

# MIC-732-A0

## AI Inference System Based on NVIDIA Isaac Nova Orin



### Features

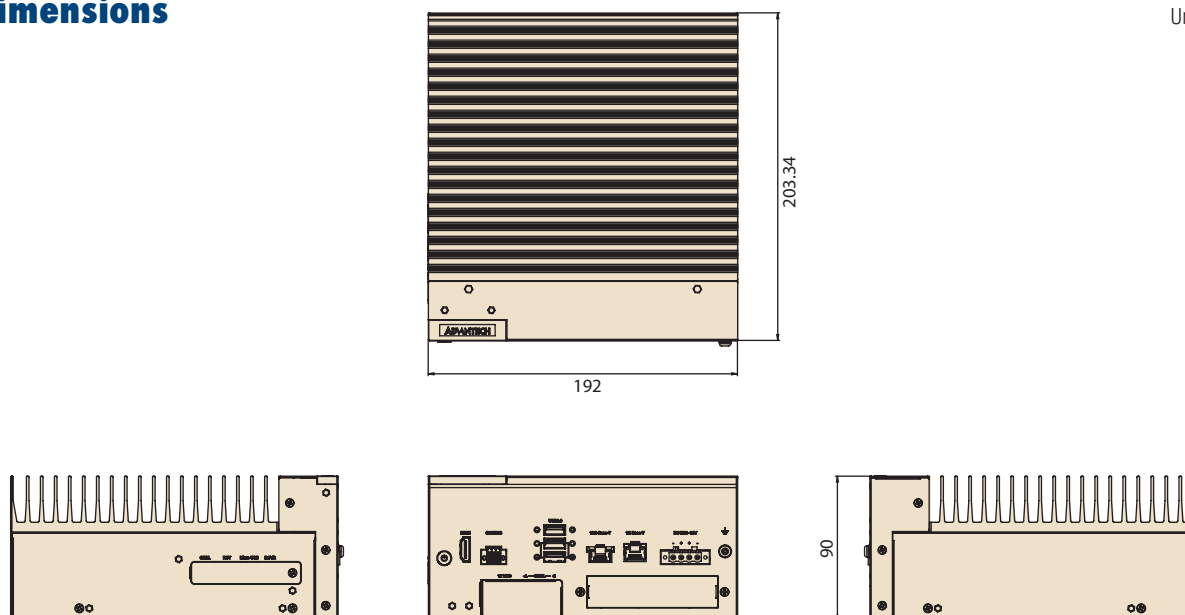
- Fanless and ultra-compact design
- Embedded with NVIDIA® Jetson AGX Orin™ up to 275 TOPS
- Supports 1 x 10GbE, 1 x 2.5GbE, 3 x USB 3.2 Gen 2 (10 Gbit/s)
- Supports 2 x CANbus, 1 x mPCIe, 2 x Nano SIM slots
- Support Total 8-ch GMSL3.0/2.0 with FAKRA connectors
- Support NVIDIA Isaac Robot Operating System (ROS2)

### Specifications

|                |                       |                                                                                                             |
|----------------|-----------------------|-------------------------------------------------------------------------------------------------------------|
|                |                       | NVIDIA                                                                                                      |
|                |                       | MIC-732-A06A1                                                                                               |
| Processor      | CPU                   | 12-core NVIDIA Arm® Cortex A78AE v8.2 64-bit CPU, 3MB L2 + 6MB L3                                           |
|                | GPU                   | 2048-core NVIDIA Ampere GPU with 64 Tensor Cores Maximum Operating Frequency: 1.3GH                         |
|                | Mem                   | 64GB LPDDR5                                                                                                 |
|                | eMMC                  | 64GB eMMC                                                                                                   |
| I/O            | Ethernet              | 1 x 10/100/1000/2500 Mbps<br>1 x 10GbE                                                                      |
|                | Display               | 1 x HDMI Display                                                                                            |
|                | USB                   | External: 3 x USB 3.2 Gen 2, 2 x USB micro B, (1 from UART for debug)<br>Internal: 1 x USB 2.0 (pin header) |
|                | CAN                   | 2 x CANBus                                                                                                  |
|                | Serial Ports          | 2 x RS-232/422/485 (On-board pin header)                                                                    |
| Expansion      | M.2                   | 1 x M.2 3052 (B-Key) (Signal: USB 3.0+USB 2.0)<br>1 x M.2 2230 (E-Key) (Signal: PCIe+USB2.0)                |
|                | Mini PCIe             | 1 x mPCIe (Signal: PCIe+USB 2.0)                                                                            |
|                | SIM                   | 2 x Nano SIM slots                                                                                          |
|                | GMSL(Optional)        | 8-ch GMSL3.0/2.0 with FAKRA connectors                                                                      |
|                | iDoor (Optional)      | 1 x iDoor bracket reserve                                                                                   |
| Storage        | M.2                   | 1 x M.2 2280 (B/M-Key, NVMe, Signal: PCIe x4)                                                               |
| Power          | Mode                  | AT/ATX (Default AT)                                                                                         |
|                | Input Voltage         | 9~36V <sub>DC</sub> , Rated 12V <sub>DC</sub>                                                               |
| Environment    | Operation Temperature | -20 ~ 60 °C with 0.7 m/s air flow                                                                           |
|                | Operating Humidity    | 95% @ 40 °C (non-condensing)                                                                                |
|                | Vibration             | 3Grms @ 5 ~ 500 Hz, random, 1 hr/axis                                                                       |
|                | Shock                 | 10G / 11 ms                                                                                                 |
| Button         |                       | Reset / Recovery                                                                                            |
| Mechanical     | Dimension (W x H x D) | 192 x 203 x 90 mm (with heat sink)                                                                          |
|                | Weight                | 3kg                                                                                                         |
|                | Installation          | Desktop / Wall mount                                                                                        |
| BSP            | Jetpack               | Above 6.0                                                                                                   |
| Certifications |                       | CE/ FCC/ BSMI/ KCC/ CCC                                                                                     |

