

NRU-52S-NX8G

Rugged NVIDIA® Jetson Xavier™ NX Edge AI computer with 4x PoE++ ports for intelligent video analytics

Features

- Powered by NVIDIA® Jetson Xavier™ NX SOM bundled with JetPack 4.6
- 4x IEEE 802.3bt PoE++ GbE ports with screw-lock
- 2x mini-PCIe sockets for WIFI/GNSS/NVMe/CAN modules
- 1x 3042/3052 M.2 B key socket for 4G/5G mobile communication
- 1x hardware configurable RS232/RS422/RS485 port
- Rugged fanless operation (- 25°C to 70°C)

System

CPU	NVIDIA® Jetson Xavier™ NX system-on-module (SOM), comprising NVIDIA® Volta GPU and Carmel CPU
eMMC	16GB eMMC 5.1 on SOM
RAM	8GB LPDDR4x @ 1600 MHz on SOM (15W TDP mode) 8GB LPDDR4x @ 1866 MHz on SOM (20W TDP mode)

I/O

USB	2x USB 3.1 Gen1 ports (total 5 Gbps shared with M.2 B key)
Ethernet	4x Gigabit ports with screw-lock, share 1 Gbps total bandwidth
PoE Capability	In compliant with IEEE 802.3bt PoE++ Type 3 and Type 4 PSE, maximum 90W output on single PoE++ port Compatible with 802.3at (PoE+) and 802.3af (PoE) PD
Serial Ports	1x hardware configurable RS-232/422/485 port
Video	1x DisplayPort, supporting 3840x2160 at 60Hz
CAN Bus	1x isolated CAN 2.0 port
Isolated DIO	1x GPS PPS input, 3-CH isolated DI and 4-CH isolated DO
Micro SD	1x front-accessible microSD card slot
Ground Terminal	1x M4 ground terminal for chassis ESD shielding
Expansion Slots	2x full-size mini PCI Express socket (PCIe + USB 2.0) for WIFI, GNSS, NVMe storage, V2X, or CAN modules 1x 3042/3052 M.2 B key (USB 3.1 Gen 1 + USB 2.0) for 4G/5G module with dual SIM support (1x front-accessible, 1x internal)

Mechanical & Environmental

DC Input	1x 3-pin pluggable terminal block for 8V to 35V DC input and ignition power control (V+/ GND/ IGN)
Dimensions	173 mm (W) x 144 mm (D) x 60 mm (H)
Weight	1.4 kg
Mounting	Wall-mount bracket (optional)
Operating Temp.	-25°C ~ 70°C with passive cooling (15W TDP mode with 50W PoE++ power supply) -25°C ~ 70°C with optional fan kit (15W TDP mode with 144W PoE++ power supply)
Storage Temp.	-40°C ~ 85°C
Humidity	10% ~ 90%, non-condensing
Vibration	Operating, MIL-STD-810G, Method 514.7, Category 4 (pending)
Shock	Operating, MIL-STD-810G, Method 516.7, Procedure I (pending)
EMC	CE/FCC Class A, according to EN 55032 & EN 55035 (pending) EN 50121-3 (EN 50155:2017, Clause 13.4.8) (pending)

