

AIEdge-X[®] 80

Edge AI Computer
NVIDIA[®] Jetson Orin[™] NX



Main Features

- NVIDIA[®] Jetson Orin[™] NX 16GB (100 TOPS)
- NVIDIA[®] Jetson Orin[™] NX 8GB (70 TOPS)
- 1024-core NVIDIA[®] Ampere GPU with 32 Tensor Cores
- 4 x Intel[®] GbE LAN port
- 1 x M.2 2280 Key M for Storage,
- 1 x M.2 3042/3052 Key B for 5G / LTE
- 1 x full size Mini PCIe for WiFi / BT
- 1 x HDMI, 2 x COM port, 4 x USB, 1 x USB OTG
- Extended Operating Temperature -20 ~ 60 °C
- DC in 24V with 3 pin phoenix terminal block

Product Overview

Powered by NVIDIA[®] Jetson Orin[™] NX system on module (SoM), it can support multiple AI application pipelines with NVIDIA[®] Ampere architecture GPU for deep learning and vision accelerators, AIEdge-X[®]80 is a fanless edge AI computer promises up to 100 TOPS of AI inference acceleration performance. This gives you up to 3X the performance of Jetson AGX Xavier[™] and up to 5X the performance of Jetson Xavier[™] NX. AIEdge-X[®]80 offers 1 x HDMI, 2 x COM port, 2 x USB 3.2, and 2 x USB 2.0 ports. Thus, AIEdge-X[®]80 is dedicated for image AI processing system on object detection which can be utilized in sorting machine, security management, parcel tracking system, and traffic enforcement.

Specifications

SOM module

- 8-core NVIDIA[®] Arm CPU (2MB L2 + 4MB L3), 16GB SoM
- 6-core NVIDIA[®] Arm CPU (1.5MB L2 + 4MB L3), 8GB SoM

GPU

- 1024-core NVIDIA[®] Ampere GPU with 32 Tensor Cores

AI Accelerator

- NVIDIA[®] Jetson Orin[™] NX 16GB (100 TOPS)
- NVIDIA[®] Jetson Orin[™] NX 8GB (70 TOPS)

System Memory

- Onboard 128-bit LPDDR5, 16GB
- Onboard 128-bit LPDDR5, 8GB

Expansion

- 1 x Full-size Mini PCIe slot, supports Wi-Fi / BT Module
- 1 x M.2 3042/3052 Key B, supports 5G / LTE Module

I/O Interface – Rear

- 1 x 3 pin phoenix terminal block
- 2 x USB 2.0, Type-A
- 2 x USB 3.2 Gen 1x1, Type-A
- 4 x GbE RJ45 port (3 x Intel[®] i210-HT, 1 x from SoM)

- 1 x HDMI 1.4, up to 4096 x 2160@60Hz
- 1 x USB OTG

I/O Interface – Front

- 1 x Power button
- 1 x HDD LED
- 1 x COM 1, supports RS232/422/485
- 1 x COM 2, supports RS232 (only TX/RX)
- 3 x Antenna hole

Storage

- 1 x M.2 2280 Key M SSD (PCIe Gen 3 x 4)

Power Supply

- +24V DC in

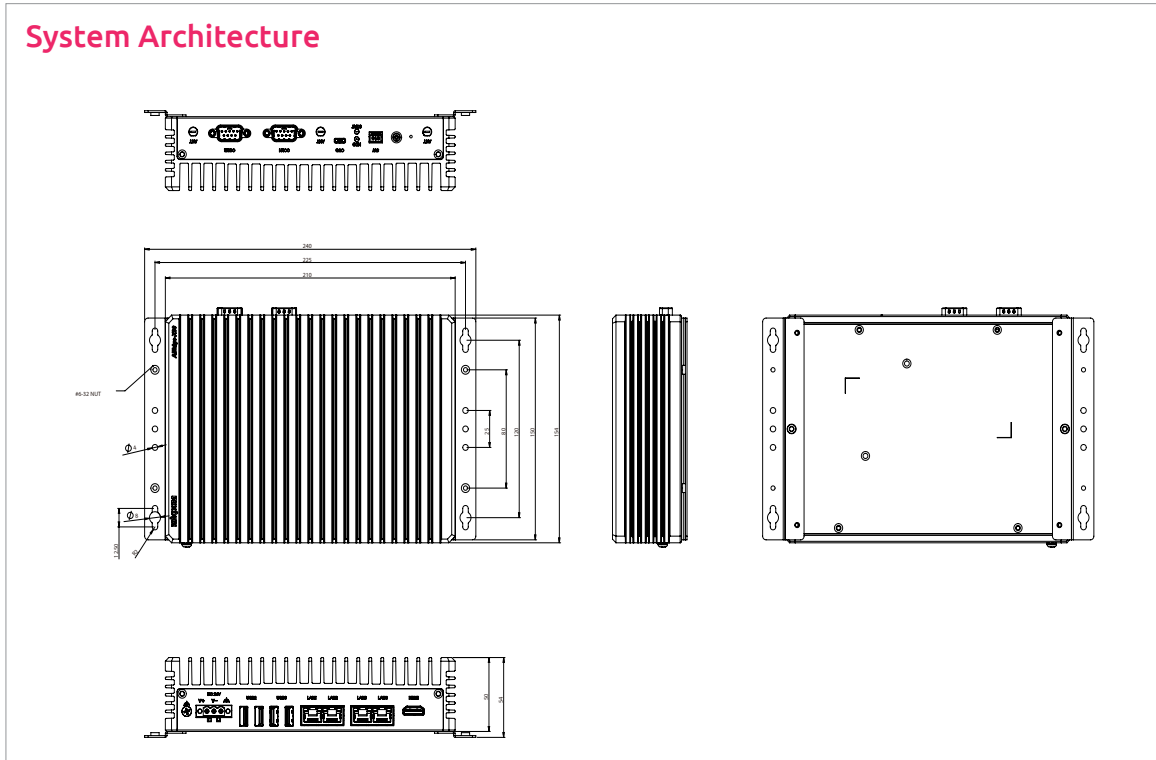
Environment

- Operating temperature:
 - Ambient with air flow: -20°C to 60°C
 - Storage temperature: -20°C to 80°C
- Relative humidity: 10%~95% (non-condensing)
- Vibration protection:
 - Random: 2Grms @ 5 ~ 500Hz, IEC60068-2-64
 - Sinusoidal: 2G @ 5 ~ 500Hz, IEC60068-2-6

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System Architecture



Mechanical & Dimension

- System Unit
 - Dimension: 240mm (W) x 154mm (D) x 54mm (H) (w/ wall mount)
 - Net Weight: 2.03 kg/Unit
- Package Carton
 - Gross Weight: 2.42kg 1unit/per carton
 - Carton dimension: 320mm (W) x 245mm (D) x 127mm (H)

Operating System Support

- NVIDIA® Jetpack™ 5.1.2

Certifications

- CE (EMC EN55032 + EN55024)
- FCC Class A (EMI Part 15)

Ordering Information

- **AIEdge-X®80-NX16 (P/N: 10W200X8000X0)**
AI Edge computing with NVIDIA® Jetson Orin™ NX 16GB
- **AIEdge-X®80-NX8 (P/N: 10W200X8001X0)**
AI Edge computing with NVIDIA® Jetson Orin™ NX 8GB

Assured Systems

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