AI Vehicle Computer

COMPACT AI Vehicle Series

Intelligent Machine Learning Unit with NVIDIA Jetson TX2 NX

IPC/COMPACT A2N - RM

This fanless COMPACT A2N generation is based on the NVIDIA Jetson TX2 NX processor module and offers a wide range of interface options.
The robust and uncompromising industrial design allows the implementation in the most demanding mobile AI applications and guarantees long term availability.

- **Power over Ethernet (PoE+), 48VDC out**
- **24/7 continuous operation**
- **6 total LAN Interfaces with individual NIC's**
- **Passively cooled, no moving parts**
- **Long term availability with fixed BOM**

NVIDIA Linux for Tegra (L4T)

Product Highlights

Maintenance free
Power Ignition Controller
Shock and vibration resistant
Each LAN interface has its own dedicated NIC
No moving parts / passively cooled

Product Features

256-core NVIDIA Pascal™ GPU Dual-Core
NVIDIA Denver 2 64-Bit CPU Quad-Core
ARM® Cortex®-A57 MPCore
4GB 128-bit LPDDR4x RAM soldered on board
M.2 NVMe slot for storage expansion up to 2TB
Ethernet, USB, passive or active CAN
Aluminum & Stainless steel housing
Protection class IP65

Markets / Applications

Autonomous Mobile Robots (AMRs)
Automotive
Transportation
Robotics
Agriculture
Construction Vehicles

CE

Your partner for reliable embedded computer solutions.

		Order Code IPC/RMA2NH20-E202S[1,5]
Processor module / Performance		
NVIDIA Jetson TX2 NX | 256-core NVIDIA Pascal™ GPU		•
6-Core ARM CPU (Dual-Core NVIDIA Denver 2 64-Bit CPU and Quad-Core ARM® Cortex®-A57 MPCore)		•
AI Performance		1.33 TFLOPs
Memory / Storage		
Data Cache Size		2MB
128-bit LPDDR4 RAM soldered on board		4GB
eMMC 5.1 Flash Storage on board		16GB
M.2 2280 Key M socket (for NVMe SSD)[5]		1
microSD card socket[2]		1
Features		
Real time clock (RTC) with battery backup Renata CR2477N (950mAh)		•
Hardware Watchdog & Temperature supervisor		•
Buzzer		•
Communication Interfaces		
Display output behind the service cover		DisplayPort 1.4
Internal USB version 2.0 OTG behind the service cover	(micro USB Type AB)	1
USB version 2.0 behind the service cover	(Type A)	2
Display output		HDMI 2.0
USB version 3.1 (5 Gbit/s)	(Type A)	1
USB version 2.0[1]	(Type A)	optional
Ethernet 10/100/1000 BASE-T (1x native, 1x I210-IT)	(M12 female, x-coded)	2
Power over Ethernet - IEEE802.3at 10/100/1000Mbit PSE - Power sourcing equipment, producing 48VDC out	(M12 female, x-coded)	4 (total max power: 39W)
CAN 2.0A / CAN 2.0B (active/passive), CAN FD supported, isolated	(M12 female, a-coded)	1
Serial RS232	(M12 male, a-coded)	1
Serial RS422/RS485		optional
I2C bus[2]		1
Digital I/O's, 24VDC[1]	(up to 4 inputs & 4 outputs)	optional
Analog input, 0-20mA or -10...+10V / 0... 30V[1] (16bit resolution Accuracy: +/- 0.1%)	(4 inputs)	optional
Mini PCIe socket[2], used for extensions depending on configuration		2
MIPI CSI-2 / GMSL2 / FPDLinkIII Camera interface[1]		on request
Technical Data		
Dimensions [mm] (housing, excl. mounting)		w182 x h75 x d127
Dimensions [mm] (housing, incl. mounting)		w218 x h75 x d127
Net weight [gram]		~1900
Non isolated input voltage, with ignition controller, reverse polarity protected	(M12 male, a-coded)	9... 45VDC
Power consumption typ. in Watt @ 24V without Add-Ins, idle		~12
Environmental Conditions		
Operating temperature[3]		–25°C ... +65°C
Storage temperature		–25°C ... +85°C
Ingress protection standard according to EN60529		IP65
Conformal coating[4]		on request
Shock (designed to meet)		EN60068-2-27
Vibration (designed to meet)		EN60068-2-64
EMI-Conformity (designed to meet)		EN55032 / EN55035
Safety (designed to meet)		EN62368-1
MTBF @ 25°C ambient excluding battery		~425 000h

[1] Please contact factory for minimum order quantities
[2] Internal connector
[3] Depending on installation situation and interface connection. Please see user documentation
[4] On all possible components (excl. Xavier NX module, connectors and wireless devices)
[5] It is possible to equip the products with an Industrial grade Apacer PV210 NVMe SSD. Retrofitting an SSD is not possible by the user without complete disassembly. Use these part codes: IPC/RMA2NH20-E202S-01 = 120GB | IPC/RMA2NH20-E-202S-02 = 240GB | IPC/RMA2NH20-E202S-05 = 480GB | IPC/RMA2NH20-E202S-10 = 960GB

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syslogic industrial computing

Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

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