AI Rugged Computer
COMPACT AI Rugged Series
Intelligent Machine Learning Unit with NVIDIA Jetson TX2(i)

preliminary

Dual nanoSIM
CFast
2 x USB
uSD
DisplayPort

LTE / GPS / WI-FI

ANT1   ANT2   ANT3   WiFi1   WiFi2

PWR   CAN   USB   LAN1   LAN2

image similar

Power Supply
9 ... 45 VDC

2x CAN

2 x USB

2x LAN
x-coded

RPC/COMPACTA2

This fan less RPC/RS-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
ARM CPU core
Hardware watchdog
Temperature supervision
ESD- protection on all interfaces
Long term availability (fixed BOM)
Goldcap or battery backup

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
Heavy Machinery
Transportation

CE

Your partner for reliable embedded computer and display solutions.

Order Code		RPC/RSA2I19-A101E[1]	RPC/RSA2I20-A101S[1]	RPC/RSA2I20-A104S[1]
Processor module / Performance				
NVIDIA Jetson TX2i | 256-core NVIDIA Pascal™ GPU		•		
NVIDIA Jetson TX2 | 256-core NVIDIA Pascal™ GPU			•	•
AI Performance		1.3 TOPs	1.3 TOPs	1.3 TOPs
Dual-Core NVIDIA Denver 2 64-Bit CPU and Quad-Core ARM® Cortex®-A57 MPCore		•	•	•
Memory / Storage				
Data Cache Size		2MB	2MB	2MB
4ch x 32-bit LPDDR4 RAM soldered on board		8GB	8GB	8GB
eMMC 5.1 Flash Storage on board		32GB	32GB	32GB
microSD Card socket [2]		1	1	1
CFast socket with retention frame [2]		1	1	1
Features				
Real time clock PC compatible with Goldcap backup		48h	48h	48h
Real time clock PC compatible with battery backup		optional	optional	optional
Hardware Watchdog & Temperature supervisor		•	•	•
Intelligent power management		•	•	•
Communication Interfaces				
Graphic interface behind the cover		DisplayPort 1.2	DisplayPort 1.2	DisplayPort 1.2
USB version 2.0 behind the cover	(Type A)	2	2	2
USB version 2.0	(1x M12 female)	2	2	
USB version 3.0[1]		on request	on request	on request
Internal USB version 2.0 OTG behind the cover	(micro USB Type AB)	1	1	1
Ethernet 10/100/1000Mbit	(M12 female x-coded)	1	1	1
Ethernet 10/100/1000Mbit (I210-IT)	(M12 female x-coded)	1	1	1
Active/passive-CAN ESD protected, isolated	(1 x M12 female)	2	2	
Mini PCIe socket [2]		1	1	1
I2C bus [2]		•	•	•
Buzzer		•	•	•
Wireless Functions				
Cellular 4G Module with GNSS positioning functionality (LTE/UMTS/GSM)	(3 x SMA)	•	•	optional
Wireless LAN IEEE 802.11a/b/g/n/ac dual-band 2x2 MIMO	(2 x RP-SMA)	optional	•	•
Dual SIM Support (nanoSIM to mPCIe slot) [2]		•	•	optional
Acceleration / Motion Sensor STMicroelectronics ISM330DLC		•	•	•
Technical Data				
Dimensions w245 x h75 x d165 mm (housing, incl. mounting)		•	•	•
Net weight in gram		~3000	~3000	~3000
Input voltage reverse polarity protected with ignition controller	(M12 4P male A-coded)	16.8 ... 45VDC	9 ... 45VDC	9 ... 45VDC
Current consumption typ. in mA @ 24V without Add-Ins, idle		~400	~400	~400
Power consumption typ. in Watt @ 24V without Add-Ins, idle		~10	~10	~10
Environmental Conditions				
Operating temperature [3]		−40°C ... +70°C	−25°C ... +65°C	−25°C ... +65°C
Storage temperature		−40°C ... +85°C	−25°C ... +80°C	−25°C ... +80°C
Protection standard: IP67		•	•	•
Conformal coating [4]		tbd	tbd	tbd
Shock: EN60068-2-27 / EN61373		•	•	•
Vibration: EN60068-2-64 / EN61373		•	•	•
EMI-Conformity EN-50121-3-2		•	•	•
Designed to meet safety according to EN62368-1		•	•	•
Radio and Telecommunication: Designed to meet RED		•	•	•
MTBF ~150 000h (17.1 Years) @ 25°C excluding battery and power supply		tbd	tbd	tbd

[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