type C to DP x 1 HDMI 2.0b x 1, 4K x 2K 60Hz HDMI 1.4 x 1, 4K x 2K 30Hz (3840 x 2160)
Multiple Display	Up to 4 Simultaneous Displays
<b>AUDIO</b>	
CODEC	Realtek ALC269 (Optional)
AUDIO INTERFACE	High Definition Audio Interface, Line-in/Line-out/MIC (Optional)
Speaker	—
<b>EXTERNAL I/O</b>	
ETHERNET	Intel® i226, 10/100/2500Base x 1 Intel® i210, 10/100/1000Base x 1
USB	USB3.2 Gen2 Type C x 1 USB3.2 Gen2 x 2
SERIAL PORT	—

## Packing List

- PICO-V2K4

## Optional Accessories

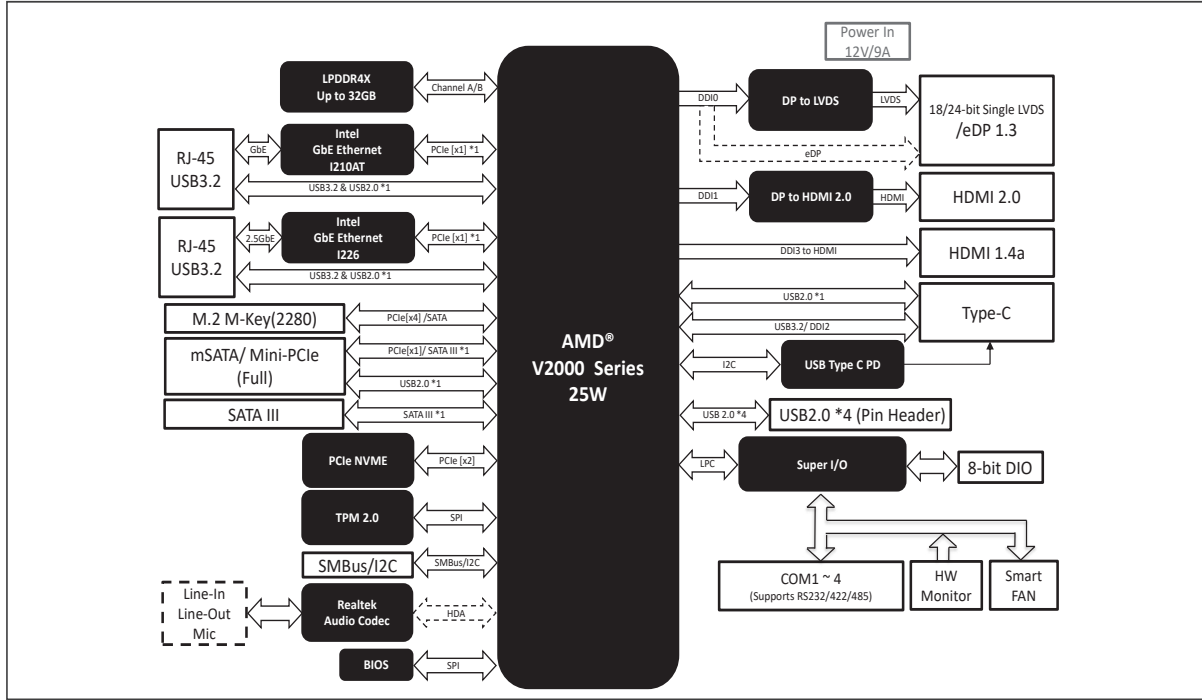
Part Number	Description	Qty.
170X000287	Front Panel cable	1
170X000317	COM *4port cable	1
170X000390	USB2.0 *4port cable	1
1709070500	(TF)SATA CABLE.7P Pitch 1.27mm.50cm	1
170X000322	SATA power cable	1
170X000156	Audio cable	1
PICO-V2K4-FAN01	Cooler	1
PICO-V2K4-HSP01	Heat Spreader.AL Fin+CU Block.100*72*10.7mm	1

# PICO-V2K4

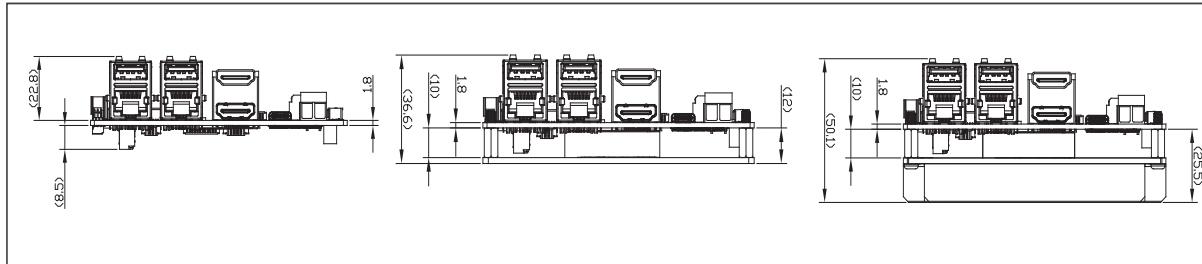
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Pico-ITX Boards

## 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 2	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-PCle(Full) x 1	+12V (Terminal block)	0~60°C	—	SMBUS x 1 (I2C Optional) 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 2	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-PCle(Full) x 1	+12V (Terminal block)	0~60°C	—	SMBUS x 1 (I2C Optional) 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 2	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-PCle(Full) x 1	+12V (Terminal block)	0~60°C	—	SMBUS x 1 (I2C Optional) 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 2	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-PCle(Full) x 1	+12V (Terminal block)	0~60°C	—	SMBUS x 1 (I2C Optional) 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 2	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-PCle(Full) x 1	+12V (Terminal block)	0~60°C	—	SMBUS x 1 (I2C Optional) 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 2	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-PCle(Full) x 1	+12V (Terminal block)	-40~85°C	—	SMBUS x 1 (I2C Optional) TPM2.0

Note: All specifications are subject to change without notice.

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## Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

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