EAR-30N3

Robotic Controller with NVIDIA® Jetson Orin™ NX 8G/16G



GMSL-2 | Ignition power | DC 9V-36V | SDK JetPack 6.2 | 5G/LTE

Features

- Powered by NVIDIA® Jetson Orin™ NX
- Provide M.2 M-key 2280 with PCIe Gen3 x4
- 3 x M12 X-coded GbE port
- 2 x CAN FD interface with isolation feature
- 4 x GMSL2 camera FAKRA Z code interface with frame sync
- HMTD Base-T1 Ethernet port for solid states
- 3D LiDAR x 4/8, Radar, and camera

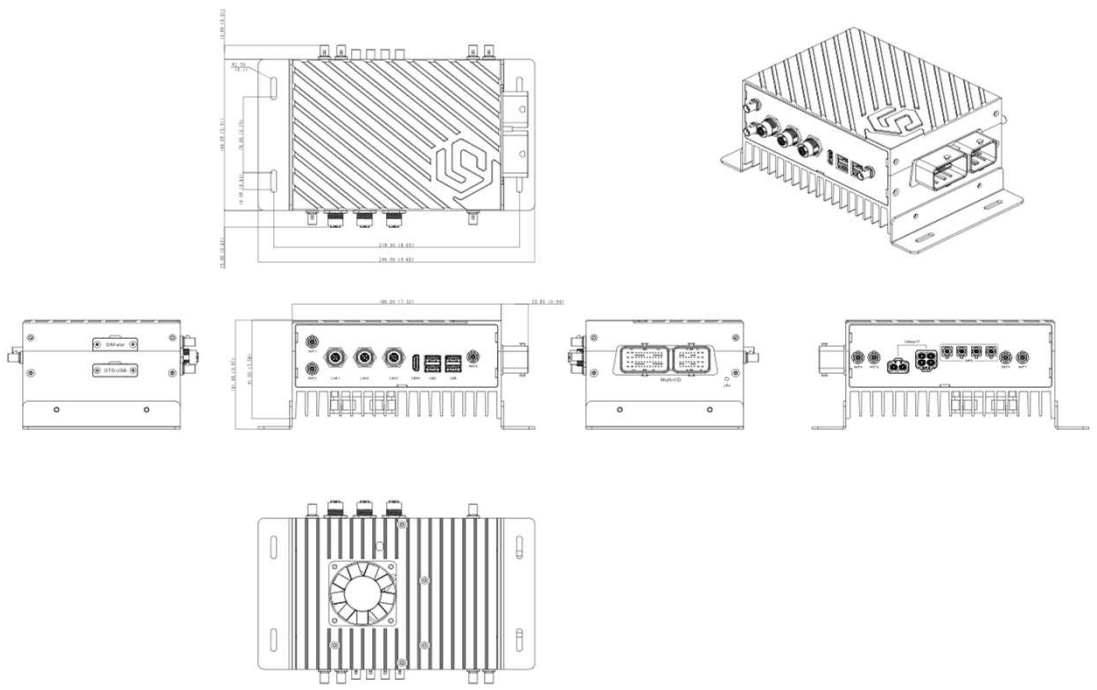
Specifications

System	
CPU/GPU	NVIDIA® Jetson Orin™ NX 8/6-core Arm® Cortex® -A78AE v8.2 64-bit CPU1024-core NVIDIA Ampere architecture GPU with 32 Tensor Cores
Memory	Onboard 8/16 GB 128-bit LPDDR5
Storage	1 x M.2 M-Key 2280, support NVMe
Real time clock	Yes
Indicators	--
Wireless	--
Operating System	Linux (NVIDIA Jetpack 6.2)
Power Supply	
Power Requirement	9 ~ 32 VDC
Power Consumption	25 W
MTBF (Hours)	--
Environmental and Mechanical	
Dimension	186 x 140 x 91 mm (7.32” x 5.51” x 3.51”)
Weight	1.8 kg
Mouting/Installation	--
Operating Temperature	-20 ~ 60 °C (-4 ~ 140 °F)
Storage Temperature	-40 ~ 85 °C (-40 ~ 176 °F)
Operating Humidity	10% ~ 95% relative humidity, non-condensing
Certification	
Regulations	CE, FCC
Vibration	MIL-STD-810H Method 514.8
Shock	MIL-STD-810H Method 516.8
Carrier	Planning

Front Panel Interface	
Ethernet	3 x M12 X-coded GbE
Display	1 x HDMI 2.0
USB	4 x USB 3.2 Gen1, Type-A
GPS	1 x FAKRA C code (Optional, requires GPS/GNSS module)
Wi-Fi	2 x FAKRA Z code (Optional, requires Wi-Fi module)
Side Panel Interface	
48-pin CMC lockable connector	4pin 9 ~ 32 VDC ignition power input 1 x ACC trigger input for power on 1 x Microphone input 2 x Speaker output with 10W amplifier 2 x CAN with isolation 1 x DO 2 x RS232 (1x option) 1 x Recovery, 1 x Reset, 1 x PWR_BTN
32-pin CMC lockable connector	8 x PPS+TxD syncout for external sensor 4 x 12V power output for external sensor
Rear Panel Interface	
GMSL Camera	4 x FAKRA Z code with frame sync
GSM Radio	4 x FAKRA D code for 4G/5G (Optional)
HMTD	(2+4) x 1G Base-T1 Ethernet
OTG USB	1 x micro USB for recovery BSP

Dimension

Unit: mm / inch



Ordering Information

Packing List
1 x EAR-30N3 AI BOX
1 x 48pin CMC lockable connector
1 x 32pin CMC lockable connector

Part Number	
EAR-30N301-001-01	EAR-30N3.Jetson Orin™ NX.9~32 VDC.LPDDR5 8GB.4 x GMSL2.(2+4) x HMTD
EAR-30N301-002-01	EAR-30N3.Jetson Orin™ NX.9~32 VDC.LPDDR5 16GB.4 x GMSL2.(2+4) x HMTD

Optional Accessories

Part Number / Item	
4G LTE Module	4G LTE, Quectel EM060K-GL, M.2 B-key 3042 with Antenna
5G Module	5G LTE, Quectel RM520N-GL, M.2 3052 with Antenna
WiFi Module	WiFi6 RTL8852BE ENLI RTL8852BE, M.2 A/E key 2230 with Antenna
396DZ100002	Sony ISX031, 63.9° , DC 6 ~ 12V/6V, IP 67/IP 69K.oToBrite.oToCAM223-H61M
396DZ100003	Sony ISX031, 120.6° , DC 6 ~ 12V/6V, IP 67/IP 69K.oToBrite.oToCAM223-C120M