

EAI-V151

Preliminary

In-Vehicle Computing AI Inference System With NVIDIA® Jetson Orin NX/Nano



Preliminary Specifications

Platform

CPU	NVIDIA® Jetson Orin NX/Nano 8/6-core NVIDIA Arm® Cortex A78
SOM TDP	up to 25W
GPU	up to 1024 CUDA Core up to 48 Tensor Cores

System Memory

Technology	LPDDR5
Max. Capacity	16/8/4 GB (By SKU)

Ethernet

Interface	1x GbE RJ45 2x GbE RJ45 w/ PoE+ (total 30W) with Intel I210IT
Speed	10/100/1000 Mbps
Bypass	N/A

I/O Interface

Reset Button	1
Serial	2x DB9 RS232/422/485 (optional 1x CAN)
Display	1x HDMI
USB	2x USB 3.2 Gen1 Type A
DIO	4x DI, 2x DO
GPS/G-sensor	Onboard u-blox NEO-M9V (UDR) / ADXL345
Audio	1x Line-in, 1x Line-out
Video-in	4x GMSL2 De-serializer
Antenna	4x Antenna for LTE/5G Sub6 2x Antenna for WiFi 1 x Antenna for GPS

Storage

Onboard Slot	1x M.2(NVMe) 2280 M-Key
--------------	-------------------------

Features

- NVIDIA® Jetson Orin NX/Nano Processors
- LPDDR5 Memory Up to 16/8/4GB
- 1x GbE RJ45, 2x GbE RJ45 with PoE+
- 2x COM(optional 1x CAN), 2x USB 3.2, 1x HDMI, 4x GMSL2 Video-in, GPS & G-sensor
- 1x M.2 2230 E-Key for WiFi, 1x M.2 3042/3052 B-Key for LTE/5G, 2x Nano-SIM for LTE/5G module
- Wide range of operating temperature -40~70°C

Expansion

mini-PCIe/M.2	1x M.2 2230 E-Key for WiFi 1x M.2 3042/3052 B-Key for LTE/5G
SIM Card Slot	2x Nano-SIM for LTE/5G module

