

# IBOX-602P-IP66

## NVIDIA® Jetson Orin™ NX Fanless Edge AI Computer



- NVIDIA® Jetson Orin™ NX SoM with 1024 CUDA Cores
- IP66 Design (Waterproof and Dustproof) for Harsh Environment
- 2 x GMSL-2 Cameras Support
- 2 x Ethernet with PoE Support
- Optional Backup Battery for Emergency

## Edge AI Application



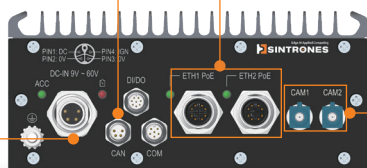
### 1 x CAN FD for Vehicle Connection

For data communication of vehicle equipment



### 9-60VDC for 12/24/48V Vehicle System

A wide input range with smart power management for EV applications



### 2 x PoE for IP Camera and ADAS

For high-resolution image capture or LiDAR connections



### GMSL-2 for Real-time Camera Connection

2 x FAKRA connectors provide robust and real-time video data transmission



**UPS** : The optional backup battery for emergency power loss situation



**Watchdog** : Monitoring the system status

## 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)

#### Network

- 1 x Intel® 2.5GbE, 1 x SoM Built-in GbE

#### Security

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

#### Watchdog

- The self-reset mechanism for unresponsive system

### Interface

#### Video

- 1 x HDMI Type-A output supports 4K resolution (with a cover)

#### Audio

- 1 x HD Audio from the HDMI

#### Ethernet

- 2 x M12 X-coded connectors

#### PoE

- 2 x PoE PSE Class 3 (15 watts)

#### Camera

- 2 x GMSL-2 via FAKRA connectors

#### CAN

- 1 x CAN FD via M8 connector

#### USB

- 1 x USB 3.2 (with a cover)

#### DIO

- 3 x DI, 4 x DO (12VDC/100mA) via M8 connector

#### Serial Port

- 1 x RS-232/422/485 via M8 connector

#### Mgmt. Port

- 1 x USB type-C for system recovery (device only)

#### Antennas

- 6 x Antenna holes with protection caps

### Internal Expansion

#### M.2

- 1 x M.2 3042/52 Key B supports WWAN w/ Dual Nano SIM
- 1 x M.2 2230 Key E supports Wi-Fi/BT

### Storage

#### Type

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

### Power

#### Power Input

- DC 9V-60V for 12/24/48V via M12 K-coded

#### Power Protection

- OCP, OVP, Surge Protection, and Reversed Polarity Protection

#### Power Management

- Supports Smart Power Management

#### RTC Battery

- High-capacity coin cell battery for RTC

#### Battery (UPS)

- Backup battery for system power backup

### Software

#### Operating System

- NVIDIA® JetPack 6.2 above, including Jetson Linux, and NVIDIA® development tools

### Environmental

#### Operating Temp.

- -25°C ~ 60°C (-13°F ~ 140°F), with SSD, ambient w/ air flow 0.6m/s (ONX16 model)
- -25°C ~ 70°C (-13°F ~ 158°F), with SSD, ambient w/ air flow 0.6m/s (ONX8 model)

#### Storage Temp.

- -40°C ~ 80°C (-40°F ~ 176°F)

#### Relative Humidity

- 10% RH – 90% RH (non-condensing)

#### Vibration (with SSD)

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

#### Shock (with SSD)

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

**Certification / Standard**

- CE, FCC Class A, UKCA, E-mark, EN50155, EN45545-2 (R25)

