

X6-ORN



NVIDIA® Jetson Orin
Edge AI Compact Fanless Embedded System

KEY FEATURES



Nvidia Edge AI engine

NVIDIA® Jetson Orin Nano™ or NX



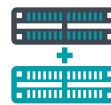
Multi GbE ports with PoE

Four RJ45 GbE ports and optional 2x PoE



OoB Support

Optional OOB (out-of-band) support



Multiple Expansions

1 M.2 2230 E-Key, 1 M.2 2280 M-Key,
1 M.2 3042/3052 B-Key

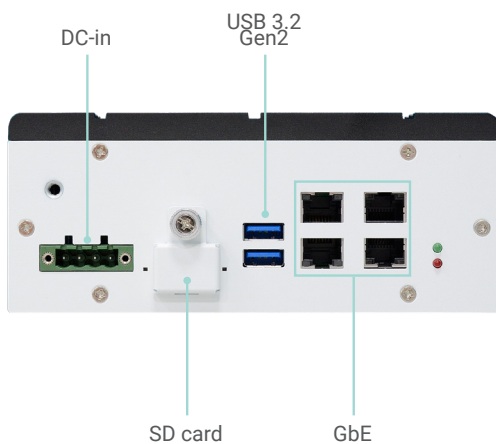


Rich I/O

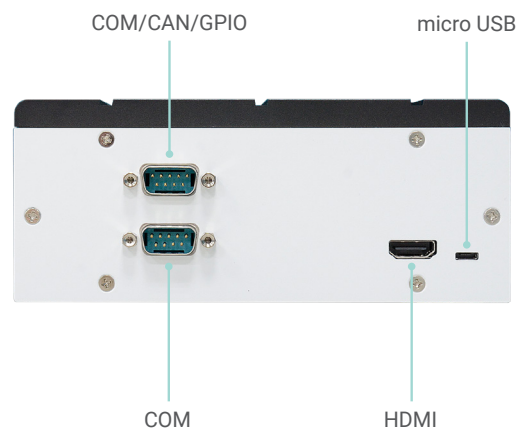
1 COM/CANBus/DIO, 2 USB 3.2



PANEL



Front View



Rear View

SPECIFICATION

SYSTEM	SOM	NVIDIA® Jetson Orin Nano™ 4GB, 7-10W NVIDIA® Jetson Orin Nano™ 8GB, 7-15W NVIDIA® Jetson Orin NX 8GB, 10-20W NVIDIA® Jetson Orin NX 16GB, 10-25W
	Processor	6/8-core Arm® Cortex®-A78AE v8.2 64-bit CPU
	GPU	1024-core NVIDIA Ampere architecture GPU with 32 Tensor Cores for Jetson Orin Nano™ 8GB and Orin NX 8/16GB, 40 TOPS 512-core NVIDIA Ampere architecture GPU with 16 Tensor Cores for Jetson Orin Nano™ 4GB, 20 TOPS
	Memory	8GB 128-bit LPDDR5 68 GB/s for Orin Nano™ 8GB 4GB 64-bit LPDDR5 34 GB/s for Orin Nano™ 4GB 16GB 128-bit LPDDR5 102.4GB/s for Orin NX 16GB 8GB 128-bit LPDDR5 102.4GB for Orin NX 8GB
WATCHDOG TIMER	Watchdog Timer	Built-in NVIDIA® Jetson Orin™
GRAPHICS	Display	HDMI with lock hole
STORAGE	Internal	M.2 2242/2280 M key (PCIe x4)
EXPANSION	Onboard	1 x M.2 Key E 2230 slot (USB 2 +PClex1 signal) for Wi-Fi 6E 1 x M.2 Key B 3042/3052 slot (USB3 signal) for 5G/LTE with Nano SIM
ETHERNET	Controller	Four RJ45 GbE ports from 4x Intel i210 Supports 2x 15W PoE ports upon request
LED	Indicators	1 x Power Status 1 x HDD activity
FRONT I/O	Ethernet	4 x RJ45 GbE connectors
	USB	2 x USB 3.2 Gen2 1 x micro USB for OS Flash
	DC in	1 x 4-pin power terminal block
REAR I/O	CAN bus/ COM/ GPIO	1 x DB-9 RS232/422/485 port 1 x combo DB-9 RS232/422/485/ CAN bus/ GPIO port BIOS selectable for RS232/422/485
	Display	1 x HDMI port with screw hole
Antenna	Antenna	4 x antenna holes
ON BOARD	On board	Header for EC CPU fan header from EC Remote switch Recovery switch for image update AT/ATX switch Reset button Power button
POWER	Type	9-36V DC
	Connector	1x 4-pin terminal block
	RTC Battery	CR2032
OS SUPPORT	Linux	Ubuntu 22.04
MECHANISM	Mounting	Wall mount (mounting brackets and screws) DIN mount by optional
	Dimensions (W x H x D)	Approx. 165 x 65 x 150 mm
	Weight	< 2 kg
ENVIRONMENT	Operating Temperature	-20°C to 70°C
	Storage Temperature	-40°C to 85°C
	Relative Humidity	5 to 95% RH (non-condensing)
STANDARDS AND CERTIFICATIONS	Shock	Operation IEC 60068-2-27 Test Ea: Shock test Half-sine, 3G @ 11ms, 18 Shock ±X, ±Y, ±Z (each axis 3 times) Non- Operation IEC 60068-2-27 Test Ea: Shock test Half-sine, 5G @ 11ms, 18 Shock ±X, ±Y, ±Z (each axis 3 times)
		Operation IEC 60068-2-64 Test Fh: Vibration board-band random test Random,2Grms @ 5~500 Hz, 30min. Non- Operation IEC 60068-2-6 Test Fc: Vibration Sinusoidal Test Sweep sine, 3Grms @ 10~500Hz, 30min.
	Certification	CE, FCC Class A, RoHS, UL 62368-1

ORDERING INFORMATION

Model Name	Description
X6-ORN-NN4	NVIDIA® Jetson Orin Nano™ 4GB system with HDMI, 2 USB 3.2, micro USB, 4 GbE, 1 DB-9 CAN bus/Serial/GPIO port
X6-ORN-NN8	NVIDIA® Jetson Orin Nano™ 8GB system with HDMI, 2 USB 3.2, micro USB, 4 GbE, 1 DB-9 CAN bus/Serial/GPIO port