



Rugged Computer RML A4AGX

Computer Vision Edge Unit with NVIDIA Jetson AGX Orin

Rugged Series



similar image

Product Highlights

- 24/7 continuous operation
- 8x camera inputs (GMSL2) with PoC
- Power Over Ethernet (PoE+), 48VDC out
- High shock and vibration resistance
- IP67, IP69K rating



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Rugged Computer RML A4AGX

Order Code [RPC/RMLA4AGX32-M202S¹](#) [RPC/RMLA4AGX32-N202S¹](#)

| Processor module / Performance | | |
|---|-------------------------|-------------------------|
| NVIDIA Jetson AGX Orin 32GB 1792-core Ampere GPU with 56 Tensor Cores 8-core NVIDIA Arm® Cortex A78AE CPU | ✓ | ✓ |
| NVIDIA Jetson AGX Orin 64GB 2048-core Ampere GPU with 64 Tensor Cores 12-core NVIDIA Arm® Cortex A78AE CPU | see page 3 | see page 3 |
| NVIDIA Jetson AGX Orin Industrial 2048-core Ampere GPU with 64 Tensor Cores (ECC) 12-core NVIDIA Arm® Cortex A78AE CPU | on request ¹ | on request ¹ |
| Memory / Storage | | |
| 256-bit LPDDR5 RAM (204.8GB/s) soldered on module | 32GB | 32GB |
| eMMC 5.1 Flash Storage on board | 64GB | 64GB |
| M.2 2280 Key M socket (for 240GB – 2TB NVMe SSD) | 1 | 1 |
| Features | | |
| Inertial measurement unit (IMU) STMicro ISM330DHCXTR | ✓ | ✓ |
| Real time clock (RTC), with battery backup Renata CR2477 (950 mAh) | ✓ | ✓ |
| Communication Interfaces | | |
| DisplayPort 1.4a @ 8K60 <small>behind the service cover (rear)</small> | 1 | 1 |
| Internal USB version 2.0 <small>behind the service cover (rear), for device flashing and SSH access only</small> (micro USB Type AB) | 1 | 1 |
| USB version 2.0 <small>behind the service cover (rear)</small> (Type A) | 2 | 2 |
| USB version 3.1 (5 Gbit/s) with dustcap (Type A) | 1 | 1 |
| Ethernet 10GbE (10GBASE-T) | (M12 female, x-coded) | 1 |
| Ethernet 1GbE (100/1000 BASE-T) | (M12 female, x-coded) | 1 |
| Power over Ethernet 1GbE (PoE+), IEEE802.3at Power sourcing equipment, producing 48VDC out, Total maximal power: 39W | (M12 female, x-coded) | 4 |
| GMSL2 camera inputs, with Power over Coax (PoC), 12VDC ^{+/-5%} Maximal power per port: 3W | (Fakra-Z) | 8 |
| CAN 2.0A / CAN 2.0B (active/passive), CAN FD supported, isolated | (M12 female, a-coded) | 2 |
| GPIOs (Digital I/O's), current sinking, isolated ^{12/24VDC} | (M12 male, a-coded) | 4in / 2out |
| Serial RS232 | (M12 male, a-coded) | 1 |
| Full size mini PCIe socket | 1 | 1 |
| Wireless Connectivity | | |
| Cellular 4G Module (LTE/UMTS/GSM) with GNSS Sierra Wireless EM7590 (Dual nano SIM support) | 3 x SMA | none |
| Wireless LAN 802.11ax/ac/a/b/g/n (Wi-Fi 6E) dual-band 2x2 MIMO Intel AX210 | 2 x RP-SMA | none |
| Cellular 5G module (4G/3G fallback) with GNSS | on request | on request |
| High precision multiband GNSS module with optional heading support ¹ u-blox ZED-F9P/F9R | on request | on request |
| Technical Data | | |
| Dimensions excl. mounting holes [mm] | w250 x h100 x d170 | w250 x h100 x d170 |
| Net weight [gram] | ~4500 | ~4500 |
| Non-isolated input voltage with ignition controller and RP protection (M12 male, L-coded) | 9.5 ... 45VDC | 9.5 ... 45VDC |
| Power consumption ³ | -tbd | -tbd |
| Software / OS | | |
| NVIDIA JetPack SDK – Jetson Linux (Ubuntu based) | ✓ | ✓ |
| Environmental Conditions | | |
| Operating temperature ³ | -25°C ... +60°C | -25°C ... +60°C |
| Storage temperature | -25°C ... +80°C | -25°C ... +80°C |
| Ingress protection (designed to meet) | IP67, IP69K | IP67, IP69K |
| Conformal coating ⁴ | on request | on request |
| Shock according to ISO 15003 (designed to meet) | 50g peak acc. (11ms) | 50g peak acc. (11ms) |
| Vibration according to ISO 15003 (designed to meet) | 4.1g (10 – 350Hz) | 4.1g (10 – 350Hz) |
| EMC-Conformity | EN55032 / EN55035 | EN55032 / EN55035 |
| Safety (designed to meet) | EN62368-1 | EN62368-1 |
| Radio and Telecommunication (designed to meet) | RED | n/a |
| Estimated MTBF @ 25°C ambient <small>according to Telcordia SR-332, Environment GB, excluding battery and SSD</small> | -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. AGX Orin module, connectors and wireless devices)

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| Features | | |
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| Real time clock (RTC), with battery backup Renata CR2477 (950 mAh) | ✓ | ✓ |
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Assured Systems

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US

sales@assured-systems.com

Sales: +1 347 719 4508
Support: +1 347 719 4508

1309 Coffeen Ave
Ste 1200
Sheridan
WY 82801
USA

EMEA

sales@assured-systems.com

Sales: +44 (0)1785 879 050
Support: +44 (0)1785 879 050

Unit A5 Douglas Park
Stone Business Park
Stone
ST15 0YJ
United Kingdom

VAT Number: 120 9546 28
Business Registration Number: 07699660