

MIC-712-0X

AI Platform Based on NVIDIA® Jetson Orin™ NX

Preliminary



Features

- Ultra-slim design for mobile equipment in safety & security applications
- Embedded with NVIDIA® Jetson Orin™ NX/Orin Nano™
- Multiple expansions for GMSL, PoE, USB
- Support nvidia power mode up to 157 TOPS performance
- Integrate Out-of-Band management within the system



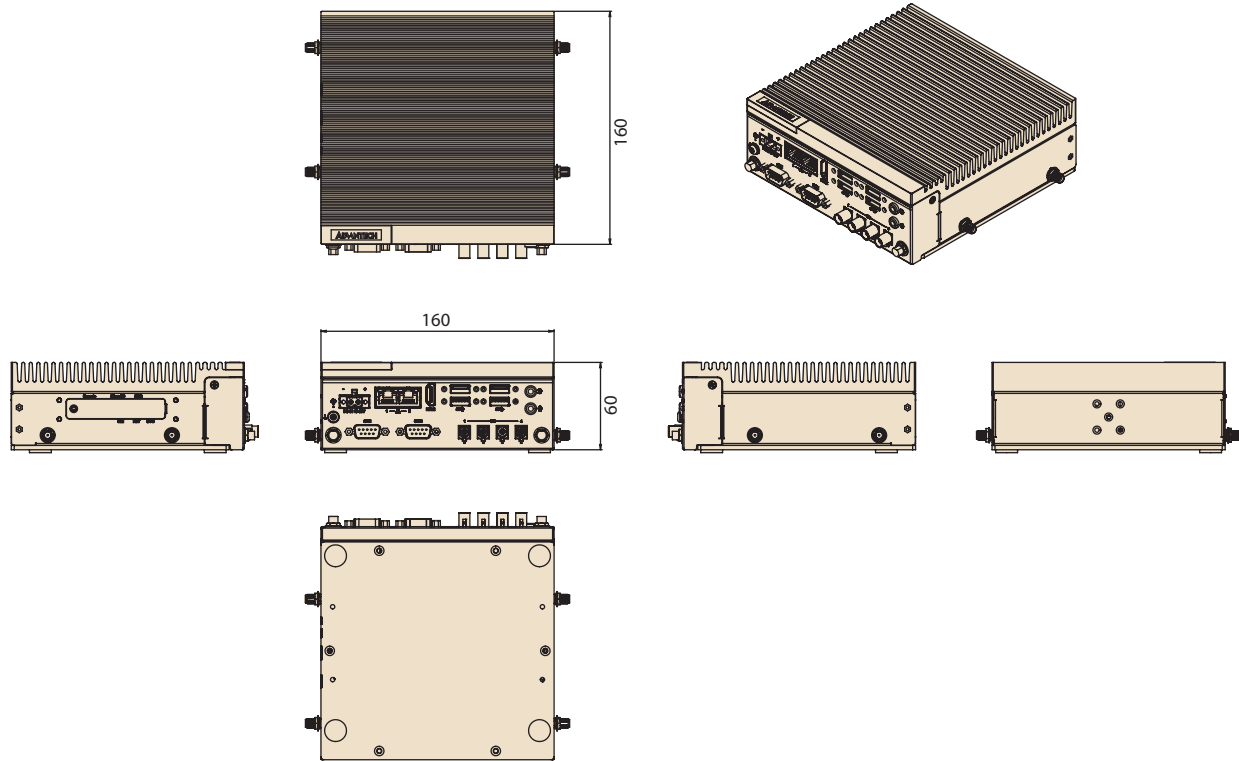
Specifications

		NVIDIA® Jetson Orin™ NX
Processor System	CPU	16GB: 8-core NVIDIA Arm® Cortex A78AE v8.2 64-bit CPU 8GB: 6-core NVIDIA Arm® Cortex A78AE v8.2 64-bit CPU
	GPU	1024-core NVIDIA Ampere GPU with 32 Tensor Cores
	Memory	16GB: 16GB LPDDR5 8GB: 8GB LPDDR5
	Flash	-
I/O	Ethernet	2 x 10/100/1000 Mbps
	Display	HDMI (Max. resolution 3840x2160 @ 60Hz)
	USB	External: 4 x USB 3.2 Gen 2
	Debug console	1 x Micro USB
	OTG USB	1 x Micro USB
Expansion	M.2 E-key	1 x 2230 E-key (Signal: PCIe + USB 2.0)
	M.2 B-key	1 x M.2 3052 (Signal: USB)
	SIM	1 x Nano SIM slots
	TPM (Optional)	1 x TPM 2.0
	GMSL (Optional)	1 x MIPI connector for GMSL expansion
	Serial Port (Optional)	1 x RS-232/422/485 (On-board pin header reserved)
	CANBus (Optional)	1 x CANBus (On-board pin header reserved)
Storage	M.2	1 x M.2 2280 (Signal: PCIe x1, Gen 4)
	SD Card	1 x Micro SD
Power	Mode	AT
	Input Voltage	19 ~ 36 V _{DC}
Environment	Operating Temperature	-20 ~ 70 °C with 0.7 m/s airflow
	Operating Humidity	95% @ 40 °C (non-condensing)
	Vibration	3 Grms @ 5 ~ 500 Hz, random, 1 hr/axis
	Shock	10G / 11ms
Mechanical	Dimensions (W x D x H)	160 x 160 x 60 mm (6.3" x 6.3" x 2.36")
	Weight	2.05 kg (w/o packing material)
	Installation	Desktop
