IBOX-601-TVI8

NVIDIA® Jetson Orin™ Edge AI Computer for Analog Camera Support

- NVIDIA® Jetson Orin™ NX SoM with 1024 CUDA Cores
- 8 x TVI/AHD Cameras Support
- 2 x Ethernet
- The Front-Facing Interface Facilitates Installation
- 9-60VDC Input with Built-in Smart Power Management
- -25 ~65°C Operating with Fanless Design

Edge AI Application

2 x Ethernet for High-speed Data Transmission
- 1 x 2.5GbE for the data transmission between the drone system
- 1 x GbE for high-resolution sensor or LiDAR connections

12VDC OUTPUT
(12V/1A for camera power or peripherals)

Wide Range Power Input
9-60VDC Input with Built-in Smart Power Management

8 x TVI/ADH Cameras Support
For quick-response, video capture.

Specifications

System

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

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

Watchdog
- Auto reset for unresponsive system

Internal Expansion

M.2
- 1 x M.2 3042/3052 Key B for WWAN w/ SIM support
- 1 x M.2 2230 Key E for Wi-Fi/BT

Mini PCIe
- 1 x Mini PCIe (full-size, USB 2.0, I2C) for GNSS module

Storage

Type
- 1 x M.2 2280 Key M for NVMe SSD

Power

Power Input
- DC 9-60V (nominal power input DC 12V/24V/48V) via Phoenix Contact 3-pin terminal block

Power Protection
- OCP, OVP, surge protection, reversed polarity protection

Power Management
- Ignition detection, Smart Power Management (BBU Supported)

RTC Battery
- Built-in RTC coin cell battery

Interface

Video
- 1 x HDMI® Type-A output

Audio
- 1 x HD audio output via HDMI®

Ethernet
- 1 x 2.5GbE (Intel® I226-IT) via RJ-45
- 1 x GbE (NVIDIA SoM) via RJ-45

Camera
- 8 x TVI/AHD Input via BNC

CAN
- 1 x CAN FD

USB
- 2 x USB 3.2

DIO
- 4 x DI, 4 x DO

COM
- 1 x RS-232/422/485

Camera Power
- 1 x 2-pin terminal block for 12VDC/1A output

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

Software

Operating System
- NVIDIA® JetPack 6.2 or above (Jetson Linux and NVIDIA® development tools included)

Certification / Compliance

- CE, FCC Class A, E-mark, UKCA

Environmental

Operating Temp.
- -25°C ~ 65°C (-13°F ~ 149°F) with 0.6 m/s airflow
  *Operating temperature varies by accessories installed.

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

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

Vibration (with SSD)
- MIL-STD-810H, Method 514.8, Procedure I, Cat.4 (Operating)
- IEC60068-2-64, random, 2.5G@5~500Hz, 1hr/axis

Shock (with SSD)
- MIL-STD-810H, Method 516.8, Procedure I,
  Trucks and semi-trailers=15G (11ms) with SSD (Operating)

Mechanical

Construction
- Aluminum Alloy

Antenna
- 5 x SMA connector mounting hole

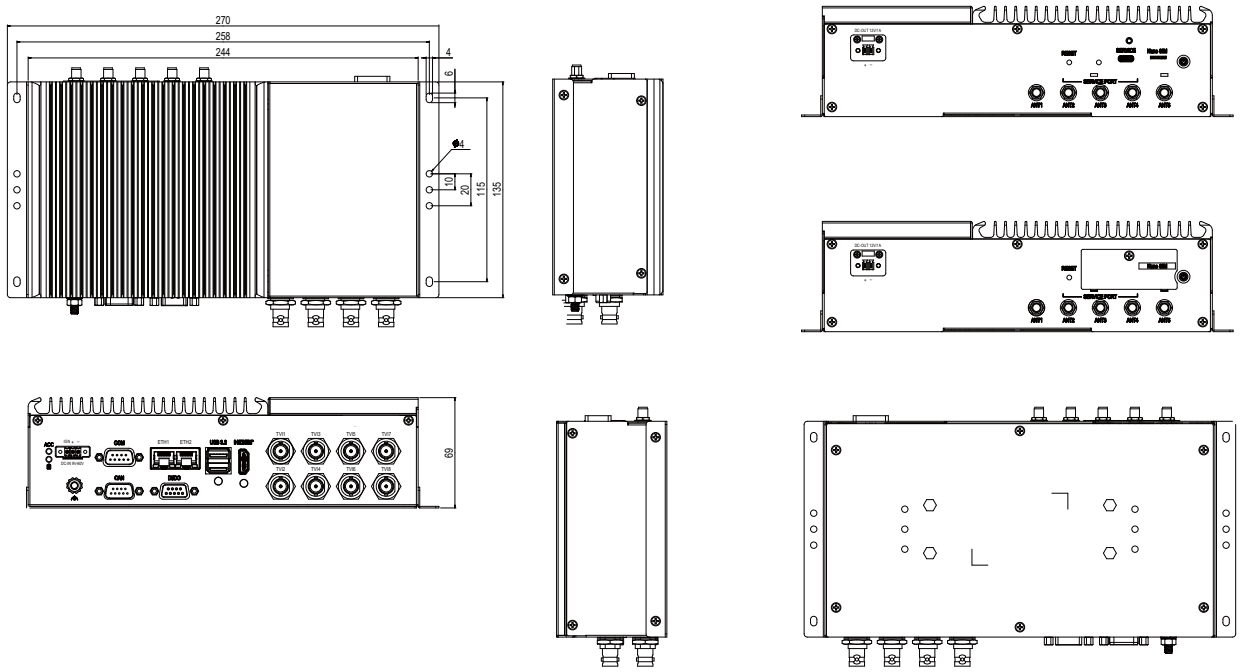
Mounting
- Wall mounting

Net Weight
- 1800 g

Dimensions (L x W x H)
- 244 x 135 x 69 mm (9.61 x 5.32 x 2.72 in.)

Dimensions

Unit : mm



Ordering Information

Model Number	IBOX-601-TVI8-zzzzz (zzzzz = ONX16 = Orin NX16GB, zzzzz = ON8 = Orin Nano 8GB)
Description	NVIDIA® Jetson Orin™ NX SoM w/ 8 x TVI/AHD 1 x CAN FD Edge AI Computer
State of Origin	Made in Taiwan

Optional Accessories

Storage	M.2 2280 Key M NVMe SSD -40°C ~ 85°C
Wi-Fi	M.2 2230 Key A-E Wi-Fi module, -40°C ~ 85°C
WWAN	M.2 3042/3052 Key B WWAN module, -40°C ~ 85°C
GNSS	M.2 2242 Key B GNSS module, -40°C ~ 85°C
Power Adapter	AC/DC 100-240V/12V 60W C14 DC plug power adapter

Analog Camera Support Lists

TVI/AHD	720p25 / 720p30 / 1080p25 / 1080p30