AI Vehicle Computer

COMPACT AI Vehicle Series

Computer Vision Edge Unit with NVIDIA Jetson TX2

Dual nanoSIM
CFast
uSD
DisplayPort

image similar

2x LAN
M12 x-coded

DC Supply
9 … 45VDC

2x CAN

2x USB

4x PoE
M12 x-coded

IPC/COMPACT A2 - RM

This fanless RM COMPACT-A2 generation is based on the NVIDIA Jetson TX2 processor module and offers a wide range of interface options.
The robust and uncompromising industrial design allows the implementation in the most demanding AI applications and guarantees long term availability.

- 24/7 continuous operation
- Extended AI Computing
- 6 LAN Interfaces w/ individual NIC's
- Power over Ethernet (PoE+), 48VDC out
- Long term availability with fixed BOM

NVIDIA. Linux for Tegra (L4T)

Product Highlights

Maintenance free
Power Ignition Controller
No moving parts / passive cooling
Hardware watchdog
Temperature supervision
ESD- protection on all interfaces
Long term availability (fixed BOM)
Shock and vibration resistant

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, Passive or Active CAN
Optional 4G LTE connectivity
Aluminum & Stainless steel housing
Protection class IP40

Markets / Applications

Automated Guided Vehicle (AGV)
Transportation
Construction Vehicles

CE

Your partner for reliable embedded computer and display solutions.

Order Code   IPC/RMA2I20-C203S[1]

AI Vehicle Computer

Processor module / Performance

NVIDIA Jetson TX2 | 256-core NVIDIA Pascal™ GPU	•
Dual-Core NVIDIA Denver 2 64-Bit CPU and Quad-Core ARM® Cortex®-A57 MPCore	•
NVIDIA Jetson TX2 4GB | 256-core NVIDIA Pascal™ GPU	on request
NVIDIA Jetson TX2i | 256-core NVIDIA Pascal™ GPU	on request
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 [2]	1
CFast socket with retention frame [2]	1

Features

Inertial measurement unit (IMU) STMicroelectronics ISM330DLC	•
Real time clock (RTC) with battery backup Renata CR2477N (950mAh)	•
Hardware Watchdog & Temperature supervisor	•
Intelligent power management (Power Ignition Controller)	•

Communication Interfaces

Graphic interface		DisplayPort 1.2
USB version 3.0	(Type A)	2
Internal USB version 2.0 OTG behind the cover	(micro USB Type AB)	1
Ethernet 10/100/1000Mbit (1x native, 1x l210-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 / RJ45)	4x M12 (total max power: 39W)
Active/passive-CAN ESD protected, isolated	(1x DSUB9)	2
RS232 / RS422/485 ESD protected	(DSUB9)	on request
Mini PCIe socket [2]		1
MIPI CSI-2 / GMSL2 / FPDLinkIII Camera interface [1]		on request

Wireless Connectivity

Cellular Module (LTE/UMTS/GSM) with GNSS positioning Sierra Wireless MC7455 - M2M only!	none
Wireless LAN IEEE 802.11a/b/g/n/ac dual-band 2x2 MIMO & Bluetooth 4.1	none

Technical Data

Dimensions w174 x h82 x d127 mm (housing without mounting bracket)		•
Net weight in gram		~1100
Non isolated input voltage, reverse polarity protected	(M12 4P male A-coded)	9... 45VDC
Current consumption typ. in mA @ 24V without Add-Ins, idle		~625
Power consumption typ. in Watt @ 24V without Add-Ins, idle		~15

Environmental Conditions

Operating temperature [3]	−25°C ... +65°C
Storage temperature	−25°C ... +80°C
Protection standard	IP40
UN/ECE R10 (E-mark) certification	on request
Conformal coating [4]	on request
Shock (designed to meet)	EN60068-2-27
Vibration (designed to meet)	EN60068-2-64
EMI-Conformity	EN55032 / EN55035
Safety (designed to meet)	EN62368-1
Radio and Telecommunication (designed to meet)	RED
MTBF @ 25°C ambient according to Telcordia SR-332, Environment GB, excluding battery	~515 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. TX2(i) Module, connectors and wireless devices)

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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