

V6Xa-ORN



NVIDIA® Jetson Orin
Edge AI Compact Fanless Embedded System

KEY FEATURES



Nvidia Edge AI engine

NVIDIA® Jetson Orin Nano™ or NX



In-Vehicle Design

9-36VDC input with ignition control
eMark certification



Wide Temperature

Ruggedized fanless design with -20 ~ 70°C
(Optional -40°C ~ 70°C) operating temperature



Optional Wireless Expansions

WiFi 6E, 4G LTE / 5G



Camera Connectivity

2x USB 3.0, 8x GMSL2 or 6 x PoE (max.)



OOB Support

Optional OOB (out-of-band) support



PANEL



Front View



Side 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 512-core NVIDIA Ampere architecture GPU with 16 Tensor Cores for Jetson Orin Nano™ 4GB
	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	Output & Interval	Built-in NVIDIA® Jetson Orin™
GRAPHICS	Display	1 x HDMI, M20
STORAGE	Internal	M.2 2242/2280 M key (NVMe)
EXPANSION	Onboard	1 x M.2 Key E 2230 slot (USB 2 +PClex1 signal) for Wi-Fi 6E 1 x M.2 Key B slot for 5G/LTE with Nano SIM
ETHERNET	Controller	2x RJ45 GbE ports from Intel i210 Supports 2x 15W PoE ports
LED	Indicators	1 x Power
FRONT I/O	Ethernet	2 x GbE M12 X code 8pin with PoE 802.3af
	USB	1 x USB 2.0 M20 (type A for recovery)
	CAN bus / COM	1 x M12 A Code (Isolated CAN BUS 2.0 Port With Transceiver x 2)
	GPIO	1 x M12 GPIO / RS485 (4x GPI & 2x GPO & 1x RS485)
	Camera Interface	4 x GbE M12 X code 8pin PoE 802.3af)
		Or 8 x GMSL2 (FAKRA SMB Plug Z code)
SIDE I/O	DC in	1 x M12 B Code 5pin Power Input
	USB	2 x USB 3.0 M20 (type A)
	Display	1 x HDMI M20
	SIM	1 x SIM card slot M20
Antenna	Antenna	6 x antenna holes
POWER	Type	9-36V DC with power ignition control
	Connector	1 x M12 B Code 5pin Power Input
	RTC Battery	Yes
OS SUPPORT	Linux	Jetpack 6.2
MECHANISM	Mounting	Wall mount (mounting brackets and screws)
	Dimensions (W x H x D)	237mm x L: 194mm x H: 105.3mm
	Weight	5.2kg
ENVIRONMENT	Operating Temperature	-20 ~ 70°C (Optional -40°C~70°C)
	Storage Temperature	-40°C ~ 85°C
	Relative Humidity	5 ~ 95% RH (non-condensing)
STANDARDS AND CERTIFICATIONS	Shock	Operation shock test: IEC-60068-2-27 MIL-STD-810H 514.8C-5
	Vibration	Operation Vibration test: IEC 60068-2-64 MIL-STD-810H 514.8C-5
	Certification	CE, FCC, eMark, RoHS
	IP Rating	IP67 enclosure