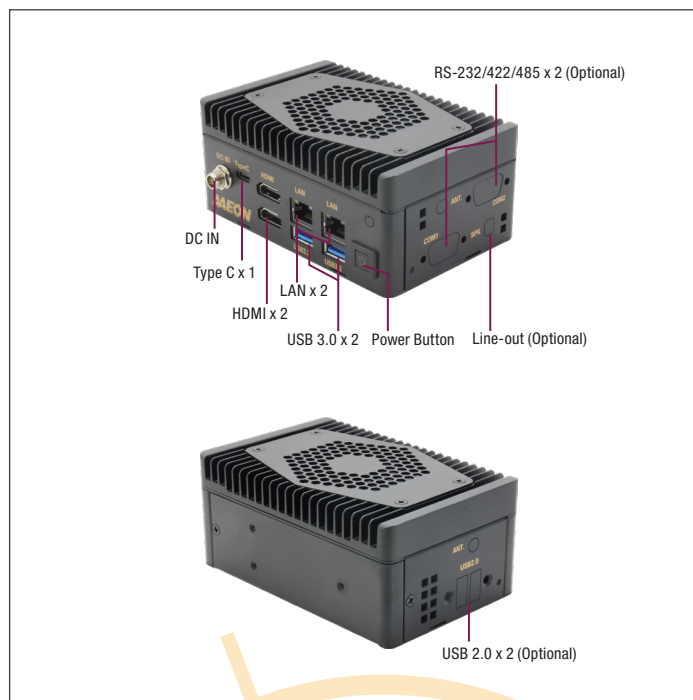


# PICO-V2K4-SEMI

PICO-SEMI with AMD RYZEN™ V2000 embedded Processor Family

PICO-SEMI



## Specifications

| System            |                                                                                                            |
|-------------------|------------------------------------------------------------------------------------------------------------|
| Form Factor       | PICO-SEMI                                                                                                  |
| CPU               | AMD RYZEN™ V2000 embedded Processor Family<br>V2718 (8C/16T, 1.70GHz, 25W)<br>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         | 4.80" x 3.18" x 2.13" (122mm x 80.8mm x 54 mm)                                                             |
| Gross Weight      | 0.84 lbs (0.38 kg)                                                                                         |
| OS Support        | Windows 10 (64 bit)<br>Linux Ubuntu 20.04.3/Kernel 5.18.0-4449-amd+                                        |
| Power             |                                                                                                            |
| Power Requirement | +12V                                                                                                       |
| Power Supply Type | ATX                                                                                                        |
| Connector         | DC Jack Connector                                                                                          |
| Power Consumption | V2718, LPDDR4x 32GB, NVMe64GB 4.24A @ +12V(TYPICAL)<br>V2718, LPDDR4x 32GB, NVMe64GB, 4.82A @ +12V(MAX)    |
| Display           |                                                                                                            |
| Controller        | AMD Radeon 6, 7 Graphics (Renoir)                                                                          |
| LVDS/eDP          | —                                                                                                          |
| Display Interface | Type C to DP x 1, 3480 x 2160 @60Hz<br>HDMI 2.0 x 1, 3480 x 2160 @60Hz<br>HDMI 1.4 x 1, 3480 x 2160 @30Hz  |
| Multiple Display  | Up to 3 Simultaneous Displays                                                                              |
| Audio             |                                                                                                            |
| Codec             | Realtek ALC269 (Optional)                                                                                  |
| Audio Interface   | Line-out (Optional)                                                                                        |
| Speaker           | —                                                                                                          |
| External I/O      |                                                                                                            |
| Ethernet          | Intel® i225/i226 2.5GbE, RJ-45 x 1<br>Intel® i210 1GbE, RJ-45 x 1                                          |
| USB               | USB3.2 Gen2 Type C x 1<br>USB3.2 Gen2 x 2<br>USB2.0 x 2 (Optional)                                         |

## Features

- AMD RYZEN™ V2000 embedded Processor Family (V2718/V2516)
- Onboard NVME SSD 64GB
- 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
- 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 2(Optional)
- RS-232/422/485 x 2 (Optional)



| Serial Port                 | COM1~2 (RS232/422/485, support 5V/12V/RI, Optional)                           |
|-----------------------------|-------------------------------------------------------------------------------|
| Video                       | DP x 1 (Via Type C)<br>HDMI 2.0 x 1,<br>HDMI 1.4 x 1                          |
| Internal I/O                |                                                                               |
| USB                         | —                                                                             |
| Serial Port                 | —                                                                             |
| Video                       | —                                                                             |
| SATA                        | Onboard NVME SSD (Optional, up to 128GB, PCIe[x2])                            |
| Audio                       | Line-out (Optional)                                                           |
| DIO/GPIO                    | —                                                                             |
| SMBus/I2C                   | —                                                                             |
| Fan                         | 4pins Smart Fan x1                                                            |
| 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 ~ 122°F (0°C ~ 50°C) with 0.2 m/s airflow                                |
| 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                                                                |

