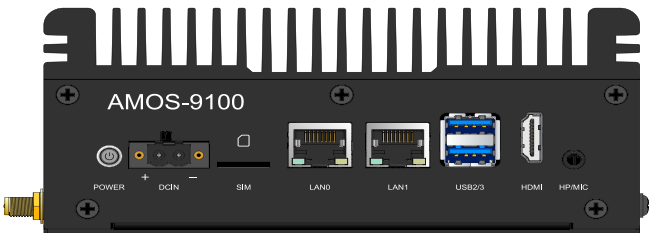


VIA
AMOS-9100

Compact and fanless
Hexa-Core Arm® system
for demanding Edge AI,
Autonomous Mobile Robot
(AMR) and Guided Vehicle
(AGV) applications

Features

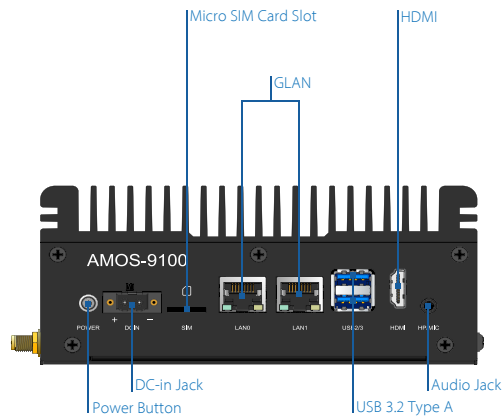
- High-performance NVIDIA Jetson Orin NX Hexa-Core Arm® processor
- AI Performance: Supports up to 70 TOPS
- Dual Gigabit Ethernet ports, dual COM (RS-232/422/485) ports, and multiple digital input-output options
- Optional Wi-Fi/4G LTE/5G/LoRa wireless connectivity and PoE
- Wide range of voltage and operating temperatures to support many industrial applications



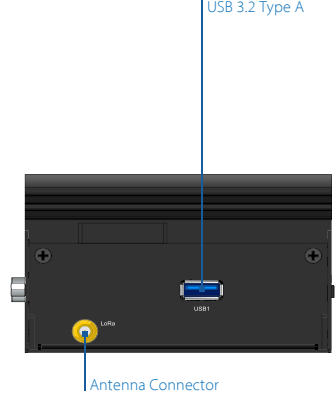
Specifications

Model Name	AMOS-9100
Processor	2.0GHz NVIDIA Jetson Orin NX Cortex®-A78AE Hexa-Core SoC
System Memory	8GB LPDDR5 DRAM
Storage	128GB SSD
Graphics	NVIDIA Ampere architecture GPU with 1024 CUDA® cores and 32 Tensor cores @ 765MHz Graphics engine supporting end-to-end lossless compression, tile caching, OpenGL® 4.6, OpenGL ES 3.2, Vulkan™ 1.10 and CUDA 10 Supports H.265 video decoding up to 8K@30fps and video encoding up to 4K@60fps
AI Processor	NVIDIA Deep Learning Accelerator (NVDLA) 2.0 (supports up to 70 TOPS) @ 610MHz Programmable Vision Accelerator (PVA) 2.0
Wireless Connectivity	Optional LoRa (with radio support from 863-930MHz)
Audio	Realtek ALC5616-CGT High Definition Audio Codec
USB	VIA VL817-Q7 USB 3.2 Gen1 Hub Controller
Video	Integrated HDMI 2.0b Transmitter
Ethernet	Realtek RTL8111H-CG Gigabit Ethernet Transceiver
IMU	6-Axis IMU TDK ICM-42607 for navigation
Onboard I/O	3 M.2 slots 1 RTC battery 8 DIP switches for RS-232/422/485 selection
Front Panel I/O	1 HDMI 2.0 port 2 USB 3.2 Type A ports 2 Gigabit Ethernet ports (supports optional PoE) 1 Micro SIM card slot 1 3.5mm audio jack (supports Line-out and MIC-in) 1 Power button with LED 1 2-pole Phoenix DC jack
Back Panel I/O	2 COM ports (supports RS-232/422/485) 1 CAN/UART port (supports 2 UART and 1 CAN) 1 12-pin DIO port 6 Antenna holes
Right Panel I/O	1 USB 3.2 Gen 1 port (for software upgrade) 1 Micro USB 2.0 OTG port (for debugging) 1 Software Upgrade Button 1 Reset button 1 Ground connector
Left Panel I/O	1 USB 3.2 Type A port 1 Antenna connector
Power Supply	DC 12~24V
System Software	JetPack SDK 6.1 and above
Operating Temperature	-20°C ~ 60°C
Storage Temperature	-40°C ~ 85°C
Operating Humidity	0~95% (relative humidity; non-condensing)
Mechanical Construction	Aluminum alloy metal chassis

