

AI Rugged Computer

## COMPACT AI Rugged Series

Computer Vision Edge Unit with NVIDIA Jetson TX2(i)

Dual nanoSIM  
CFast  
2 x USB  
microSD  
DisplayPort



on request  
LTE / GNSS / Wi-Fi / BT



Power Supply  
9 ... 45 VDC

2x CAN

USB

2x LAN  
x-coded

## RPC/COMPACT A2 Series

This fanless RPC COMPACT-A2 generation is based on the NVIDIA Jetson TX2(i) processor module and offers a wide range of interface options.

The robust and uncompromising industrial design allows the implementation in the most demanding environments for AI applications and guarantees long term availability.

- IP67 Protection
- Shock and vibration resistant
- Dust and water proof
- Extended AI Computing
- 24/7 continuous operation

 **NVIDIA.** Linux for Tegra (L4T)

### Product Highlights

Ultra rugged  
Sealed housing  
Maintenance free  
No moving parts / passive cooling  
Hardware watchdog  
Temperature supervision  
ESD- protection on all interfaces  
Long term availability (fixed BOM)  
RTC backup with battery or goldcap

### Product Features

256-core NVIDIA Pascal™ GPU  
Dual-Core NVIDIA Denver 2 64-Bit CPU  
Quad-Core ARM® Cortex®-A57 MPCore  
8GB 128-bit LPDDR4 RAM soldered on board  
Socket for CFast  
Ethernet, USB, CAN  
Field M12 connectors  
Rugged aluminum housing  
Protection class IP67

### Markets / Applications

Construction Vehicles  
Transportation  
Agriculture  
Automated Guided Vehicles (AGV)

Processor module / Performance		
NVIDIA Jetson TX2   256-core NVIDIA Pascal™ GPU		•
NVIDIA Jetson TX2i   256-core NVIDIA Pascal™ GPU		on request
NVIDIA Jetson TX2 4GB   256-core NVIDIA Pascal™ GPU		on request
Dual-Core NVIDIA Denver 2 64-Bit CPU and Quad-Core ARM® Cortex®-A57 MPCore		•
AI Performance		1.3 TOPs
Memory / Storage		
Data Cache Size		2MB
4ch x 32-bit LPDDR4 RAM soldered on board		8GB
eMMC 5.1 Flash Storage on board		32GB
microSD Card socket <sup>2</sup>		1
CFast socket with retention frame <sup>2</sup>		1
Features		
Real time clock PC compatible with battery backup Renata CR2477N (950 mAh)		•
Hardware Watchdog & Temperature supervisor		•
Intelligent power management		•
Inertial measurement unit (IMU) STMicroelectronics ISM330DLCTR		•
Communication Interfaces		
Graphic interface <small>behind the cover</small>		DisplayPort 1.2
Internal USB version 2.0 OTG <small>behind the cover</small>	(micro USB Type AB )	1
USB version 2.0 <small>behind the cover</small>	(Type A)	2
USB version 2.0	(1x M12 female a-coded)	2
Ethernet 10/100/1000Mbit (1x native, 1x I210-IT)	(M12 female x-coded)	2
Active/passive-CAN ESD protected, isolated	(M12 female a-coded)	2 (2x M12 5P)
Mini PCIe socket <sup>2</sup>		1
I2C bus <sup>2</sup>		•
Buzzer		•
MIPI CSI-2 Camera Interface <sup>2</sup>		•
USB version 3.0 <sup>1</sup>		on request
Wireless Connectivity		
Cellular 4G Module (LTE/UMTS/GSM) with built-in GNSS		none / on request
Wireless LAN IEEE 802.11a/b/g/n/ac dual-band 2x2 MIMO & Bluetooth		none / on request
Technical Data		
Dimensions [mm] (housing, incl. mounting)		w245 x h75 x d165
Net weight [gram]		~2500
Non isolated Input voltage, with Ignition controller, reverse polarity protected (M12 4P male a-coded)		9 ... 45VDC
16.8...45VDC Input voltage, isolated with Ignition controller, reverse polarity protected <sup>1</sup>		on request
Current consumption typ. in mA @ 24V without Add-Ins, idle		~400
Power consumption typ. in Watt @ 24V without Add-Ins, idle		~10
Environmental Conditions		
Operating temperature <sup>3</sup>		-25°C ... +70°C
Storage temperature		-25°C ... +80°C
Extended operating temperature -40°C ... +70°C		with TX2i
Extended storage temperature -40°C ... +85°C		with TX2i
Ingress protection standard according to EN60529 (ISO 20653)		IP67 / IP69
Conformal coating <sup>4</sup>		on request
UN/ECE R10 (E-mark) certification		on request
Shock		EN60068-2-27
Vibration		EN60068-2-64
EMI-Conformity		EN55032 / EN55035
Designed to meet safety according to		EN62368-1
Radio and Telecommunication (designed to meet)		RED
MTBF @ 25°C ambient <small>according to Telcordia SR-332, Environment GB, excluding battery</small>		~700 000h

<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. TX2(i) Module, connectors and wireless devices)

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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