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

ACCESSORIES

CE UK CA

Rugged Computer RS A4NA

Nano 4GB

		Order Code	RPC/RSA4NA4-M112S-02[1,5]	RPC/RSA4NA4-N112S-02[1,5]
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 [1]	on request [1]
AI Performance			20 TOPs	20 TOPs
Memory / Storage				
LPDDR5 RAM in SoC			4GB	4GB
NVMe M.2 SSD (240GB – 2TB [6]) an SSD is required, 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 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
Ethernet 10/100/1000 BASE-T (1× native, 1× I210-IT)	(M12 female, x-coded)		2	2
GMSL2 camera inputs, with Power over Coax (PoC) 12VDC+/-5% Total max power for all ports combined: 9W | Bandwith: 5Gbps / port	(Fakra-Z, IP67)		4	4
CAN 2.0A / CAN 2.0B (active/passive), CAN FD supported, isolated [1]	(M12 female, a-coded)		1	1
Digital I/O's, current sinking, isolated (12/24VDC) [1, instead of CAN]	(M12 male, a-coded)		on request [6]	on request [6]
Serial RS232 [1, instead of CAN]	(M12 male, a-coded)		on request	on request

choose one

Wireless Connectivity				
Cellular 4G Module (LTE/UMTS/GSM) with GNSS Sierra Wireless EM7590 (Dual nano SIM support)			3 × 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 × RP-SMA	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]			w196 × h66 × d165	w196 × h66 × 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 [3]			~tbd	~tbd
Software / OS				
NVIDIA JetPack SDK – Jetson Linux (Ubuntu based)			✓	✓
Environmental Conditions				
Operating temperature [3, *Cold startup max. -25°C]			−40°C* ... +70°C	−40°C* ... +70°C
Storage temperature			−40°C ... +85°C	−40°C ... +85°C
Ingress protection standard according to EN60529			IP67	IP67
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)			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 according to Telcordia SR-332, Environment GB, excluding battery and SSD			~tbd	~tbd

[1] Please contact factory for minimum order quantities
[2] Internal connector
[3] Depends on installation situation interface connection and device load. Please see user documentation. Cold startup maximal −25°C
[4] On all possible components (excl. Orin NX module, connectors and wireless devices)
[5] 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)
[6] If you need GMSL2 and digital I/O's contact Syslogic, not all configurations are possible

For support and further information support@syslogic.ai or www.syslogic.ai

Rugged Computer RS A4NA

Nano 8GB

Order Code	RPC/RSA4NA8-M112S-02[1,5]	RPC/RSA4NA8-N112S-02[1,5]

Processor module / Performance

NVIDIA Jetson Orin Nano | (8GB RAM) 1024-core NVIDIA Ampere GPU with 32 Tensor Cores 6-core NVIDIA Arm® Cortex A78AE 64-bit CPU	✓	✓
AI Performance	40 TOPs	40 TOPs

Memory / Storage

LPDDR5 RAM in SoC	8GB	8GB
NVMe M.2 SSD (240GB – 2TB [6]) an SSD is required, 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 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
Ethernet 10/100/1000 BASE-T (1× native, 1× I210-IT)	(M12 female, x-coded)	2	2
GMSL2 camera inputs, with Power over Coax (PoC) 12VDC+/-5% Total max power for all ports combined: 9W | Bandwith: 5Gbps / port	(Fakra-Z, IP67)	4	4
CAN 2.0A / CAN 2.0B (active/passive), CAN FD supported, isolated [1]	(M12 female, a-coded)	1	1
Digital I/O's, current sinking, isolated (12/24VDC) [1, instead of CAN]	(M12 male, a-coded)	on request [6]	on request [6]
Serial RS232 [1, instead of CAN]	(M12 male, a-coded)	on request	on request

choose one

Wireless Connectivity

Cellular 4G Module (LTE/UMTS/GSM) with GNSS Sierra Wireless EM7590 (Dual nano SIM support)	3 × 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 × RP-SMA	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]		w196 × h66 × d165	w196 × h66 × 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 [3]		~tbd	~tbd

