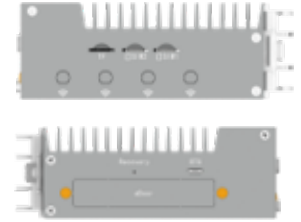


WBP-NVJ01 series

Features

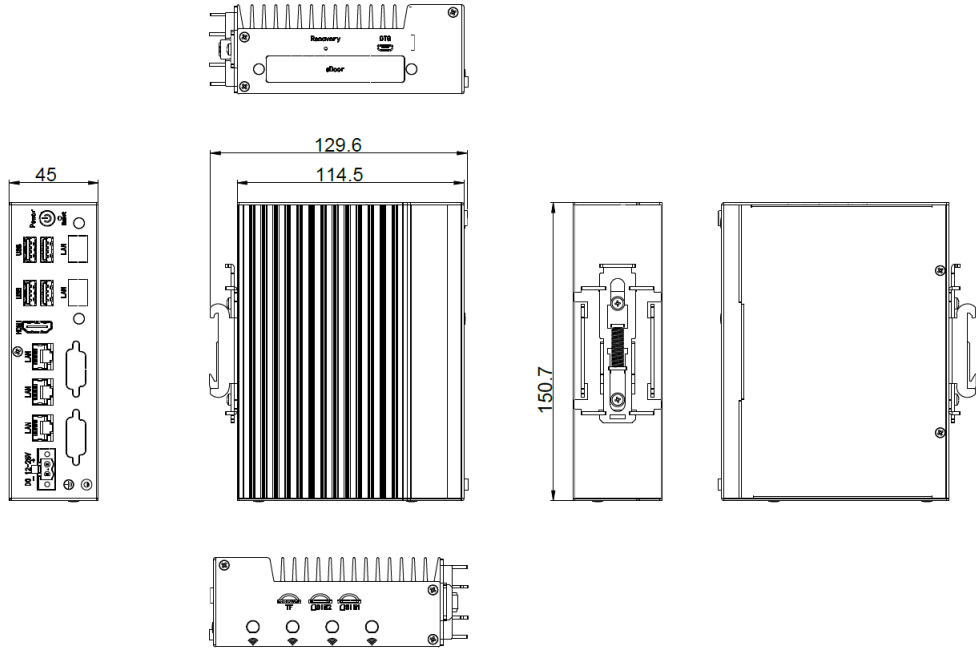
- Fanless Edge AI System with NVIDIA® Jetson TMSO-DIMM SoM
- High-performance AI controller up to 100 TOPS
- Onboard 3 GbE and 4 USB 3.0
- Optional 16bit GPIO, 2 RS-232/485
- 12-28V DC Input
- Support DIN Rail and Desktop Mount



