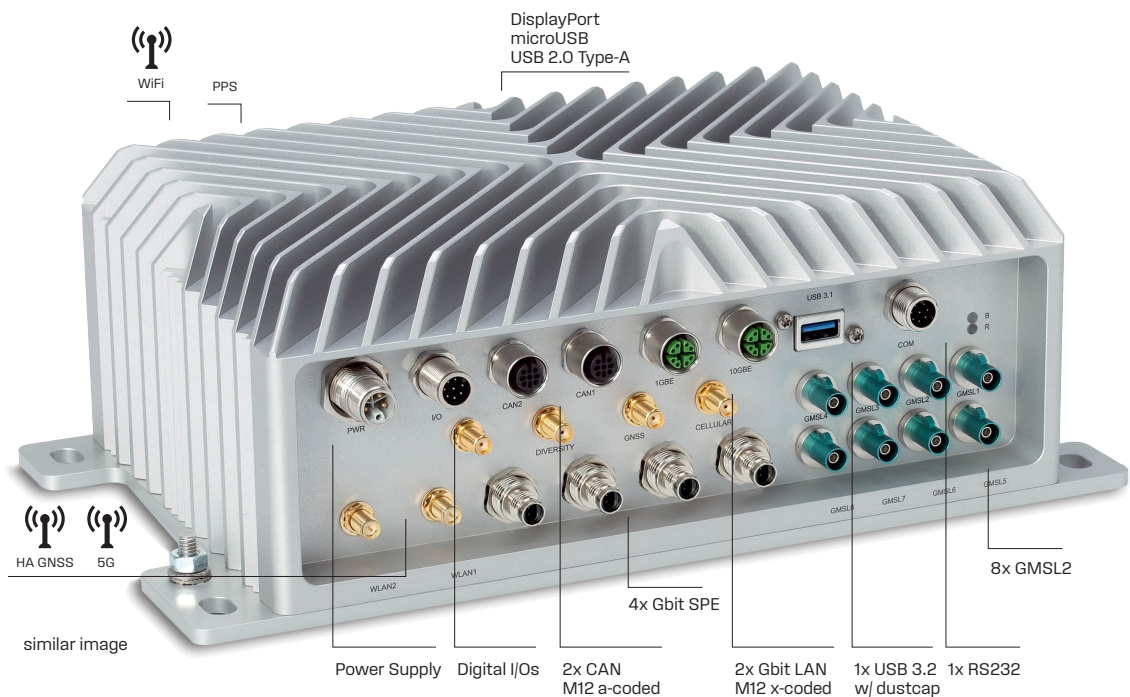


Rugged Series



Rugged Computer RML A4AGX

Computer vision edge device featuring NVIDIA Jetson AGX Orin



Product Highlights
4x 100/1000 BASE-T1 Single pair ethernet
8x camera inputs (GMSL2) with PoC
High-precision GNSS (RTK) w/heading
IP67, IP69 protection
High shock and vibration resistance
Resistance to chemicals
Inertial measurement unit (IMU)

Market / Applications
Agriculture
Construction
Off-Highway
Automotive

RPC RML A4AGX

The fanless AI edge computers from Syslogic's rugged series are perfectly suited for tough 24/7 use in mobile machinery and agriculture. The RPC RML A4AGX not only meets the highest requirements in terms of robustness, but also stands out in terms of AI compute power. It is based on the powerful NVIDIA Jetson AGX Orin™

The AI Rugged Computer RML A4AGX was designed from the ground up for autonomous machines and vehicles. The AI edge computer typically handles inference tasks such as object recognition, or intelligent control of autonomous robots, machines and vehicles.

