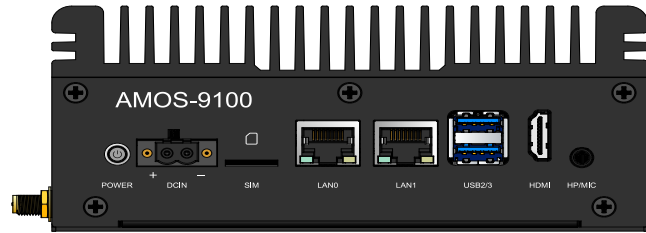


### VIA AMOS-9100

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



### Features

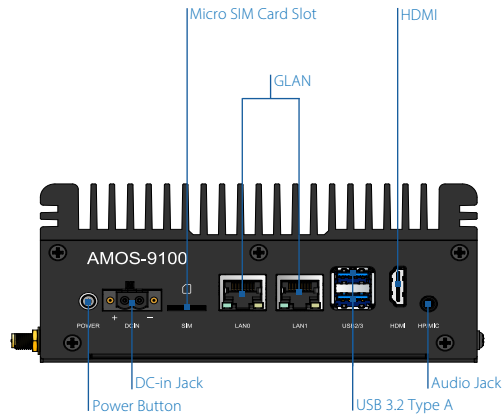
- High-performance NVIDIA Jetson Orin NX Hexa-Core Arm® processor
- AI Performance: Supports up to 70 TOPS
- Dual Gigabit Ethernet ports, dual COM (RS-232/422/485) ports, and multiple digital input-output options
- Optional Wi-Fi/4G LTE/5G/LoRa wireless connectivity and PoE
- Wide range of voltage and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

### Specifications

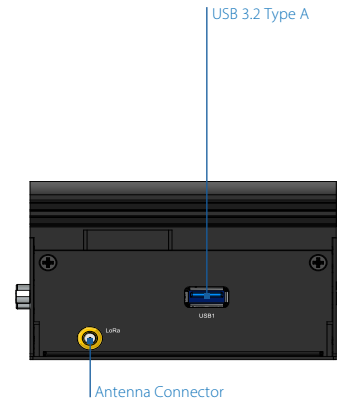
<b>Model Name</b>	<b>AMOS-9100</b>
<b>Processor</b>	2.0GHz NVIDIA Jetson Orin NX Cortex®-A78AE Hexa-Core SoC
<b>System Memory</b>	8GB LPDDR5 DRAM
<b>Storage</b>	128GB SSD
<b>Graphics</b>	NVIDIA Ampere architecture GPU with 1024 CUDA® cores and 32 Tensor cores @ 765MHz Graphics engine supporting end-to-end 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
<b>AI Processor</b>	NVIDIA Deep Learning Accelerator (NVDLA) 2.0 (supports up to 70 TOPS) @ 610MHz Programmable Vision Accelerator (PVA) 2.0
<b>Wireless Connectivity</b>	Optional LoRa (with radio support from 863-930MHz)
<b>Audio</b>	Realtek ALC5616-CGT High Definition Audio Codec
<b>USB</b>	VIA VL817-Q7 USB 3.2 Gen1 Hub Controller
<b>Video</b>	Integrated HDMI 2.0b Transmitter
<b>Ethernet</b>	Realtek RTL8111H-CG Gigabit Ethernet Transceiver
<b>IMU</b>	6-Axis IMU TDK ICM-42607 for navigation
<b>Onboard I/O</b>	3 M.2 slots 1 RTC battery 8 DIP switches for RS-232/422/485 selection
<b>Front Panel I/O</b>	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
<b>Back Panel I/O</b>	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
<b>Right Panel I/O</b>	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
<b>Left Panel I/O</b>	1 USB 3.2 Type A port 1 Antenna connector
<b>Power Supply</b>	DC 12~24V
<b>System Software</b>	JetPack SDK 6.1
<b>Operating Temperature</b>	-20°C ~ 60°C
<b>Storage Temperature</b>	-40°C ~ 85°C
<b>Operating Humidity</b>	0~95% (relative humidity; non-condensing)
<b>Mechanical Construction</b>	Aluminum alloy metal chassis



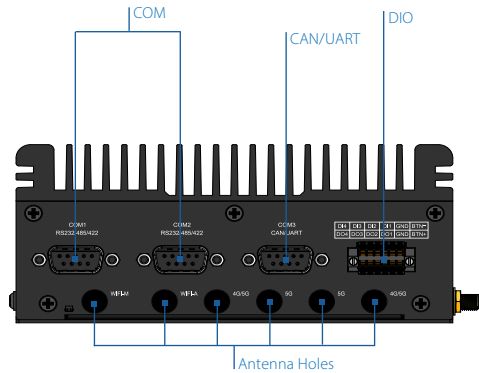
### Front Panel I/O



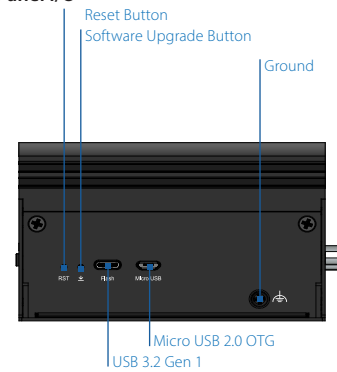
### Left Panel I/O



### Back Panel I/O



### Right Panel I/O



## Specifications

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

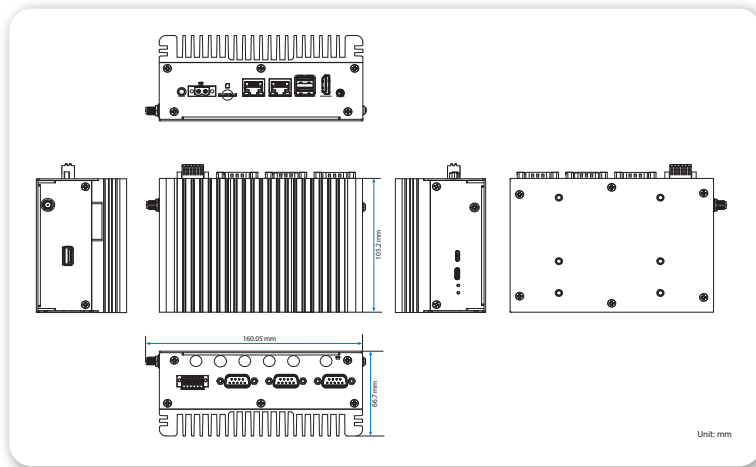
## Ordering Information

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

## 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