

NRU-220S series

NVIDIA® Jetson AGX Orin™ AI NVR for intelligent video analytics

Features

PRELIMINARY

- › Powered NVIDIA® Jetson AGX Orin™ SoM bundled with JetPack 5.0.2
- › 2x 2.5 Gigabit Ethernet + 4x IEEE 802.3at Gigabit PoE+ ports
- › 2x front-accessible 2.5" HDD trays
- › 1x M.2 2280 M key socket for NVMe SSD
- › 8V to 48V wide-range DC input with built-in ignition power control
- › 1x isolated RS-485 and 2x RS232 ports



2x mini-PCIe sockets for WiFi/ GNSS/ NVMe/ CAN modules



1x 3042/ 3052 M.2 B key socket for 4G/5G



Fanless wide-temperature operation

One-stop AI NVR real-time video transcoder

NRU-220S series is a one-stop AI NVR real-time inference and video transcoder powered by NVIDIA Jetson AGX Orin. Its fanless design and wide-temperature operation capability makes it ideal for stationary or mobile deployment applications.

Powered by NVIDIA® Jetson AGX Orin™ 32GB/ 64GB system-on-module (SOM), it comprises an Ampere GPU with up to 2048 CUDA cores, 64 Tensor cores, 2x NVDLA 2.0 Engines that offer a total of 275 sparse TOPS (INT8) AI inference and video transcoding capability of up to twenty-two 1080P video streams simultaneously.

In addition to the above mentioned connectivity, the system also includes a wide range of NVIDIA AI tools, and modern deep learning frameworks. NRU-220S brings real-time video inference to the edge for surveillance, predictive maintenance, and intelligent transportation system (ITS) applications.