## Dimensions

Unit: mm



## Ordering Information

| Part Number   | NVIDIA Module | Memory | eMMC  |
|---------------|---------------|--------|-------|
| MIC-732-A06A1 | AGX Orin      | 64 GB  | 64 GB |

## Packing List

| Part Number   | Description                         | Quantity |
|---------------|-------------------------------------|----------|
| MIC-732-A0    | AI Inference System                 | 1        |
| 1652003234    | Power terminal block 4P             | 1        |
| 1652006794-02 | CanBus Plug-In Block 2x3P           | 1        |
| 1700023619-01 | Micro USB cable for system recovery | 1        |

## Optional

| Category            | Part number          | Description                                                          | Quantity               |
|---------------------|----------------------|----------------------------------------------------------------------|------------------------|
| Power Adapter       | 96PSA-A150W19P4-4    | Adaptor A/D, 100-240V, 150W, 19V                                     | 1                      |
| Power Cord          | 1702002600           | Power Cord (USA) UL/CSA, 3-pin, 10A, 125V, 1.83 M,                   | 1                      |
|                     | 1700029019-01        | Power Cord (PSE/BSMI), 3-pin, 7A, 125V, 1.8 M, DAC-ST01              | 1                      |
|                     | 1702002605           | Power Cord (EU) 2-pin, 10/16A, 220V, 1.83 M, 90 D                    | 1                      |
|                     | MIC-FG-8G2C1         | 8-port GMSL video capture card                                       | 1                      |
| GMSL2 frame grabber | 1751000758-01        | RF Cable MINI FAKRA B-Z/F FAKRA-Z/M 1x4 BLK L300                     | 1 to 4 cameras         |
|                     | 1751000805-01        | Cable Ant. FAKRA-Z/F FAKRA-Z/F KS302 BLK L15M                        | 1 (by camera quantity) |
|                     | 1700036237-01        | A Cable 1x4P-2.0/1x4P-2.54x2 50CM                                    | 1                      |
|                     | PCM-27D24DI-AE       | Digital I/O, 16 DI / 8 DO, Isolation, DB37 x 1                       | 1                      |
| iDoor Module (DI/O) | 1960065854N021       | iDoor bracket                                                        | 1                      |
|                     | PCM-24R2GL-AE        | 2 Port Giga LAN Intel i350 PCIe mini card                            | 1                      |
|                     | 1960065854N021       | iDoor bracket                                                        | 1                      |
| iDoor Module (LAN)  | 1970006420N000       | Heatsink block for PCM-24R2GL-AE                                     | 1                      |
|                     | 1990011336N000       | Thermal Pad/ 21x21x1 k=6 GR-Hm                                       | 1                      |
|                     | PCM-24U2U3           | 2-Port USB 3.0, mPCIe, USB-A type                                    | 1                      |
| SSD                 | SQF-C8MV2-128GDEDM   | SQF PCIe/NVMe Gen.3 M.2 2280 OPAL 720-D 128G 3D TLC BiCS5 (-20~85°C) | 1                      |
|                     | SQF-C8MV2-256GDEDM   | SQF PCIe/NVMe Gen.3 M.2 2280 OPAL 720-D 256G 3D TLC BiCS5 (-20~85°C) | 1                      |
|                     | SQF-C8MV2-512GDEDM   | SQF PCIe/NVMe Gen.3 M.2 2280 OPAL 720-D 512G 3D TLC BiCS5 (-20~85°C) | 1                      |
|                     | SQF-C8MV4-1TDEDM     | SQF PCIe/NVMe Gen.3 M.2 2280 OPAL 720-D 1T 3D TLC BiCS5 (-20~85°C)   | 1                      |
|                     | SQF-C8MV4-2TDEDM     | SQF PCIe/NVMe Gen.3 M.2 2280 OPAL 720-D 2T 3D TLC BiCS5 (-20~85°C)   | 1                      |
|                     | EWM-W173H01E         | Wi-Fi 6+BT 5.0 Module 2.4/5GHz Mini PCIe                             | 1                      |
| WIFI                | 1751000620-01        | RF Cable SMA/F-R MHF4L/113 BLK L300mm                                | 2                      |
|                     | 1751000460-01        | Wifi antenna// Dipole Ant. WiFi 6E SMA/M-R BLK L111.7mm IP54         | 2                      |
| 5G                  | AIW-356              | 5G Sub6+GNSS M.2 3052 Key B, (USB only)                              | 1                      |
|                     | 1751000620-01        | RF Cable SMA/F-R MHF4L/113 BLK L300mm                                | 4                      |
|                     | 1750009372-01        | Ant.SMA/M 90/180 5G BLK 167mm RG178 (5G)                             | 4                      |
| 4G                  | 968AD00589 (US)      | 4G LTE CAT4+GNSS Mini PCIe Full size WW                              | 1                      |
|                     | 96PD-EC25EFA (EU)    | 4G LTE+GNSS Mini PCIe 5130 EU,TW,IN,KR,SEA                           | 1                      |
|                     | 96PD-EG25GG (Global) | 4G LTE+GNSS Mini PCIe 5130 Global                                    | 1                      |
|                     | 1751000620-01        | RF Cable SMA/F-R MHF4L/113 BLK L300mm                                | 2                      |
|                     | 1750008303-01        | LTE antenna// Antenna AN0727-64SP6BSM                                | 2                      |