

LTE / GNSS / Wi-Fi



Dual nanoSIM  
CFast  
uSD

DP

Power Supply  
DC In

2x CAN

4x PoE LAN  
M12 x-coded

2x LAN  
M12 x-coded

2x USB

## IPC/COMPACT A3 - RML-DEV

This fanless RML-COMPACT-A3 DEV generation is based on the NVIDIA Jetson AGX Xavier 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
- Highly customizable interface options
- Extended AI Computing
- Power Over Ethernet
- High Accuracy GNSS option

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

### Product Highlights

Goldcap or battery RTC clock backup  
No moving parts / passive cooling  
ARM CPU core  
Hardware watchdog  
Temperature supervision  
ESD- protection on all interfaces  
Long term availability (fixed BOM)  
Shock and vibration resistant

### Product Features

512-core NVIDIA Volta™ GPU with 64 Tensor Cores  
8-Core ARM v8.2 64-bit NVIDIA Carmel CPU  
32GB 256-Bit LPDDR4x RAM soldered on board  
Socket for CFast  
Ethernet, USB, Passive or Active CAN  
Aluminum & Stainless steel housing

### Markets / Applications

Production and Industrial Automation  
Automated Guided Vehicles (AGV)  
Transportation  
Logistics  
Robotics  
  
Railway (rolling stock)



Processor module / Performance		
NVIDIA Jetson AGX Xavier (32GB)   512-Core NVIDIA Volta™ GPU with 64 Tensor Cores 8-Core ARM v8.2 64-bit NVIDIA Carmel CPU		
AI Performance	32 TOPs	32 TOPs
Memory / Storage		
Data L3 Cache Size	4MB	4MB
256-Bit LPDDR4x RAM soldered on board	32GB	32GB
eMMC 5.1 Flash Storage on board	32GB	32GB
microSD Card socket	1	1
M.2 socket <sup>2</sup>	1	1
CFast socket with retention frame <sup>2</sup>	1	1
Features		
Real time clock PC with Goldcap backup	48h	optional
Real time clock PC with battery backup Renata CR2477 (950 mAh)	optional	•
Hardware Watchdog & Temperature supervisor	•	•
Intelligent power management	•	•
Communication Interfaces		
Graphic interface	DisplayPort 1.2	DisplayPort 1.2
USB version 3.0 (Type A)	2	2
Internal USB version 2.0 OTG <small>behind the cover</small> (micro USB Type AB)	1	1
Ethernet 10/100/1000Mbit (M12 female x-coded)	2	2
Power over Ethernet - IEEE802.3at 10/100/1000Mbit (M12 female x-coded)	4	4
Active/passive-CAN ESD protected, isolated (DSUB9)	2	2
1-4 additional Active/passive-CAN ESD protected, isolated (DSUB9)	optional	optional
Serial Interface RS232 / RS422/485 ESD protected (DSUB9)	optional	optional
Digital I/O	optional	optional
Analog I/O	optional	optional
Mini PCIe socket <sup>2</sup>	1	1
I2C bus <sup>2</sup>	•	•
Buzzer	•	•
Wireless Connectivity		
Cellular 4G Module (GSM/UMTS/LTE) Telit or Sierra Wireless - M2M only!	2x SMA	2x SMA
Dual SIM Support (nanoSIM to mPCIe slot)	•	•
Positioning Wireless Module (GPS, Galileo, Glonass, Beidou) u-blox NEO-M8U Module incl. acceleration sensor	1x SMA	1x SMA
Acceleration / Motion Sensor STMicroelectronics ISM330DLC	•	•
Wireless LAN IEEE 802.11a/b/g/n/ac dual-band 2x2 MIMO	2x RP-SMA	2x RP-SMA
High Accuracy Positioning Wireless Module u-blox ZED-F9P	optional	optional
Technical Data		
Dimensions w230 x h110 x d127 mm (housing, incl. mounting)	•	•
Net weight in gram	tbd	tbd
Input voltage and reverse polarity protected (M12 5P male a-coded)	16.8 ... 45VDC (isolated)	9 ... 30VDC
Interruption of voltage supply time: EN50155	> 10ms	n/a
Current consumption typ. in mA @ 24V without Add-Ins, idle	~ 400	~ 400
Power consumption typ. in Watt @ 24V without Add-Ins, idle	~ 10	~ 10
Environmental Conditions		
Operating temperature <sup>3</sup>	-25°C ... +50°C	-25°C ... +50°C
Storage temperature	-25°C ... +80°C	-25°C ... +80°C
Protection standard: IP20	•	•
Conformal coating <sup>4</sup>	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	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. NVIDIA Xavier 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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