NVIDIA Jetson搭載 ECU

AI Rugged Computer シリーズ

RPC/COMPACT RSL A3 シリーズ

RPC/COMPACT RSL A3は、NVIDIA Jetson AGX Xavier モジュールを搭載し、広範なインターフェースを提供するファンレスのECUです。
堅牢で妥協のない設計が、自律動作マシン及び過酷な屋外での強力なAIアプリケーション使用を実現するとともに、長期間の利用を可能にします。

- 24時間 連続運転
- 広範な AIコンピューティング
- 削出しアルミハウジング
- 密閉ハウジング: IP67/IP69 保護
- 耐衝撃, 耐振動

NVIDIA
Linux for Tegra (L4T)

CE E1

ハイライト

堅牢
密閉ハウジング
保護等級 IP67/IP69
メンテナンスフリー
パワーイグニッションコントローラー
動作部品無し/パッシブクーリング
空気圧調整
薬品耐性
長期製品供給(BOM固定)

特徴

512-core NVIDIA Volta™ GPU
64 Tensor コア
8-Core ARM v8.2 64-bit NVIDIA Carmel CPU 32GB 256-Bit
LPDDR4x RAM ボードはんだ付
ストレージオプション:
NVMe M.2 2280 & CFast
イーサネット, USB, パッシブ/アクティブCAN
堅牢なM12コネクタ

分野

農業
建設
交通
高速道路外の車両
重工業
自律移動ロボット(AMR)
野外アプリケーション

Order Code		RPC/RSLA3K22-B102S[1]	RPC/RSLA3K22-C102S[1]
Processor module / Performance			
NVIDIA Jetson AGX Xavier (JAX) | 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 2280 Key M socket (for NVMe SSD) [2]		1	1
CFast socket with retention frame [2]		1	1
Features			
Inertial measurement unit (IMU) STMicroelectronics ISM330DHCXTR		•	•
Real time clock (RTC) with battery backup Renata CR2477 (950 mAh)		•	•
Hardware Watchdog & Temperature supervisor		•	•
Buzzer		•	•
Communication Interfaces			
Graphic interface behind the back service cover		DisplayPort 1.2	DisplayPort 1.2
Internal USB version 2.0 OTG behind the back service cover	(micro USB Type AB)	1	1
USB version 2.0 behind the back service cover	(Type A)	2	2
Ethernet 10/100/1000 Mbit BASE-T	(M12 female x-coded)	2	2
Active/passive-CAN ESD protected, isolated	(M12 female a-coded)	2	2
Power over Ethernet - IEEE802.3at 10/100/1000Mbit requires taller housing: h103mm	(M12 female x-coded)	optional	optional
USB version 2.0	(M12 female a-coded)	optional	optional
Serial RS232 / RS422/RS485	(M12 female a-coded)	optional	optional
Digital I/O's, 24VDC [1]	(up to 4 inputs & 2 outputs)	optional	optional
Analog input, 16bit resolution, current: 0-20mA or voltage input: -10 ...+10V / 0 ... 30V [1] Accuracy: +/- 0.1%	(4 inputs)	optional	optional
Mini PCIe socket [2]		1	1
I2C bus [2]		1	1
MIPI CSI-2 / GMSL2 / FPDLinkIII Camera interface [1]		on request	on request
Wireless Connectivity			
Cellular 4G Module (LTE/UMTS/GSM) Sierra Wireless MC7455 - M2M only! with GNSS and dual nano SIM support	(full size Mini PCIe)	3x SMA	none
Wireless LAN IEEE 802.11a/b/g/n/ac dual-band 2x2 MIMO Sparklan WPEB-263ACNI	(half size Mini PCIe)	2x RP-SMA	none
High Accuracy GNSS Positioning Module w/ RTK support [1] u-blox ZED F9P		optional	none
Cellular 5G Module (4G/3G fallback) with GNSS Module tbd		optional	optional
Wireless LAN (Wi-Fi 6) 802.11ax/ac/a/b/g/n 2T2R Module tbd		optional	optional
Technical Data			
Dimensions mm (housing, excl. mounting)		w250 x h75 x d170	w250 x h75 x d170
Net weight in gram		~3900	~3900
Non isolated input voltage, with Ignition controller, reverse polarity protected	(M12 5P male a-coded)	9 ... 45VDC	9 ... 45VDC
Power consumption [3]		depends on power mode (15W, 30W, MAXN)	
Environmental Conditions			
Operating temperature (JAX) [3]		–25°C ... +65°C	–25°C ... +65°C
Storage temperature (JAX)		–25°C ... +80°C	–25°C ... +80°C
Ingress protection standard according to EN60529 (ISO 20653)		IP67 / IP69	IP67 / IP69
Conformal coating [4]		on request	on request
Road vehicles [5]		UN/ECE R10 (E-mark)	UN/ECE R10 (E-mark)
Agriculture ISOBUS		hardware ready	hardware ready
Shock (designed to meet)		ISO 15003 / EN60068-2-27	ISO 15003 / EN60068-2-27
Vibration (desigend to meet)		ISO 15003 / EN60068-2-64	ISO 15003 / EN60068-2-64
EMI-Conformity		EN55032 / EN55035	EN55032 / EN55035
Safety (designed to meet)		EN62368-1	EN62368-1
Radio and Telecommunication (designed to meet)		RED	RED
MTBF @ 25°C ambient according to Telcordia SR-332, Environment GB, excluding battery		~325 000h	~435 000h

choose one

[1] Please contact factory for minimum order quantities
[2] Internal connector
[3] Depending on installation situation, power mode and interface connection. Please see user documentation.
[4] On all possible components (excl. NVIDIA Xavier Module, connectors and wireless devices)
[5] UN/ECE-R10 is the type-approval test for European automotive electronics. It includes a variety of testing including RF immunity and emissions, transient immunity and emissions. It also includes a requirement for burst, surge, harmonics & flicker and provides advice and requirements for electrical vehicles.

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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industrial computing