BSP	Jetpack	JP6.2 or above
Certifications		CE/FCC/UKCA/CB/UL/BSMI/CCC (No RED certification)

MIC-712-OX

Dimensions

Unit: mm



Ordering Information

Part Number	NVIDIA Module	NVIDIA Module Memory	NVIDIA Module eMMC	NVMe**
MIC-712-OX4A1	Orin NX	16GB	N/A	128GB
MIC-712-OX3A1	Orin NX	8GB	N/A	128GB

** The system BSP will be pre-installed in a 128GB NVMe M.2 SSD.

Packing List

Part Number	Description	Quantity
MIC-712-OX	MIC-712 Fanless system	1
1652002202	Power connector - 2-pin	1
1700023619-01	Micro USB cable for System recovery	1
1930005673-11	Screw M3x4.5L for GMSL card	2
1960095312N001	Mounting Bracket	2
1930007979	Screw for mounting bracket	4

Optional

Part Number	Description
96PSA-A65W19P2-1	Power Adapter 100-240V 65W 19V C6
96PSA-A120W24T2-4	ADP A/D 100-240V 120W 24V C14 CORD END 62368
1700001524	Power Cord UL 3P 10A 125V C5 183 cm (US)
170203183C	Power Cord EU 3P 2.5A 250V C5 183 cm (EU)
170203180A	Power Cord BSI 3P 2.5A 250V C5 183 cm (UK)
1700018553	Power Cord SAA 3P 2.5A 250V C5 183cm (AU)
1700008921	Power Cord PSE 3P 7A 125V C5 183 cm (JP)
1700019146	Power Cord CCC 3P 2.5A 250V C5 183 cm (CN)
1700027928-01	Power Cord UL 3P 15A 125V C13 183 cm (US)
1702002605-11	Power Cord EU 3P 10A 250V C13 183cm (EU)
1702031801	Power Cord BSI 3P 10A 250V C13 183cm (UK)
1700020098	Power Cord SAA 3P 10A 250V C13 183cm (AU)
1700028677-01	Power Cord PSE 3P 7A 125V C13 180cm (Japan)
1700000596-11	Power Cord CCC 3P 10A 250V C13 183cm (China)
PCA-TPMSPI-00A1	PCA-TPMSPI-00A1
1700019116	COM port / CANBus cable
1700027920-01	Audio port cable (1 x Line-In + 1 x Mic)
MIC-FG-4G2C1	4CH GMSL2 frame grabber with FAKRA