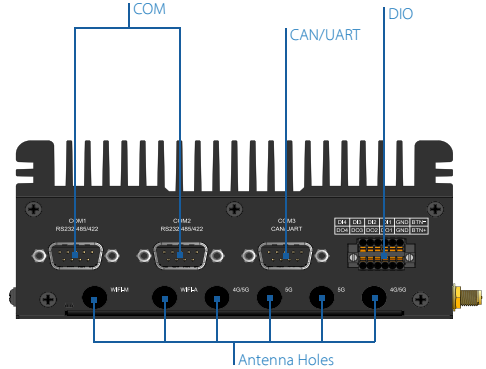
Front Panel I/O



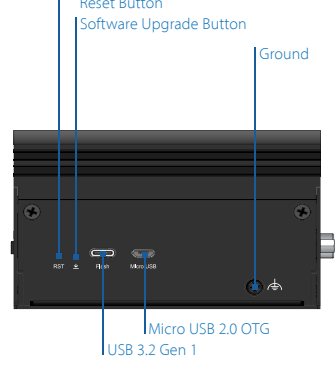
Left Panel I/O



Back Panel I/O



Right Panel I/O



Specifications

Model Name	AMOS-9100
Dimensions	160.05mm(W) x 66.7mm (H) x 105.2mm (D) (6.30" x 2.62" x 4.14")
Weight	1.3kg (3lbs)
Compliance	CE, FCC, BSMI, UKCA, VCCI

Ordering Information

Part Number	System Frequency	Description
AMOS-9100-2H11A0	NVIDIA Jetson Orin NX Hexa-Core SoC @ 2.0GHz	VIA AMOS-9100 system with 2.0GHz NVIDIA Jetson Orin NX Hexa-Core SoC, 8GB LPDDR5 DRAM, 128GB SSD, HDMI, 3 USB 3.2 Type A, USB 3.2 Gen 1, Micro USB 2.0 OTG, 2 GLAN with PoE, 2 COM, CAN/UART, DIO, Audio jack, LoRa, 3 M.2 slots, Micro SIM card slot, 12~24V DC-in
AMOS-9100-1H11A0	NVIDIA Jetson Orin NX Hexa-Core SoC @ 2.0GHz	VIA AMOS-9100 system with 2.0GHz NVIDIA Jetson Orin NX Hexa-Core SoC, 8GB LPDDR5 DRAM, 128GB SSD, HDMI, 3 USB 3.2 Type A, USB 3.2 Gen 1, Micro USB 2.0 OTG, 2 GLAN, 2 COM, CAN/UART, DIO, Audio jack, 3 M.2 slots, Micro SIM card slot, 12~24V DC-in

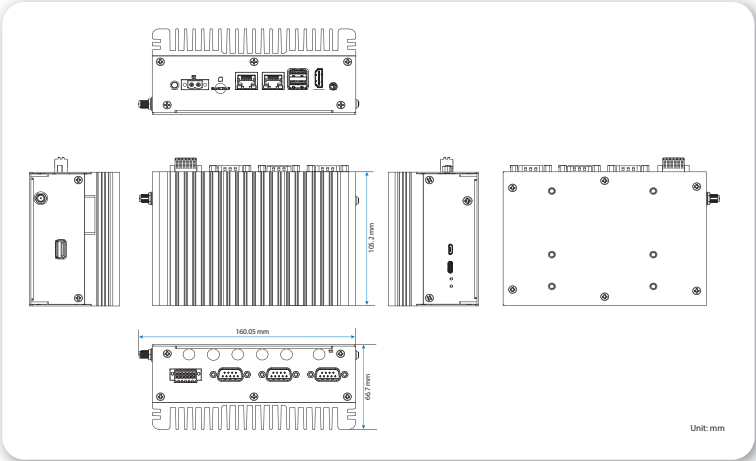
Optional Accessories

Wireless Module Options	
Part Number	Description
AMOS-9000-W101A1	Wi-Fi 6 module with antennas and assembly
AMOS-9000-L201A0	4G LTE mobile broadband M.2 module kit
AMOS-9000-L101A0	5G mobile broadband M.2 module kit

Optional Accessories

Power Options	
Part Number	Description
99G63-02119D	160W power adapter
99G63-02118D	138W power adapter
99G33-02112N	Power cord for the USA region
99G33-02151N	Power cord for the JP region
99G33-02133N	Power cord for the EU region

Dimensions



Packing List

AMOS-9100-2H11A0
Items
AMOS-9100 system
2-pole Phoenix plug to DC jack
LoRa antenna

AMOS-9100-1H11A0
Items
AMOS-9100 system
2-pole Phoenix plug to DC jack

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

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[AMOS-9100-1H11A0](#) [AMOS-9100-2H11A0](#)