

MIC-715-0X

Ruggedized In-Vehicle AI Fanless System Based on NVIDIA® Jetson Orin™ NX

Preliminary



Features

- Ruggedized IP67 waterproof fanless design
- Embedded with NVIDIA® Jetson Orin™ NX up to 100 TOPS
- 2 x GbE and 4 x PoE with IEEE 802.3af compliance
- 2 x USB 3.0, 2 x CAN bus, 1 x HDMI
- Supports 2 x mPCIe, 1 x M.2 3052, 1 x M.2 2280
- Supports Allxon 24/7 remote monitoring and OTA deployment
- e-mark compliance

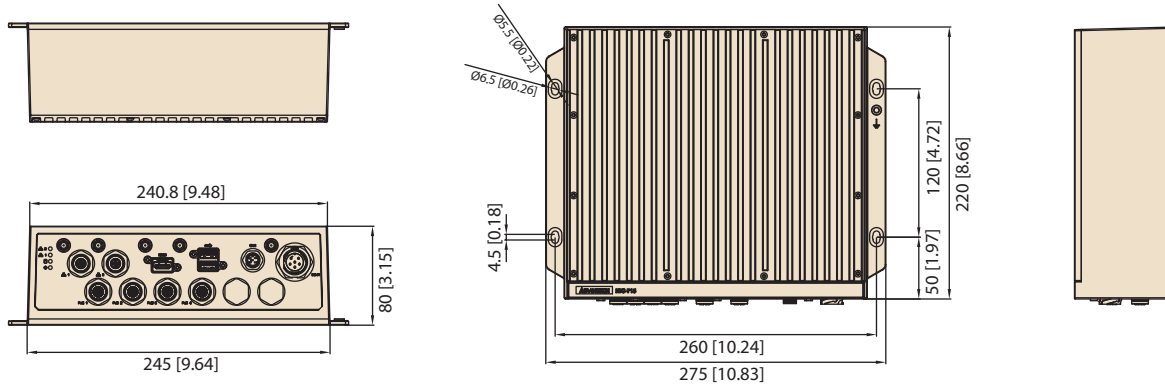
Specifications

		NVIDIA® Jetson Orin™ NX
Processor System	CPU	16GB: 8-core NVIDIA Arm® Cortex A78AE v8.2 64-bit CPU
	GPU	1024-core NVIDIA Ampere GPU with 32 Tensor Cores
	Memory	16GB LPDDR5
	Flash	-
I/O	Ethernet	6 x 10/100/1000 Mbps (4 x PoE support, IEEE 802.3af) in M12 X-coded, 8-pin female connector
	Display	HDMI (Max. resolution 3840 x 2160 @ 60Hz)
	USB	External: 2 x USB 3.0
	CAN Bus	2 x CAN bus
	OTG USB	1 x Micro USB
Expansion	Mini PCIe	2 x mPCIe (signal: PCIe + USB)
	SIM	2 x Nano SIM slot (M.2 3052 & Mini PCIe2 slot)
	M.2	1 x M.2 3052 (B-Key, signal: PCIe + USB)
Storage	M.2	1 x M.2 2280 M-Key (NVMe, PCIe x1)
Power	Mode	M16, 6-pin male
	Input power	12/24V _{DC} (12-6A) with ignition *Note1
Environment	Operating Temperature	-20 ~ 60 °C with 0.7 m/s airflow (Max-N ARM mode)
	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)	275 x 220 x 80 mm (10.8" x 8.7" x 3.2")
	Weight	4.5 kg
	Installation	Desktop
BSP	Jetpack	Above 5.1
Certifications		CB/UL/CE/FCC/CCC (No RED certification)

Note1: Default setting is 12V DC in. If the power source is 24V, please open the case and adjust the SW1 DIP switch to 01 for 24V DC in.

Dimensions

Unit: mm [inch]



Ordering Information

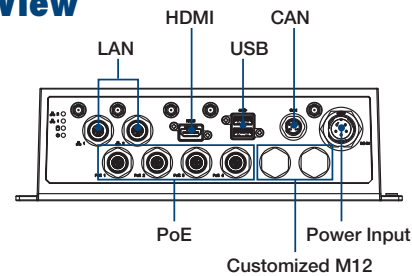
Part Number	NVIDIA Module	Memory	Installed Jetpack version	NVMe**	Super mode support
MIC-715-OX4A1	Orin NX	16GB	JP6.0	128GB pre installed	NO
MIC-715-OX4A2	Orin NX	16GB	NA	NA	NO

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

Packing List

Part Number	Description	Quantity
MIC-715-OX4A1	Ruggedized AI System based on Orin NX	1
1700023619-01	Micro USB Cable	1
1700032301-01	6-pin M12 power cable	1
1930005673-11	M2 Screws	2
1930008089	Mini PCIe Screws	2

Front View



Optional for Development/Testing Only

Part Number	Description
XSK320-LRS-150-12	Open Frame, A/D 100-240V 150W 12V

Remote Management Enrollment

Enroll in 24/7 secure service to get all the features of remote device management on one centralized cloud portal - the Allxon Portal
 Enrollment Page: https://allxon.com/jetson/device_enroll/

Optional

Category	Part Number	Description	Quantity
Cable	1700025503-01	M Series Waterproof Cable 8P/RJ45-8P8C 100cm (M12 to RJ-45)	1
	1700022250-21	Type-A Waterproof Cable 5P(F) 200cm (CAN cable)	1
Thermal Kit	98R27150000	M2 3052 / Mini PCIe module thermal kit	1
Wifi	EWM-W173H01E	Wi-Fi 6+BT 5.0 Module 2.4/5GHz Mini PCIe	1
	1751000626-01	RF Cable SMA/F-R MHF1/113 BLK L250mm	2
	1751000460-01	Dipole Ant. Wi-Fi 6E SMA/M-R BLK L111.7mm IP54 (Wi-Fi)	2
5G	9656EVMG00E	Half-size miniPCIe to miniPCIe bracket set	1
	AIW-356-DQ	5G Sub6+GNSS M.2 3052 Key B (by region)	1
	1751000624-01	Cable Ant. SMA/F MHF4L/113 BLK L250mm (5G)	4
	1750009372-01	Ant.SMA/M 90/180 5G BLK 167mm RG178 (5G)	4
SSD	96FD80-P128-AH	APACER M.2 2280 NVME G4x4 128G -25°C ~ 85 °C	1
	96FD80-P256-AH	APACER M.2 2280 NVME G4x4 256G -25°C ~ 85 °C	1
	96FD80-P1TB-TS1	SSSTC M.2 2280 1TB NVME G4x4 SSD -25°C ~85°C	1
	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-C8MV4-2TDDEM	SQF PCIe/NVMe Gen.3 M.2 2280 OPAL 720-D 2T 3D TLC BiCS5 (-20-85°C)	1
	SQF-C8MV2-128GDEDE	SQF PCIe/NVMe Gen.3 M.2 2280 OPAL 720-D 128G 3D TLC BiCS5 (-40-85°C)	1
	SQF-C8MV2-256GDEDE	SQF PCIe/NVMe Gen.3 M.2 2280 OPAL 720-D 256G 3D TLC BiCS5 (-40-85°C)	1
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