Software / OS

NVIDIA JetPack SDK – Jetson Linux (Ubuntu based)	✓	✓

Environmental Conditions

Operating temperature [3, *Cold startup max. -25ºC]	−40ºC* ... +70ºC	−40ºC* ... +70ºC
Storage temperature	−40ºC ... +85ºC	−40ºC ... +85ºC
Ingress protection standard according to EN60529	IP67	IP67
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)	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 @ 25ºC ambient according to Telcordia SR-332, Environment GB, excluding battery and SSD	~tbd	~tbd

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[3] Depends on installation situation interface connection and device load. Please see user documentation. Cold startup maximal -25ºC
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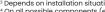[6] If you need GMSL2 and digital I/O's contact Syslogic, not all configurations are possible

Rugged Computer RS A4NA

(Nano 8GB)

Order Code   RPC/RSA4NA8-H112S-02[1,5]

Processor module / Performance

NVIDIA Jetson Orin Nano | (8GB RAM) 1024-core NVIDIA Ampere GPU with 32 Tensor Cores 6-core NVIDIA Arm® Cortex A78AE 64-bit CPU	✓
AI Performance	40 TOPs

Memory / Storage

LPDDR5 RAM in SoC	8GB
NVMe M.2 SSD (240GB – 2TB) [6] an SSD is required, no internal eMMC storage available	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 behind the service cover (rear)		1
Internal USB version 2.0 behind the service cover (rear), for device flashing and SSH access only	(micro USB Type AB)	1
USB version 2.0 behind the service cover (rear)	(Type A)	2
Ethernet 10/100/1000 BASE-T (1× native, 1× I210-IT)	(M12 female, x-coded)	2
GMSL2 camera inputs, with Power over Coax (PoC) 12VDC+/-5% Total max power for all ports combined: 9W | Bandwith: 5Gbps / port	(Fakra-Z, IP67)	4
CAN 2.0A / CAN 2.0B (active/passive), CAN FD supported, isolated	(M12 female, a-coded)	1
Serial RS232 [1, instead of CAN]	(M12 male, a-coded)	on request

Wireless Connectivity

Cellular 4G Module (LTE/UMTS/GSM) w/o GNSS Sierra Wireless EM7590 (Dual nano SIM support)		2 × SMA
Wireless LAN (Wi-Fi 6/6E) 802.11ax/ac/a/b/g/n dual-band 2x2 MIMO & Bluetooth 5.2 Intel AX210		2 × RP-SMA
High precision multiband GNSS module with heading support (u-blox ZED-F9P & F9H) [1]		2 × SMA

Technical Data

Dimensions excl. mounting holes [mm]		w196 × h66 × d165
Net weight [gram]		~2500
Non-isolated input voltage with ignition controller and RP protection	(M12 male, a-coded)	9 … 45VDC
Power consumption [3]		~tbd

Software / OS

NVIDIA JetPack SDK – Jetson Linux (Ubuntu based)	✓

Environmental Conditions

Operating temperature [3], *Cold startup max. -25ºC	−40ºC* … +70ºC
Storage temperature	−40ºC … +85ºC
Ingress protection standard according to EN60529	IP67
Conformal coating [4]	on request
Shock according to ISO 15003 (designed to meet)	50g peak acc. (11ms)
Vibration according to ISO 15003 (designed to meet)	2g (10 – 350Hz)
EMC-Conformity (designed to meet)	EN55032 / EN55035
Safety (designed to meet)	EN62368-1
Radio and Telecommunication (designed to meet)	n/a
estimated MTBF @ 25ºC ambient according to Telcordia SR-332, Environment GB, excluding battery and SSD	~tbd

[1] Please contact factory for minimum order quantities
[2] Internal connector
[3] Depends on installation situation interface connection and device load. Please see user documentation. Cold startup maximal -25ºC
[4] On all possible components (excl. Orin NX module, connectors and wireless devices)
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