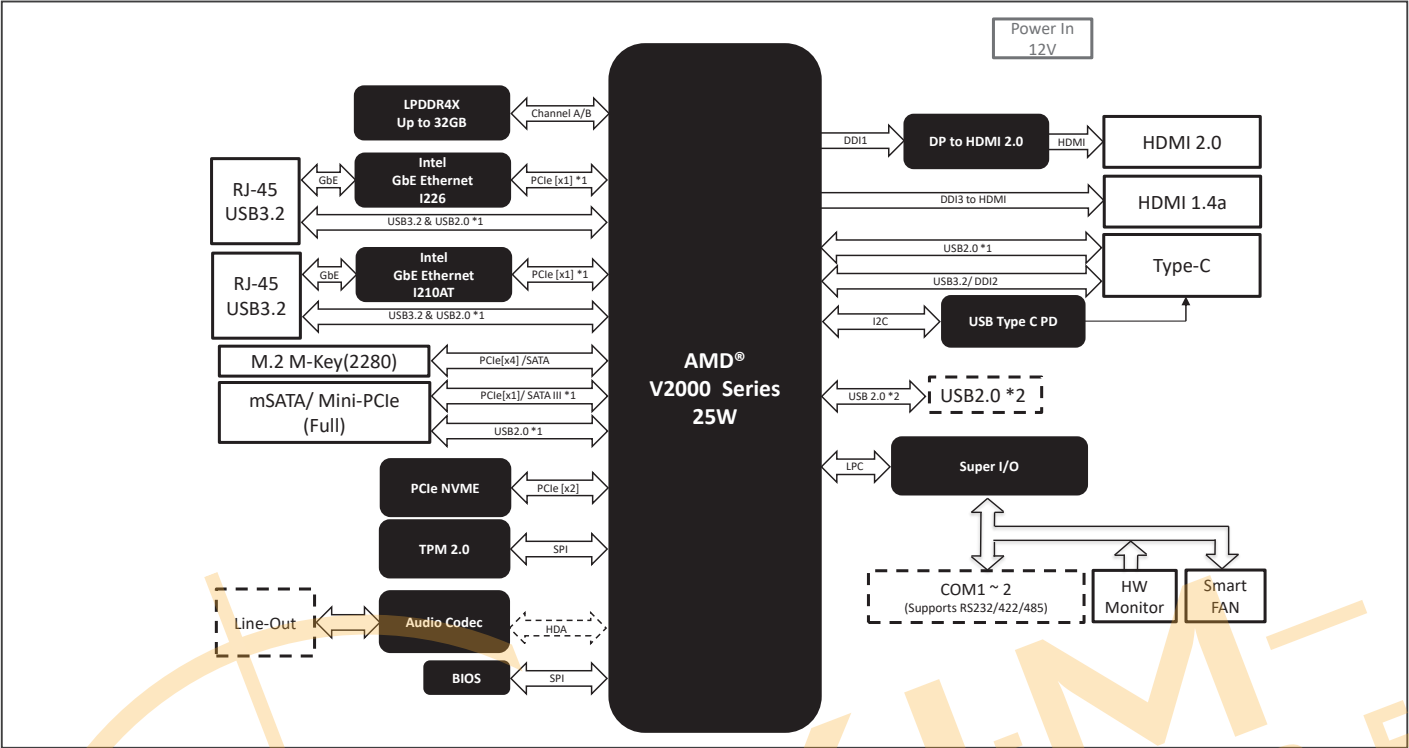
## Packing List

- PICO-V2K4-SEMI

## Optional Accessories

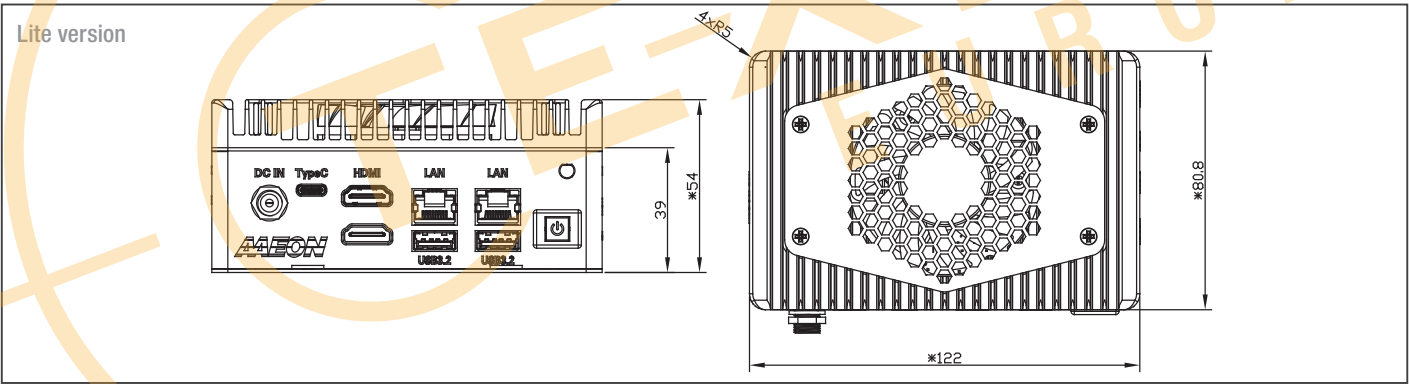
| Part Number          | Description                                                                            | Qty. |
|----------------------|----------------------------------------------------------------------------------------|------|
| 1702031802           | POWER CORD.3P-125V 10A 180D.1.8M.(US Type)                                             | 1    |
| 1702031803           | POWER CORD.3P-250V 10A 180D.1.8M.VDE. (Europe Type)                                    | 1    |
| 170203180E           | Power cord.3P.125V/7A.1.8M.(Japan type)                                                | 1    |
| 1255201200           | Power Adapter 12V/10A 120W FSP120-AHAN3 w/o Lock                                       | 1    |
| 1255X00063           | AC/DC Adapter.100-240V.150W.12V/12.5A.AC C14 DC JACK W/ Lock 180D.DELTA.DPS-150AB-15 J | 1    |
| 170X000568           | COM Cable.2ports.150mm                                                                 | 1    |
| 170X000576           | USB2.0 Cable.2ports.100mm                                                              | 1    |
| 170X000482           | Audio cable.50mm                                                                       | 1    |
| PICO-V2K4-SEMI-VESA1 | VESA bracket kit                                                                       | 1    |
| PICO-V2K4-SEMI-WMT1  | Wallmount bracket kit                                                                  | 1    |
| PICO-V2K4-SEMI-DIN1  | Din rail kit                                                                           | 1    |

