

optional  
LTE / GNS / Wi-Fi




2x USB 2.0  
microSD  
DisplayPort

USB 3.1  
HDMI

Image similar

Power Supply  
9 ... 45VDC

RS232

CAN

2x GBit LAN

4x PoE LAN

## IPC/COMPACT A3N - RM

This fanless COMPACT A3N generation is based on the NVIDIA Jetson Xavier 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  
LTE, GNSS and Wi-Fi connectivity options  
No moving parts / passively cooled

### Product Features

384-core NVIDIA Volta™ GPU  
with 48 Tensor Cores  
6-Core ARM v8.2 64-bit NVIDIA Carmel CPU  
8GB 128-bit LPDDR4x RAM soldered on board  
M.2 NVMe slot for storage expansion up to 2TB  
USB 3.0 and HDMI 2.0 ports with dust covers  
Ethernet, RS232, passive or active CAN  
Optional LTE, GNSS & WiFi extensions  
Aluminum & Stainless steel housing  
Protection class IP65

### Markets / Applications

Automated Guided Vehicles (AGV)  
Automotive  
Transportation  
Robotics  
Agriculture  
Construction Vehicles

**Processor module / Performance**

NVIDIA Jetson Xavier NX   384-core NVIDIA Volta™ GPU with 48 Tensor Cores	•	•
6-Core ARM v8.2 64-bit NVIDIA Carmel CPU	•	•
AI Performance (INT8)	21 TOPs	21 TOPs

**Memory / Storage**

Data Cache Size	2MB	2MB
128-bit LPDDR4x RAM soldered on board	8GB	8GB
eMMC 5.1 Flash Storage on board	16GB	16GB
M.2 2280 NVMe SSD socket <sup>5</sup>	1	1
microSD card socket <sup>2</sup>	1	1

**Features**

Inertial measurement unit (IMU) STMicroelectronics ISM330DHCXTR	•	•
Real time clock (RTC) with battery backup Renata CR2477N (950mAh)	•	•
Hardware Watchdog & Temperature supervisor	•	•

**Communication Interfaces**

Graphic interface <small>behind the service cover</small>		DisplayPort 1.4	DisplayPort 1.4
Internal USB version 2.0 OTG <small>behind the service cover</small>	(micro USB Type AB )	1	1
USB version 2.0 <small>behind the service cover</small>	(Type A )	2	2
Graphic interface		HDMI 2.0	HDMI 2.0
USB version 3.1	(Type A)	1	1
USB version 2.0 <sup>1</sup>	(Type A )	optional	optional
Ethernet 10/100/1000Mbit (1x native, 1x I210-IT)	(M12 female, x-coded)	2	2
Power over Ethernet - IEEE802.3at 10/100/1000Mbit	(M12 female, x-coded)	4	4
PSE - Power sourcing equipment, producing 48VDC out		(total max power: 39W)	(total max power: 39W)
Active/passive-CAN ESD protected, isolated	(M12 female, a-coded)	1	1
Serial RS232 / RS422/RS485	(M12 male, a-coded)	1	1
Digital I/O's, 24VDC	(up to 4 inputs & 4 outputs)	optional	optional
Analog input, 16bit resolution, voltage input: -10 ...+10V / 0 ... 30V <small>Accuracy: +/- 0.1%</small>	(4 inputs)	optional	optional
Analog input, 16bit resolution, current: 0-20mA	(4 inputs)	optional	optional
Mini PCIe socket <sup>2</sup>		2	2
I2C bus <sup>2</sup>		1	1
Buzzer		1	1
MIPI CSI-2 / GMSL2 / FPDLinkIII Camera interface <sup>1</sup>		on request	on request

**Wireless Connectivity**

Cellular Module (LTE/UMTS/GSM) with GNSS positioning functionality Sierra Wireless MC7455 - M2M only! (Dual nano SIM)	none	3x SMA
Wireless LAN IEEE 802.11a/b/g/n/ac dual-band 2x2 MIMO & Bluetooth 4.1 SparkLAN WPEB-263ACNI(BT)	none	2x RP-SMA
High precision GNSS module <sup>1</sup> u-blox ZED-F9P module	optional	optional

**Technical Data**

Dimensions [mm] (housing, excl. mounting)		w182 x h75 x d127	w182 x h75 x d127
Dimensions [mm] (housing, incl. mounting)		w218 x h75 x d127	w218 x h75 x d127
Net weight [gram]		~ 1600	~ 1600
Non isolated input voltage, with ignition controller, reverse polarity protected	(M12 male, a-coded)	9... 45VDC	9... 45VDC
Power consumption typ. in Watt @ 24V without Add-Ins, idle		~ 13	~ 13

**Environmental Conditions**

Operating temperature <sup>3</sup>		-25°C ... +60°C	-25°C ... +60°C
Storage temperature		-25°C ... +85°C	-25°C ... +85°C
Ingress protection standard according to EN60529		IP65	IP65
Conformal coating <sup>4</sup>		on request	on request
Shock (designed to meet)		EN60068-2-27	EN60068-2-27
Vibration (designed to meet)		EN60068-2-64	EN60068-2-64
EMI-Conformity (designed to meet)		EN55032 / EN55035	EN55032 / EN55035
Safety (designed to meet)		EN62368-1	EN62368-1
Radio and Telecommunication (designed to meet)		RED	RED
MTBF @ 25°C ambient <small>excluding battery</small>		tbd	tbd

<sup>1</sup> Please contact factory for minimum order quantities<sup>2</sup> Internal connector<sup>3</sup> Depending on installation situation and interface connection. Please see user documentation<sup>4</sup> On all possible components (excl. Xavier NX module, connectors and wireless devices)<sup>5</sup> It is possible to equip the products with a Cactus Technologies 270P Series NVMe SSD from the factory, use these part codes:

IPC/RMA3NI19-[E/F]202S-01 = 128GB | IPC/RMA3NI19-[E/F]202S-02 = 256GB | IPC/RMA3NI19-[E/F]202S = 512GB | IPC/RMA3NI19-[E/F]202S-10 = 1TB

Product specifications subject to change without notice. | All data is for information purposes only and not guaranteed for legal purposes. Information in this data sheet has been carefully checked and is believed to be accurate. However, no responsibility is assumed for inaccuracies. Please refer to the user documentation for additional product specification.

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