Rugged Computer RML A4AGX



Order Code **RPC/RMLA4AGX64-P202S-20¹**

Processor module / Performance		
NVIDIA Jetson AGX Orin 64GB 2048-core Ampere GPU with 64 Tensor Cores 12-core NVIDIA Arm® Cortex A78AE CPU, with 275 TOPs		✓
NVIDIA Jetson AGX Orin 32GB 1792-core Ampere GPU with 56 Tensor Cores 8-core NVIDIA Arm® Cortex A78AE CPU, with 200 TOPs		on request
Memory / Storage		
256-bit LPDDR5 RAM (204.8GB/s) soldered on module		64GB
Internal eMMC 5.1		64GB
Industrial grade NVMe SSD M.2 2280 Apacer PV920		1920GB
MicroSD Card socket ²		1x
Features		
Real time clock (RTC) with battery Renata CR2477 (950 mAh)		✓
Inertial measurement unit stMicroelectronics ISM330DHCXTR (Please see user documentation for more detailed information and maximum sampling rate)		✓
Intelligent power management (Ignition controller)		✓
Communication Interfaces		
DisplayPort 1.4a @ 8K60 <small>behind the service cover (rear)</small>	(DisplayPort)	1x
Internal USB version 2.0 <small>behind the service cover (rear), for device flashing and SSH access only</small>	(micro USB Type AB)	1x
USB version 2.0 behind the service cover (rear)	(Type A)	2x
USB version 3.2 (5 Gbit/s) with dustcap	(Type A)	1x
Ethernet 10GbE (100/1000/10000 BASE-T)	(MI2 female, x-coded)	1x
Ethernet 1GbE (100/1000 BASE-T)	(MI2 female, x-coded)	1x
100/1000 BASE-T1 Single Pair Ethernet with 4 dedicated NIC's NIC: Microchip LAN7431-I / TI-Phy: Microchip LAN8870 / SPE Connector: acc. IEC 63171-5	(M8 male, SPE)	4x
GMSL2 camera inputs, with Power over Coax (PoC), 12VDC ^{1/5%} Maximal power per port: 3W	(Fakra-Z)	8x
CAN 2.0A / CAN 2.0B (set to active by default, passive mode possible), CAN FD supported, isolated	(MI2 female, a-coded)	2x
GPIOs (Digital I/O's), isolated, current sinking inputs / current sourcing outputs (high side-switch) ^{1/2/4VDC}	(MI2 male, a-coded)	4 inputs / 2 outputs
Serial RS232	(MI2 male, a-coded)	1x
PPS input	(SMA)	1x
Wireless connectivity		
Cellular 5G module (4G fallback) with onboard GNSS Quectel RM520N-GL, dual nano SIM support - M2M only!	(SMA)	4x SMA
High precision GNSS multiband module with RTK and heading (PPS available on internal GPIO) u-blox ZED-F9P & ZED-F9H	(SMA) ³	2x SMA
Wireless LAN (Wi-Fi 6E) 802.11ac/a/b/g/n/ax Intel, Bluetooth 5.2 Module Intel Wireless AX210	(RP-SMA)	2x RP-SMA
Cellular 4G Module (LTE/LTMS/GSM) with GNSS Sierra Wireless EM7590 (Dual nano SIM support)	(SMA)	on request
Technical Data		
Exterior Dimensions [mm], excl. base plate (width incl. base plate mounting holes: 298mm)		w250 x h100x d170
Net weight [gram]		-4500
Non-isolated input voltage, with Ignition controller and RP protection	(MI2 5P male L-coded)	9 ... 45VDC
Power consumption typ. [Watt] @ 24V without peripherals ⁴		-25-60W
Environmental Conditions		
Operating temperature ⁴		-25°C ... +70°C
Non operating temperature (Recommended storage temperature 20°C .. 25°C)		-25°C ... +80°C
Ingress protection standard according to EN60529		IP67, IP69
Conformal coating ⁵		on request
Shock according to ISO 15003 (designed to meet)		50g peak acc. (11ms)
Vibration according to EN 60068-2-64 (designed to meet)		4.1g peak (10-350Hz)
EMC-Conformity		ISO 13766 / ISO 14982
Safety (designed to meet)		EN IEC 62368-1
Radio and Telecommunication (designed to meet)		RED
MTBF @ 25°C <small>according to Telcordia SR-332, Environment GB</small>		tbd
Certifications		
UKCA/CE		✓
Software		
NVIDIA JetPack SDK - Jetson Linux (Ubuntu based)		✓

¹ Made to order product. Please contact factory for minimum order quantities

² Internal connector

³ Multiband antenna needed (GNSS L1 band and L2/E5b/B2I bands). Example u-Blox antenna: ANN-MB

⁴ Depends on interface connection and device load. Please see product manual.

⁵ On all possible components (excl. 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.

Accessories

syslogic.ai/accessories



For support and further information:
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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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