## 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-SEMI-A11-S001 | V2516 | 8GB    | Type C to DP x 1<br>HDMI x 2 | Onboard NVME SSD<br>64GB x 1 | GbE x 1<br>2.5GbE x 1 | USB 3.2 Gen 2 x 2<br>USB 3.2 Gen 2 Type C x 1 | —              | M.2 2280 M-key x 1<br>mini-PCIe(Full) x 1 | +12V (ATX) | 0~50°C         | —     | SMBUS x 1 (I2C Optional)<br>TPM2.0 |
| PICO-V2K4-SEMI-A11-S002 | V2718 | 16GB   | Type C to DP x 1<br>HDMI x 2 | Onboard NVME SSD<br>64GB x 1 | GbE x 1<br>2.5GbE x 1 | USB 3.2 Gen 2 x 2<br>USB 3.2 Gen 2 Type C x 1 | —              | M.2 2280 M-key x 1<br>mini-PCIe(Full) x 1 | +12V (ATX) | 0~50°C         | —     | SMBUS x 1 (I2C Optional)<br>TPM2.0 |
| PICO-V2K4-SEMI-A11-S003 | V2718 | 32GB   | Type C to DP x 1<br>HDMI x 2 | Onboard NVME SSD<br>64GB x 1 | GbE x 1<br>2.5GbE x 1 | USB 3.2 Gen 2 x 2<br>USB 3.2 Gen 2 Type C x 1 | —              | M.2 2280 M-key x 1<br>mini-PCIe(Full) x 1 | +12V (ATX) | 0~50°C         | —     | SMBUS x 1 (I2C Optional)<br>TPM2.0 |

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## Headquarters & Warehouse

Elektrostraat 17  
NL-7483 PG Haaksbergen  
The Netherlands

T: +31 (0)53 573 33 33  
E: [info@texim-europe.com](mailto:info@texim-europe.com)  
Homepage: [www.texim-europe.com](http://www.texim-europe.com)



### The Netherlands

Elektrostraat 17  
NL-7483 PG Haaksbergen

T: +31 (0)53 573 33 33  
E: [nl@texim-europe.com](mailto:nl@texim-europe.com)



### Belgium

Zuiderlaan 14, box 10  
B-1731 Zellik

T: +32 (0)2 462 01 00  
E: [belgium@texim-europe.com](mailto:belgium@texim-europe.com)



### UK & Ireland

St Mary's House, Church Lane  
Carlton Le Moorland  
Lincoln LN5 9HS

T: +44 (0)1522 789 555  
E: [uk@texim-europe.com](mailto:uk@texim-europe.com)



### Germany

Bahnhofstrasse 92  
D-25451 Quickborn

T: +49 (0)4106 627 07-0  
E: [germany@texim-europe.com](mailto:germany@texim-europe.com)



### Germany

Martin-Kollar-Strasse 9  
D-81829 München

T: +49 (0)89 436 086-0  
E: [muenchen@texim-europe.com](mailto:muenchen@texim-europe.com)



### Austria

Martin-Kollar-Strasse 9  
D-81829 München

T: +49 (0)89 436 086-0  
E: [austria@texim-europe.com](mailto:austria@texim-europe.com)



### Nordic

Stockholmsgade 45  
2100 Copenhagen

T: +45 88 20 26 30  
E: [nordic@texim-europe.com](mailto:nordic@texim-europe.com)



### Italy

Martin-Kollar-Strasse 9  
D-81829 München

T: +49 (0)89 436 086-0  
E: [italy@texim-europe.com](mailto:italy@texim-europe.com)