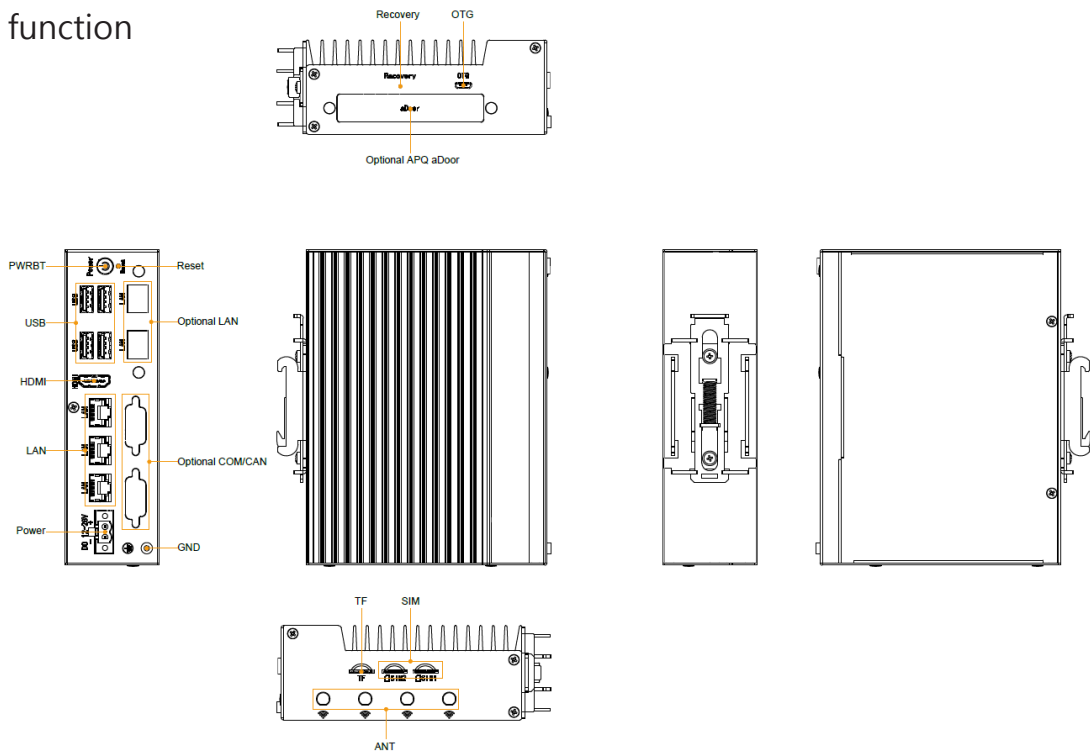
Specifications

	SOM	Nano	TX2 NX	Xavier NX	Xavier NX 16GB
Core Modules	AI Performance	472 GFLOPS	1.33 TFLOPS	21 TOPS	
	GPU	128-core NVIDIA Maxwell™ architecture GPU	256-core NVIDIA Pascal™ architecture GPU	384-core NVIDIA Volta™ architecture GPU with 48 Tensor Cores	
	GPU Max Frequency	921MHz	1.3 GHz	1100 MHz	
	CPU	Quad-core ARM® Cortex®-A57 MPCore processor	Dual-core NVIDIA Denver™ 2 64-bit CPU and quad-core ARM® Cortex®-A57 MPCore processor	6-core NVIDIA Carmel Arm® v8.2 64-bit CPU 6MB L2 + 4MB L3	
	CPU Max Frequency	1.43GHz	Denver 2: 2 GHz Cortex-A57: 2 GHz	1.9 GHz	
	Memory	4GB 64-bit LPDDR4 25.6GB/s	4GB 128-bit LPDDR4 51.2GB/s	8GB 128-bit LPDDR4x 59.7GB/s	16GB 128-bit LPDDR4x 59.7GB/s
	TDP	5W-10W	7.5W - 15W	10W - 20W	
Core Modules	SOM	Orin Nano 4GB	Orin Nano 8GB	Orin NX 8GB	Orin NX 16GB
	AI Performance	20 TOPS	40 TOPS	70 TOPS	100 TOPS
	GPU	512-core NVIDIA Ampere architecture GPU with 16 Tensor Cores	1024-core NVIDIA Ampere architecture GPU with 32 Tensor Cores	1024-core NVIDIA Ampere architecture GPU with 32 Tensor Cores	
	GPU Max Frequency	625 MHz	765 MHz	918 MHz	918 MHz
	CPU	6-core Arm® Cortex® A78AE v8.2 64-bit CPU 1.5MB L2 + 4MB L3		6-core Arm® Cortex® A78AE v8.2 64-bit CPU 1.5MB L2 + 4MB L3	8-core Arm® Cortex® A78AE v8.2 64-bit CPU 2MB L2 + 4MB L3
	CPU Max Frequency		1.5 GHz		2 GHz
	Memory	4GB 64-bit LPDDR5 34 GB/s	8GB 128-bit LPDDR5 68 GB/s	8GB 128-bit LPDDR5 102.4 GB/s	16GB 128-bit LPDDR5 102.4 GB/s
TDP	7W - 10W	7W - 15W	10W - 20W	10W - 25W	
Ethernet	Controller	1 * GBE LAN Chip (LAN signal from System-on-Module), 10/100/1000 Mbps 2 * Intel® I210-AT, 10/100/1000 Mbps			
Storage	eMMC	16GB eMMC 5.1 (Orin Nano and Orin NX SOMs do not support eMMC)			
	M.2	1 * M.2 Key-M (NVMe SSD, 2280) (Orin Nano and Orin NX SOMs is PCIe x4 signal, while other SOMs is PCIe x1 signal)			
	TF Slot	1 * TF Card Slot (Orin Nano and Orin NX SOMs do not support TF Card)			
Expansion Slots	Mini PCIe	1 * Mini PCIe Slot (PCIe x1+USB 2.0, with 1 * Nano SIM Card) (Nano SOM do not have PCIe x1 signal)			
	M.2	1 * M.2 Key-B Slot (USB 3.0, with 1 * Nano SIM Card, 3052)			
Front I/O	Ethernet	3 * RJ45			
	USB	4 * USB3.0 (Type-A)			
	Display	1 * HDMI: Resolution up to 4K @ 60Hz			
	Button	1 * Power Button + Power LED 1 * System Reset Button			
Side I/O	USB	1 * USB 2.0 (Micro USB, OTG)			
	Button	1 * Recovery Button			
	Antenna	4 * Antenna hole			
	SIM	2 * Nano SIM			
Internal I/O	Serial	optional 2 * RS232/RS485 (COM1/2, wafer, Jumper Switch) 1 * RS232/TTL (COM3, wafer, Jumper Switch)			
	PWRBT	1 * Power Button (wafer)			
	PWRLED	1 * Power LED (wafer)			
	Audio	optional 1 * Audio (Line-Out + MIC, wafer) ; optional 1 * AmpliPer, 3-W (per channel) into a 4-Ω Loads (wafer)			
	GPIO / CAN Bus	optional 1 * 16 bits DIO (8xDI and 8xDO, wafer) ; optional 1 * CAN (wafer)			
Power Supply	Type	DC, AT			
	Power Input Voltage	12~28V DC			
	Connector	Terminal block, 2Pin, P=5.00/5.08			
	RTC Battery	CR2032 Coin Cell			
OS Support	Linux	Nano/TX2 NX/Xavier NX: JetPack 4.6.3 Orin Nano/Orin NX: JetPack 5.1.2			
Mechanical	Enclosure Material	Radiator: Aluminum alloy, Box: SGCC			
	Dimensions	150.7mm(L) * 114.5mm(W) * 45mm(H)			
	Mounting	Desktop; DIN-rail			
Environment	Heat Dissipation System	Fan less design			
	Operating Temperature	-20~60°C with 0.7 m/s airBow			
	Storage Temperature	-40~80°C			
	Relative Humidity	10 to 95% (non-condensing)			
	Vibration	3Grms@5~500Hz, random, 1hr/axis (IEC 60068-2-64)			
Shock	10G, half sine, 11ms (IEC 60068-2-27)				

