

EAR-30N3

Autonomous car controller / NVIDIA Jetson Orin NX



Features

- Powered by NVIDIA Jetson Orin NX
- Provide M.2 M-key 2280 w/ PCIe Gen3 x4
- M12 X-coded Gigabit Ethernet port x 3
- CAN FD interface with isolation feature x 2
- Provide 7-channel Time sync output for external sensor (Optional)
- GMSL2 camera FAKRA Z code interface with frame sync x 4
- HMTD Base-T1 Ethernet port for solid states 3D LiDAR x 4/8, Radar, and camera

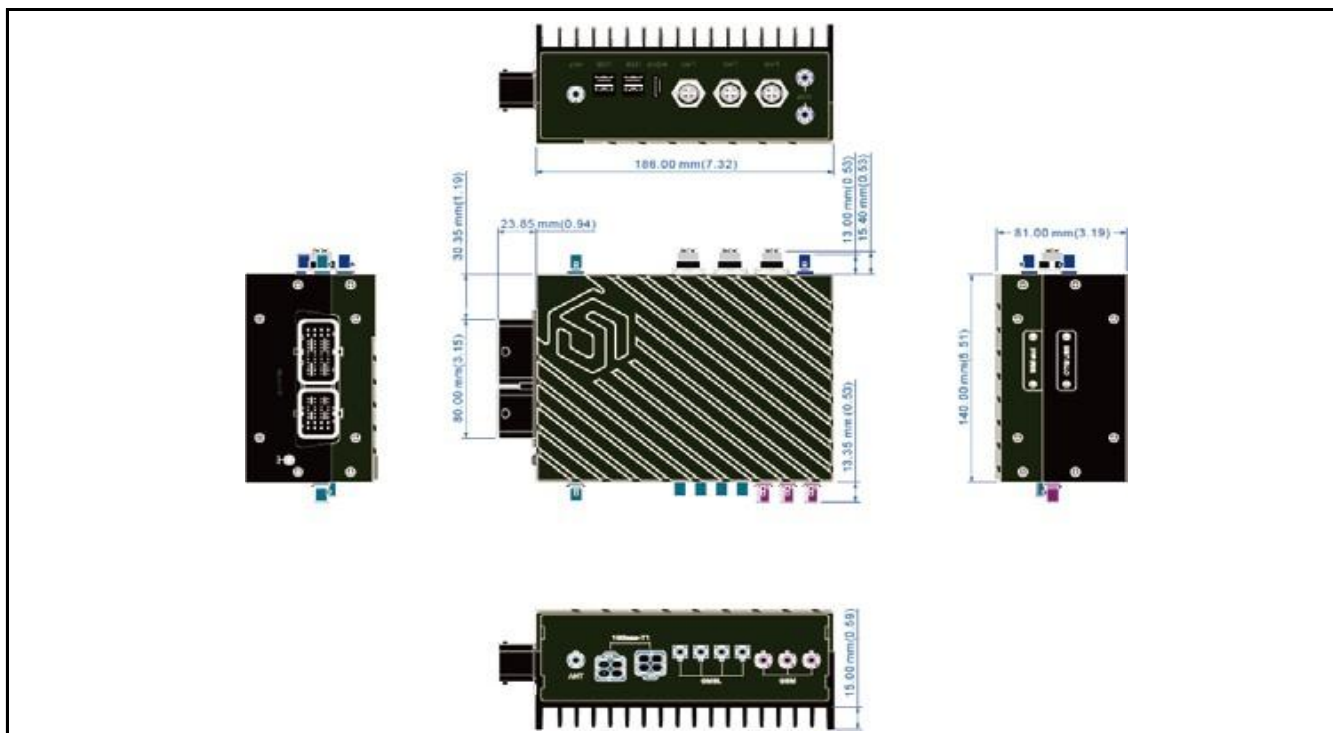
Specifications

System	
CPU/GPU	NVIDIA® Jetson Orin™ NX
	8/6-core Arm® Cortex® -A78AE v8.2
	64-bit CPU
	1024-core NVIDIA Ampere architecture
	GPU with 32 Tensor Cores
Memory	Onboard 16GB / 8GB 128-bit LPDDR5
Storage	1 x M.2 M-Key 2280, support NVMe
Real time clock	Yes
Indicators	--
Wireless	--
Operating System	Linux NVIDIA Jetpack 5.1.2
Power Supply	
Power Requirement	9~36 VDC
Power Consumption	25W
MTBF (Hours)	--
Environmental and Mechanical	
Dimension	186 x 140 x 81mm
Weight	1.8 kg
Mouting/Installation	--
Operating Temperature	-4 °F ~ 140 °F (-20 °C ~ 60 °C)
Storage Temperature	-40 °F ~ 176 °F (-40 °C ~ 85 °C)
Operating Humidity	10% ~ 95% relative humidity, non-condens
Certification	
Regulations	CE, FCC
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
Antenna	2 x FAKRA C code for GPS
Side Panel Interface	
48pin CMC lockable connector	4pin 9-36VDC ignition power input
	1x 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
32pin CMC lockable connector	2 x RS232 (1 Optional)
	1 x Recovery, 1 x Reset, 1 x PWR_BTN
	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 w/ frame sync
GSM Radio	3 x FAKRA D code for 4G/5G
HMTD	8 x 1G Base-T1 Ethernet
Antenna	1 x FAKRA Z code for Wi-Fi
OTG USB	1 x micro-USB for recovery BSP

Dimension

Unit: mm / inch



Ordering Information

Packing List

EAR-30N3 AI BOX

48pin CMC lockable connector

32pin CMC lockable connector

Part Number

EAR-30N3-00-204N08	Autonomous car controller w/ NIDIA Jetson Orin NX, 8GB LPDDR5, W/ 1TB SSD, 4x GMSL2, 8x HMTD, ignition power, -20 to 60, 9-36VDC, w/ ignition power
EAR-30N3-00-205N08	Autonomous car controller w/ NIDIA Jetson Orin NX, 16GB LPDDR5, W/ 1TB SSD, 4x GMSL2, 8x HMTD, ignition power, -20 to 60, 9-36VDC, w/ ignition power

Optional Accessories

Part Number / Item

4710EM060KG5301	4G LTE, Quectel EM060K-GL, M.2 B-key 3042
4710RM520NG5301	5G LTE, Quectel RM520N-GL, M.2 3052
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