**Mechanical**

**Construction**

- Aluminum Alloy

**Mounting**

- Wall-mount

**Weight**

- 1.78 kg

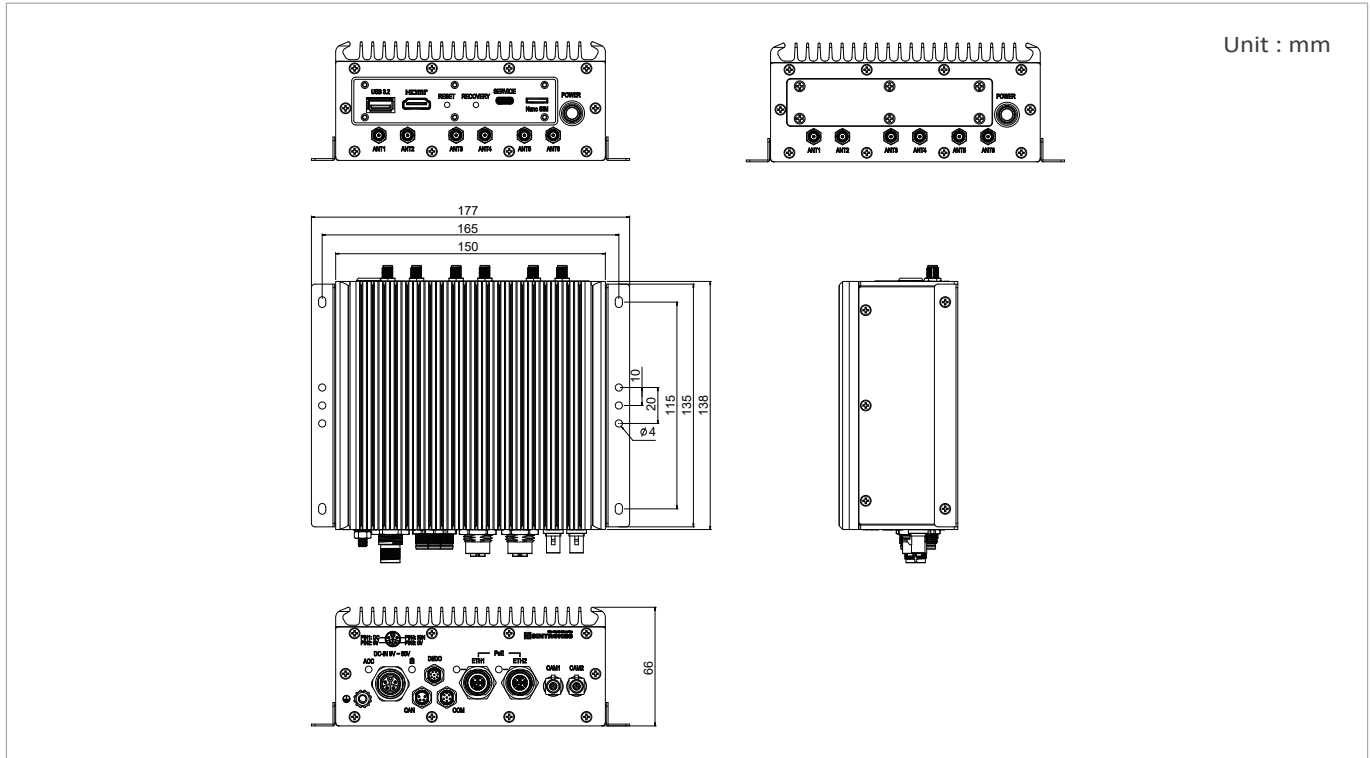
**Dimensions**

- 150 (L) x 138 (W) x 66 (H) mm (6.0 x 5.5 x 5.6 inch)

**Ingress Protection**

- IP66

**Dimensions**



Unit : mm

**Ordering Information**

Model Number	IBOX-602P-IP66-ONX16	NVIDIA® Jetson Orin™ NX NX 16GB / 2 x PoE / 2 x GMSL-2 / IP66
	IBOX-602P-IP66-ONX8	NVIDIA® Jetson Orin™ NX NX 8GB / 2 x PoE / 2 x GMSL-2 / IP66
Description	NVIDIA® Jetson Orin™ NX NX SoM w/ 2x LAN / 2x PoE / 2x GMSL-2 / 1x CAN FD / DC 9-60V / IP66 Edge AI Computer	
State of Origin	Made in Taiwan	

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	M.2 3042/52 WWAN Modem
GNSS	M.2 2242 GPS Module
Battery (UPS)	BAT-2300v2 (Operating Temp. : -10°C ~ 50°C (14°F ~ 122°F))
Power Adapter	60W 100-240VAC to 12VDC Power Adapter
Camera**	SINTRONES - VCM-1020G2 Series (Sony IMX390 2MP, 63.9°, GMSL-2, 63.9°/120°/186°)
	Stereolabs - ZED X Stereo
	e-con System - STURDeCAM25
	oToBrite - otoCAM223
	oToBrite - otoCAM260

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

\*\*BSP versions may vary depending on supported GMSL cameras.

All specifications are subject to change without notice.