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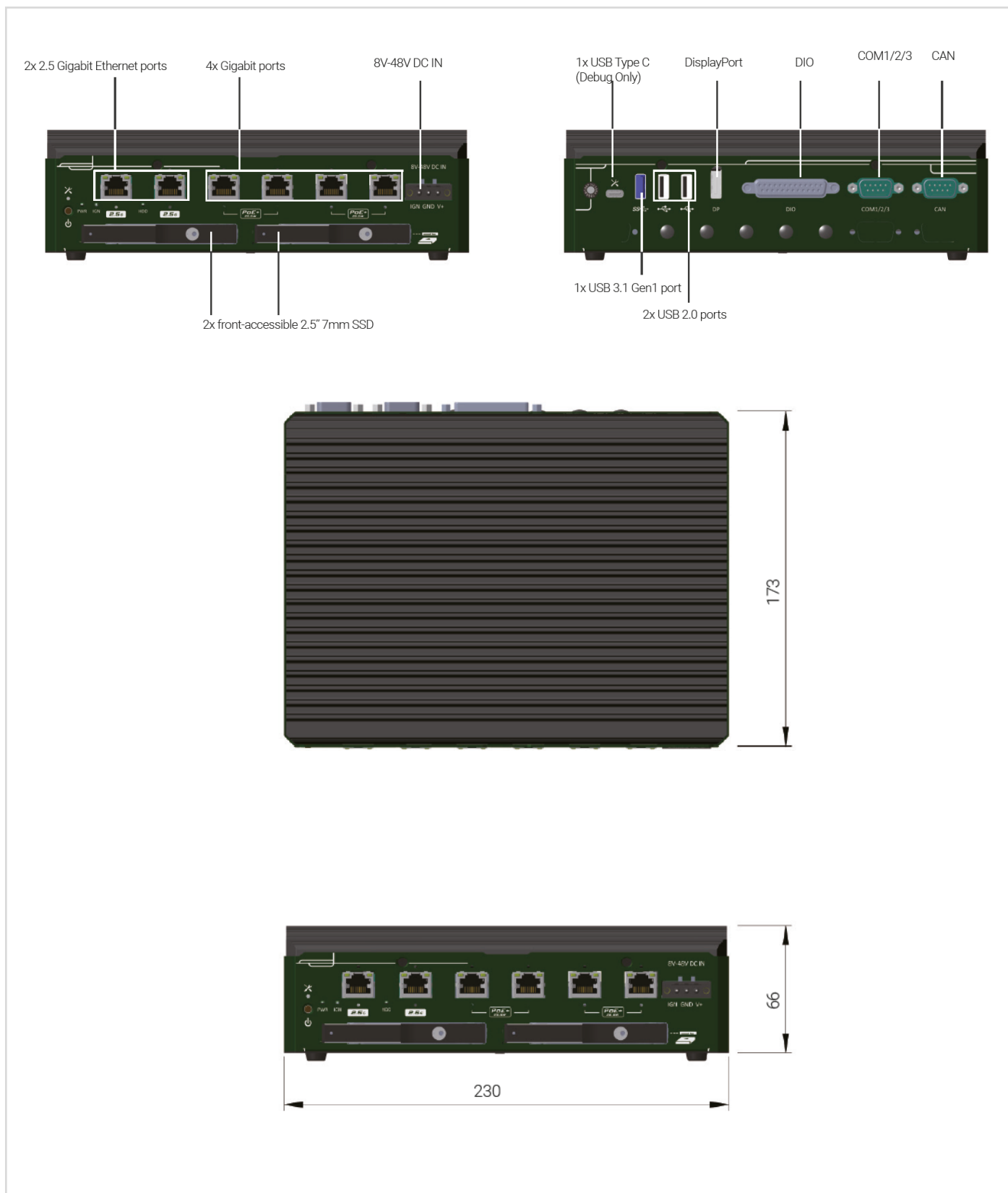
NRU-220S series	
SYSTEM	
Processor	Supporting NVIDIA® Jetson AGX Orin™ System-on-Module (SOM), comprising NVIDIA® Ampere GPU and Arm Cortex-A78AE CPU
Memory	32GB/ 64GB LPDDR5 (AGX Orin 32GB/ 64GB) @ 3200 MHz on SOM
eMMC	64GB eMMC 5.1 on SOM
Storage	SATA HDD: 2x front-accessible 2.5" 7mm SSD M.2 NVMe: 1x M.2 2280 M key NVMe socket (PCIe Gen4x2) for NVMe SSD
PANEL I/O	
Ethernet Port	6xRJ-45 with screw lock (NRU-220S) 6x M-12 X-coded 8-pin (NRU-222S) Port 1, Port 2: 2.5 Gigabit Ethernet ports by Intel® I225 Port 3 ~ Port 6: Gigabit ports, share 1 Gbps total bandwidth
POE Capability	IEEE 802.3at PoE+ PSE for Port 3 ~ Port 6, 100W total power budget
USB	1x USB 3.1 Gen1 port 2x USB 2.0 ports 1x USB Type C (debug only)
Video	1x DisplayPort, supporting 3840x2160 at 60Hz
Serial port	1x Isolated RS-485 port and 2x RS-232 ports
CAN bus	2x CAN 2.0 port
Isolated DIO	4-CH isolated DI and 4-CH isolated DO
INTERNAL I/O	
Mini PCI Express	1x full-size mini PCI Express socket (PCIe + USB 2.0) for WIFI 6 or CAN 1x full-size mini PCI Express socket (USB 2.0) for GNSS or 4G LTE
M.2	1x M.2 3042/3052 B key (USB 3.1 Gen 1 + USB 2.0) for LTE/5G module with dual micro SIM support
MECHANICAL	
Power supply	1x 3-pin pluggable terminal block for 8V to 48V DC input and ignition power control (IGN/ GND/ V+) (NRU-220S) 1x M-12 A-coded 5-pin for 8V to 48V DC input and ignition power control (IGN/ GND/ V+) (NRU-222S)
System LED	PWR: System carrier board power status OS: Jetson OS boot status IGN: Ignition power signal
Dimensions	230 mm (W) x 173 mm (D) x 66 mm (H)
Weight	TBD
Mounting	Wall-mount with damping brackets
Operating temperature	-25°C ~ 70°C with passive cooling (30W TDP mode)*
Storage temperature	-40°C ~ 85°C
Humidity	10% ~ 90% non-condensing
Vibration	Operating, MIL-STD-810H, Method 514.8, Category 4 (pending)
Shock	Operating, MIL-STD-810H, Method 516.8, Procedure I (pending)
Certifications	CE/ FCC Class A, according to EN 55032 & EN 55035 (pending) EN 50121-3 (EN 50155:2017, Clause 13.4.8) (pending)

*For sub-zero and over 60°C operating temperature, a wide temperature HDD or Solid State Disk (SSD) is

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Appearance and dimensions (mm)



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Ordering information

NRU-220S series	
MODEL NO.	
NRU-220S	NVIDIA® Jetson AGX Orin™ AI NVR for Intelligent Video Analytics with RJ-45 Ethernet
NRU-222S	NVIDIA® Jetson AGX Orin™ AI NVR for Intelligent Video Analytics with M-12 Ethernet
OPTIONAL ACCESSORIES	
PA-160W-OW	160W AC/DC power adapter 20V/8A; 18AWG/120cm; cord end terminals for terminal block, operating temperature: -30 to 70°C.
PA-120W-OW	120W AC/DC power adapter 20V/6A; 18AWG/120cm; cord end terminals for terminal block, operating temperature: -30 to 70°C
AccsyBx-FAN-NRU-100	Fan kit with 92mm x 92mm fan for NRU-220S series