



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)

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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Rugged Computer RML A4AGX

Order Code [RPC/RMLA4AGX64-M202S¹](#) [RPC/RMLA4AGX64-N202S¹](#)

Processor module / Performance		
NVIDIA Jetson AGX Orin 64GB 2048-core Ampere GPU with 64 Tensor Cores 12-core NVIDIA Arm® Cortex A78AE CPU	✓	✓
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	64GB	64GB
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 behind the service cover (rear)	1	1
Internal USB version 2.0 behind the service cover (rear), for device flashing and SSH access only (micro USB Type AB)	1	1
USB version 2.0 behind the service cover (rear) (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	1
Ethernet 1GbE (100/1000 BASE-T) (M12 female, x-coded)	1	1
Power over Ethernet 1GbE (PoE+), IEEE802.3at (M12 female, x-coded)	4	4
Power sourcing equipment, producing 48VDC out, Total maximal power: 39W		
GMSL2 camera inputs, with Power over Coax (PoC), 12VDC ^{+/-5%} (Fakra-z)	8	8
Maximal power per port: 3W		
CAN 2.0A / CAN 2.0B (active/passive), CAN FD supported, isolated (M12 female, a-coded)	2	2
GPIOs (Digital I/O's), current sinking, isolated ^{12/24VDC} (M12 male, a-coded)	4in / 2out	4in / 2out
Serial RS232 (M12 male, a-coded)	1	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
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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 ⁴ according to Telcordia SR-332, Environment GB, excluding battery and SSD	~tbd	~tbd

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Assured Systems

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