



# Rugged Computer RS A4NA

Computer Vision Edge Unit with NVIDIA Jetson Orin Nano

Rugged Series



image similar

## Product Highlights

- 24/7 continuous operation
- GMSL2 camera inputs with PoC
- IP67 protection, extended temperature range
- Power ignition controller
- High shock and vibration resistance



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## Rugged Computer RS A4NA

Order Code [RPC/RSA4NA4-M112S-02<sup>1,5</sup>](#) [RPC/RSA4NA4-N112S-02<sup>1,5</sup>](#)

Processor module / Performance		
NVIDIA Jetson Orin Nano   (4GB RAM) 512-core NVIDIA Ampere GPU with 16 Tensor Cores 6-core NVIDIA Arm® Cortex A78AE 64-bit CPU	✓	✓
NVIDIA Jetson Orin Nano   (8GB RAM) 1024-core NVIDIA Ampere GPU with 32 Tensor Cores 6-core NVIDIA Arm® Cortex A78AE 64-bit CPU	on request <sup>1</sup>	on request <sup>1</sup>
AI Performance	20 TOPs	20 TOPs
Memory / Storage		
LPDDR5 RAM in SoC	4GB	4GB
NVMe SSD (M.2 2280) <sup>6</sup> , an SSD is <u>required</u> , no internal eMMC storage available	240GB	240GB
Features		
Inertial measurement unit (IMU) STMicro ISM330DHCXTR	✓	✓
Real time clock (RTC), with battery backup Renata CR2477 (950 mAh)	✓	✓
Communication Interfaces		
DisplayPort 1.2 @ 4K30 <sup>2</sup> behind the service cover (rear)	1	1
Internal USB version 2.0 <sup>3</sup> behind the service cover (rear), for device flashing and SSH access only (micro USB Type AB )	1	1
USB version 2.0 <sup>3</sup> behind the service cover (rear) (Type A)	2	2
Ethernet 10/100/1000 BASE-T (1x native, 1x 1210-IT)	2	2
GMSL2 camera inputs, with Power over Coax (PoC) <sup>12VDC+/-5%</sup> (Fakra-Z, IP67)	4	4
Total max power for all ports combined: 9W   Bandwidth: 5Gbps / port		
CAN 2.0A / CAN 2.0B (active/passive), CAN FD supported, isolated <sup>1</sup> (M12 female, a-coded)	1	1
Digital I/O's, current sinking, isolated (12/24VDC) <sup>1</sup> , instead of CAN (M12 male, a-coded)	on request <sup>6</sup>	on request <sup>6</sup>
Serial RS232 <sup>1</sup> , instead of CAN (M12 male, a-coded)	on request	on request
Wireless Connectivity		
Cellular 4G Module (LTE/UMTS/GSM) with GNSS Sierra Wireless EM7590 (Dual nano SIM support)	3 x SMA	on request
Wireless LAN (Wi-Fi 6/6E) 802.11ax/ac/a/b/g/n dual-band 2x2 MIMO & Bluetooth 5.2 Intel AX210	2 x RP-SMA	on request
High precision multiband GNSS module with optional heading support <sup>1</sup> U-blox ZED-F9P/F9R	on request	on request
Technical Data		
Dimensions excl. mounting holes [mm]	w196 x h66 x d165	w196 x h66 x d165
Net weight [gram]	~2500	~2400
Non-isolated input voltage with ignition controller and RP protection (M12 male, a-coded)	9 ... 45VDC	9 ... 45VDC
Power consumption <sup>3</sup>	~tbd	~tbd
Software / OS		
NVIDIA JetPack SDK - <a href="#">Jetson Linux</a> (Ubuntu based)	✓	✓
Environmental Conditions		
Operating temperature <sup>3</sup>	-25°C ... +70°C	-25°C ... +70°C
Storage temperature	-25°C ... +85°C	-25°C ... +85°C
Ingress protection standard according to EN60529	IP67	IP67
Conformal coating <sup>4</sup>	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)	2g (10 - 350Hz)	2g (10 - 350Hz)
EMC-Conformity (designed to meet)	EN55032 / EN55035	EN55032 / EN55035
Safety (designed to meet)	EN62368-1	EN62368-1
Radio and Telecommunication (designed to meet)	n/a	n/a
estimated MTBF @ 25°C ambient <sup>5</sup> according to Telcordia SR-332, Environment GB, excluding battery and SSD	~tbd	~tbd

choose one

<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. Orin NX module, connectors and wireless devices)  
<sup>5</sup> The product must be ordered with an SSD, use the following order codes: xxx-02(240GB), xxx-05(480GB), xxx-10(960GB), xxx-20(1920GB)  
<sup>6</sup> If you need GMSL2 and digital I/O's contact Syslogic, not all configurations are possible



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.

## 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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