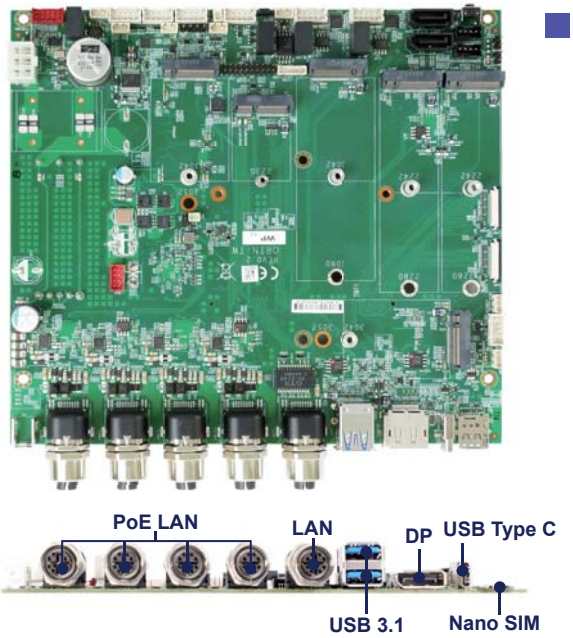
ORIN-TW(M12)

Carrier Board for NVIDIA® Jetson Orin™ Nano (Super) / NX SoM

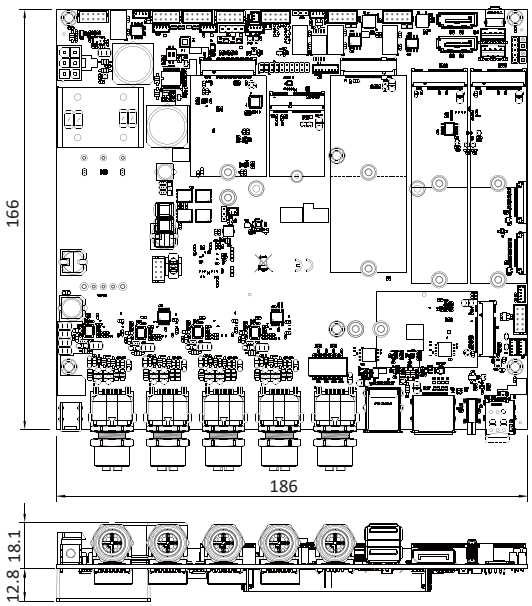


CPU Board:

- NVIDIA Jetson Orin™ Nano (Super): 4 / 8GB LPDDR5, 20 / 40 TOPs
- NVIDIA Jetson Orin™ NX: 8 / 16GB LPDDR5, 70 / 100 TOPs
- AI Accelerator: NVIDIA® Jetson Orin™ Nano (Super) / Orin™ NX

- 1 x DP, 5 x GbE (1 + 4 x PoE)
- 1 x USB 3.1 Type C ; 2 x USB 3.1 Type A ; 1x USB 2.0
- Mic-in / Line-out ; AMP 2W, 2 x SATA
- 2 x Isolated RS232 / RS422 / RS485, 1 x Isolated CANBus
- 1 x M.2 M key, 4 x M.2 B key, 1 x M.2 E Key, 1 x Nano SIM
- 2 x MIPI CSI, SPI, I2S, 3 x I2C
- 8DI / 8 DO, ISO Wide Range +9~36V, CPC-Ignition on/off control

Dimensions: (Unit:mm)



Specifications :

- CPU
  8-core Arm® Cortex®-A78AE 2.0 GHz
  6-core Arm® Cortex®-A78AE 1.5 Ghz
- GPU
  1024-core NVIDIA Ampere architecture GPU with 32 Tensor Cores
  512-core NVIDIA Ampere architecture GPU with 16 Tensor Cores
- AI Accelerator
  NVIDIA Jetson Orin NX: 70 / 100 TOPs
  NVIDIA Jetson Orin Nano (Super): 20 / 40 TOPs
- System Memory
  Jetson Orin NX: LPDDR5, 8 / 16GB
  Jetson Orin Nano (Super): LPDDR5, 4 / 8GB
- Storage
  1 x M.2 M key Type 3042 / 3080 (PCIe x 4), NVMe ; 2 x SATA
  2 x M.2 B key Type 2242 / 2280 (SATA-SSD)
- Display
  1 x DP
- LAN
  5 x GbE (1 + 4 x PoE (I210IT))
- Audio
  Audio, Support Line-out / Mic-in
  Two channel Class D Audio Amplifier 2W
- Expansion Interface
  1 x M.2 M key Type 3042 / 3080 (PCIe x 4)
  1 x M.2 B key Type 3042 / 3052 (PCIe x 1 / USB 2.0 (OEM to USB 3.1))
  1 x M.2 B key Type 3042 / 3052 (USB 3.1 / 2.0)
  1 x M.2 E key Type 2230 (PCIe x 1 / USB 2.0 / UART / I2S)
  2 x M.2 B key Type 2242 / 2280 (SATA-SSD)
  1 x Nano SIM
- Expansion Options
  NF212A M.2 B + M Key 2242 PCIe to GbE LAN
  NF212B M.2 B + M Key 3042 PCIe to Dual GbE LAN
  NF226A M.2 B + M Key 2242 PCIe to 2.5G LAN
  NF226B M.2 B + M Key 3042 PCIe to Dual 2.5G LAN
  CC007 USB to 4 x RS232 / 485 / 422
- USB
  1 x USB 3.1 Type C (external) ; 2 x USB 3.1 Type A (external)
  1 x USB 2.0 (internal)
- Serial IO
  2 x ISO RS232 / 422 / 485
  1 x ISO CANBus
- SPI, I2C
  SPI, I2S, 3 x I2C
- Camera interface
  2 x MIPI-CSI
- GPIO
  Hardware digital Input & Output, 8 x DI / 8 x DO
- Power Input
  ISO Wide Range +9~36V
  CPC-Ignition on/off delay control
  power brick 1/4 CQB100W-24S12 9~36V IN / 12V Out 100W (SYS) (Standard SPEC)
  power brick 1/4 CQB100W-48S12 18~75V IN / 12V Out 100W (SYS) (OEM SPEC Non PSE)
  power brick 1/4 CQB150W-24S48 9~36V IN / 48V Out 150W (SYS+PSE) (OEM SPEC)
- Dimension
  186 x 166 mm ; Weight: 345g
- Operation Temperature (100% CPU Usage)
  -20°C~70°C
- Operation Humidity
  5~95%, non-condensing
- Chassis (OEM I/O Expansion by request)
  Box PC: HAWK
- OS Support
  JetPack 6.2 Ubuntu 22.04.05

Specification are subject to change without prior notice. ODM / OEM is available.