SINTRONES

Edge AI Computing

IBOX-600

NVIDIA® Jetson Orin NX / Orin Nano Fanless Edge AI Computer

- NVIDIA® Jetson Orin™ NX SoM with 1024 CUDA Cores
- Compact Size with Fanless Design
- 1 x CAN FD for Vehicle Connection
- 2 x Ethernet with RJ45 / M12 Connectors
- 9-60VDC Input with Built-in Smart Power Management
- -25~ 70°C Operating with Fanless Design
- Optional Backup Battery for Emergency

Edge AI Application

CAN FD
Enables In-Vehicle Networking

Wide Range Power Input
9~60V DC Input with
Smart Power Management

Dual Ethernet
RJ45/M12 Model Available

2.5 GbE
Connect to PoE Switch

GbE
Perfect for LiDAR Connection

Dual USB 3.2
High Speed Connection for
Cameras or Sensors

Specifications

System

Module
- NVIDIA® Jetson Orin™ NX 16GB (1024 CUDA cores + 8-core ARM Cortex-A78AE CPU + 16 GB LPDDR5)
- NVIDIA® Jetson Orin™ NX 8GB (1024 CUDA cores + 6-core ARM Cortex-A78AE CPU + 8 GB LPDDR5)
- NVIDIA® Jetson Orin™ Nano 8GB (1024 CUDA cores + 6-core ARM Cortex-A78AE CPU + 8GB LPDDR5)
- NVIDIA® Jetson Orin™ Nano 4GB (512 CUDA cores + 6-cores ARM Cortex-A78AE CPU + 4GB LPDDR5)

Network
- Intel® Industrial 2.5GbE, soM Built-in GbE

Security
- Platform Security Controller (PSC), Security Engine (SE)

Interface

Ethernet
- 2 x RJ-45 / M12 X-coded for 1 x 2.5GbE & 1 x GbE

USB
- 2 x USB 3.2 Type-A * Two ports share 10Gbps bandwidth

Video
- 1 x HDMI Type-A output supports 4K resolution

Audio
- 1 x HD Audio output from the HDMI

Serial Port
- 1 x DB-9 for RS-232/422/485

CAN Bus
- 1 x DB-9 for CAN FD

GPIO
- 1 x DB-9 for 4 x DI / 4 x DO

Mgmt. Port
- 1 x USB Type-C for System Recovery (Device only)

SIM Card
- 1 x Nano SIM Card Slot

Antenna
- 5 x Pre-cut Holes for External SMA Antenna

Internal Expansion

M.2 Slot
- 1 x M.2 3042/52 Key B slot (USB3.0) with a Nano SIM Card Slot
- 1 x M.2 2230 Key E slot

mPCIe Slot
- 1 x mPCIc Full size slot (USB.2.0 supported)

Storage

Type
- 1 x M.2 2280 Key M slot supports NVMe SSD (Pre-installed system BSP)

Power

Supply Voltage
- 1 x DC-IN 9 ~ 60V with Smart Power Management, OCP and OVP

RTC Battery
- High-capacity coin cell battery for RTC

UPS (Option)
- Backup battery for System Power Backup

Software

Operating System / BSP
- NVIDIA® JetPack including Jetson Linux, NVIDIA® development tools

Environmental

Operating Temp.
- -25°C ~ 70°C (-13°F ~ 158°F), ambient w/ 0.6m/s airflow

  * Operating temp. varies by accessories installed.

Storage Temp.
- -40°C ~ 80°C (-40°F ~ 176°F)

Relative Humidity
- 10% RH – 90% RH (non-condensing)

Vibration
- Random - IEC60068-2-64, random, 2.5G@5~500Hz, 1hr/axis
- MIL-STD-810G - Method 514.6, Procedure I, Category 4

Shock
- MIL-STD-810G, Method 516.6, Procedure I, Trucks and semi-trailers=15G (11ms) with SSD

IBOX-600

Version. 2024-12-20

Certification / Standard

- CE, FCC Part-15 Class A, E-mark, EN 50155, EN 45545-2 (R25)

Mechanical

Construction
- Aluminum Alloy

Thermal Design
- Fanless Passive Cooling Design

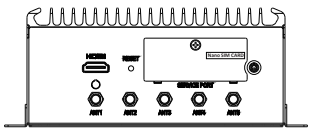
Mounting
- DIN-rail, Wall Mount

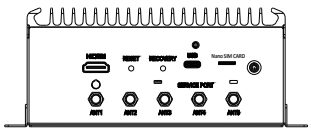
Weight
- 1370 g

Dimensions
- 150 mm (L) x 135 mm (W) x 69 mm (H)

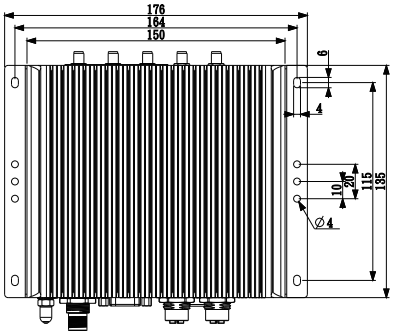
Dimensions

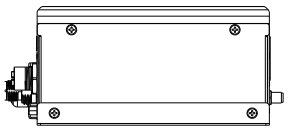
Unit : mm

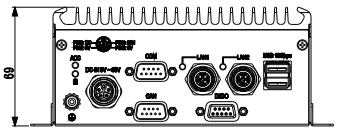




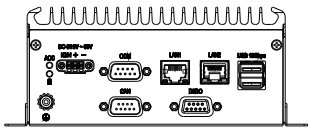
Without SIM Card Cover







M12 Version



RJ-45 Version

Ordering Information

Model Number	IBOX-600-ONX16	NVIDIA® Jetson Orin™ NX 16GB
	IBOX-600-ONX8	NVIDIA® Jetson Orin™ NX 8GB
	IBOX-600-ON8	NVIDIA® Jetson Orin™ Nano 8GB
	IBOX-600-ON4	NVIDIA® Jetson Orin™ Nano 4GB
	IBOX-600-M12X-ONX16	NVIDIA® Jetson Orin™ NX 16GB / Model M12X
	IBOX-600-M12X-ONX8	NVIDIA® Jetson Orin™ NX 8GB / Model M12X
	IBOX-600-M12X-ON8	NVIDIA® Jetson Orin™ Nano 8GB / Model M12X
	IBOX-600-M12X-ON4	NVIDIA® Jetson Orin™ Nano 4GB / Model M12X
Description	NVIDIA® Jetson Orin™ NX / Nano SoM w / 2x LAN/ 1x HDMI / 1x CAN bus / DC 9-60V / Edge AI Computer	
State of Origin	Made in Taiwan	

*NVMe SSD performance could be limited according to the storage capacity

Jetson Orin SoM Lifecycle is available through January 2032.

Optional Accessories

Storage*	M.2 2280 NVMe SSD 240GB / 480GB / 960GB
Wi-Fi	M.2 2230 Wi-Fi Module
WWAN Modem	M.2 3042/52 WWAN Modem
GPS	mPCIe GPS Module
UPS	BAT-2300v2 (Operating Temp. : -20°C ~ 60°C /-4°F ~ 140°F)

*The NVMe SSD is a mandatory accessory for this product.

All specifications are subject to change without notice.

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