Miscellaneous

Watchdog	N/A
Internal RTC with Li Battery	Yes
TPM	Onboard TPM 2.0

Cooling

Processor	Passive CPU Heatsink
System	Fanless

Environmental Parameters

Temperature	-40°C~70°C
Humidity (RH)	5~90% Operating 5~95% Non-Operating

System Dimensions

WxHxD	201 x 65 x 196 mm
Weight	TBD
Mounting	Wall mount/VEESA mount

Power

Type/Watts	Single, 12/24VDC
Input	DC +12V/24V input 1x3 terminal block connector

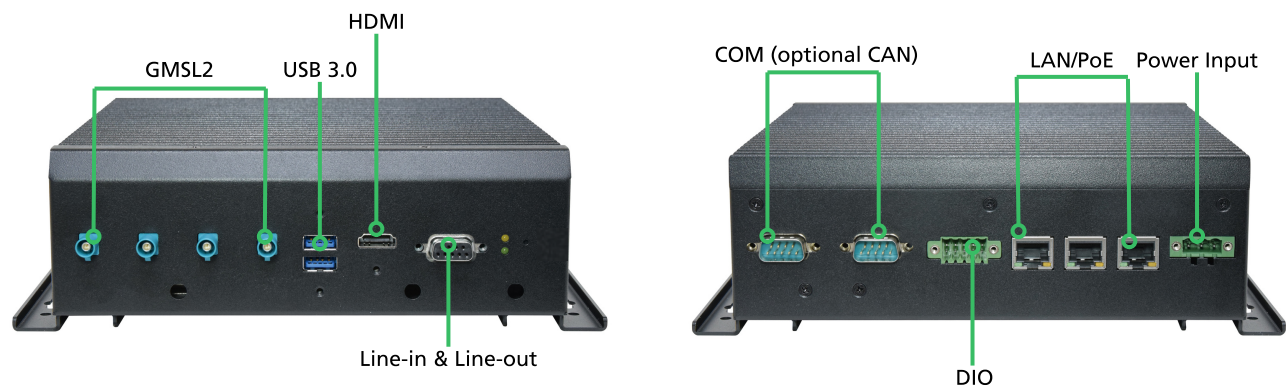
Driver Support

Linux	Linux (NVIDIA Jetpack 6.0.0) Ubuntu 22.0.4 LTS
-------	---

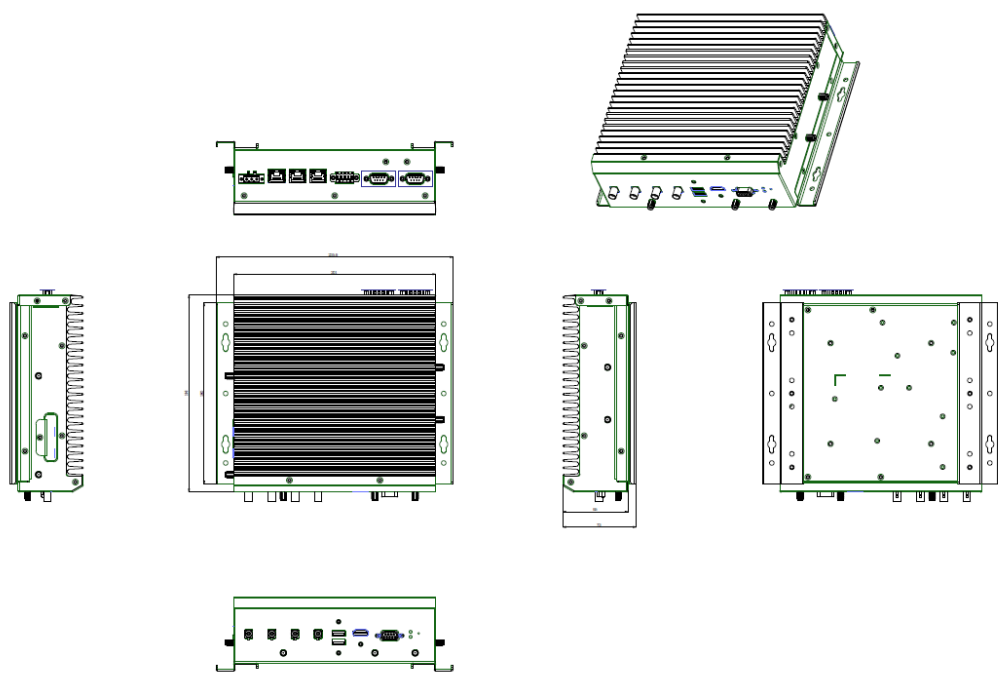
Certification

EMC	CE/UKCA, FCC Class A, RoHS, E-Mark (E24)
Safe	MIL-STD-810H(wall mount)

Product I/O View



Dimensions (WxHxD): 201 x 65 x 196 mm



Ordering Information

SKU	CPU	Memory	GPU	Ethernet	I/O	Power
EAI-V151A	NVIDIA® Jetson Orin NX 8-core NVIDIA Arm® Cortex A78	16GB LPDDR5	1024 CUDA Core 32 Tensor Cores, 918 MHz	1x GbE RJ45 2x GbE RJ45 w/ PoE+ (total 30W) with Intel I210IT	2x COM (optional 1x CAN) 2x USB3.2 1x HDMI 4x Video-in GPS & G-sensor	DC 12V/24V
EAI-V151B	NVIDIA® Jetson Orin NX 6-core NVIDIA Arm® Cortex A78	8GB LPDDR5	1024 CUDA Core 32 Tensor Cores, 765 MHz			
EAI-V151C	NVIDIA® Jetson Orin Nano 6-core NVIDIA Arm® Cortex A78	8GB LPDDR5	1024 CUDA Core 48 Tensor Cores, 625 MHz			
EAI-V151D	NVIDIA® Jetson Orin Nano 6-core NVIDIA Arm® Cortex A78	4GB LPDDR5	512 CUDA Core 16 Tensor Cores, 625 MHz			