Dimension:



Product I/O function



Ordering Information

Model name	Description
WBP-NVJ01-Nano	Fanless edge AI system with NVIDIA® Jetson™ Jetson Nano SoM, 1 HDMI, 3 GbE LAN, 4 USB3.0 and USB 2.0 OTG
WBP-NVJ01-TX2 NX	Fanless edge AI system with NVIDIA® Jetson™ Jetson TX2 NX SoM, 1 HDMI, 3 GbE LAN, 4 USB3.0 and USB 2.0 OTG
WBP-NVJ01-Xavier NX	Fanless edge AI system with NVIDIA® Jetson™ Jetson Xavier NX SoM, 1 HDMI, 3 GbE LAN, 4 USB3.0 and USB 2.0 OTG
WBP-NVJ01-Xavier NX 16GB	Fanless edge AI system with NVIDIA® Jetson™ Jetson Xavier NX 16GB SoM, 1 HDMI, 3 GbE LAN, 4 USB3.0 and USB 2.0 OTG

Model name	Description
WBP-NVJ01-Orin Nano 4GB	Fanless edge AI system with NVIDIA® Jetson™ Jetson Orin Nano 4GB SoM, 1 HDMI, 3 GbE LAN, 4 USB3.0 and USB 2.0 OTG
WBP-NVJ01-Orin Nano 8GB	Fanless edge AI system with NVIDIA® Jetson™ Jetson Orin Nano 8GB SoM, 1 HDMI, 3 GbE LAN, 4 USB3.0 and USB 2.0 OTG
WBP-NVJ01-Orin NX 8GB	Fanless edge AI system with NVIDIA® Jetson™ Jetson Orin NX 8GB SoM, 1 HDMI, 3 GbE LAN, 4 USB3.0 and USB 2.0 OTG
WBP-NVJ01-Orin NX 16GB	Fanless edge AI system with NVIDIA® Jetson™ Jetson Orin NX 16GB SoM, 1 HDMI, 3 GbE LAN, 4 USB3.0 and USB 2.0 OTG