Front

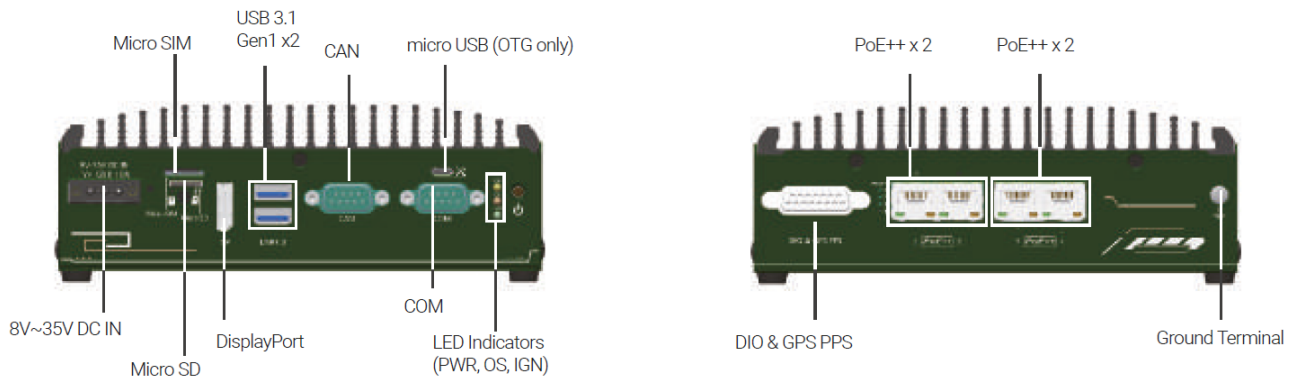


Rear

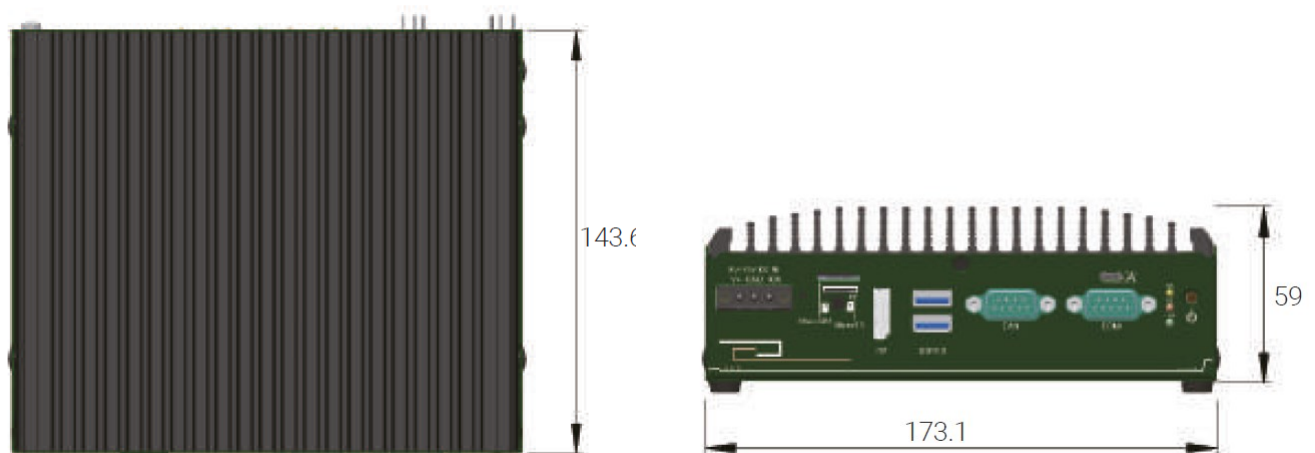


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Appearance



Dimensions (mm)



Ordering Information

NRU-52S	Rugged NVIDIA® Jetson Xavier™ NX Edge AI Computer with 4x PoE++ Ports for Intelligent Video Analytics
NRU-52S-F	Rugged NVIDIA® Jetson Xavier™ NX Edge AI Computer with 4x PoE++ Ports for Intelligent Video Analytics with Fan Kit

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.
NSIO-MPM-512GB	512GB M.2 2242 NVMe with mini-PCIe adapter
Wmkit-NRU-50	Wall mounting kit for NRU-50 series, including wall mounting brackets and screws
AccsyBx-FAN-NRU-50	Fan kit for NRU-50 series, including 92x92mm fan, fan frame, fan cable cover, and screws
Tpkit-NRU-50	3 pcs of 30x30x2 mm thermal pad for mPCIe modules with the max component height between 1.3 mm and 2.4 mm, and M.2 B key modules with the max component height between 0.7 mm and 2.0 mm