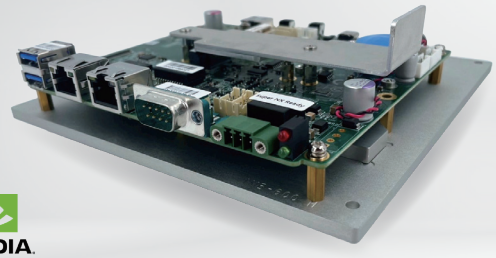
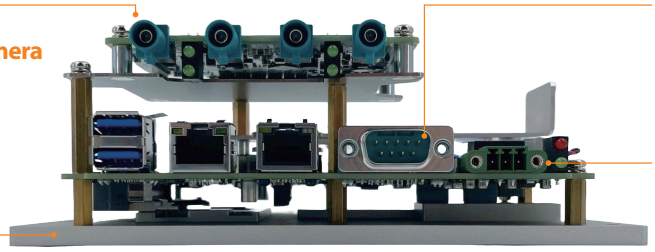
IMB-600 Developer Kit

NVIDIA® Jetson Orin™ NX Developer Kit



- Carrier Supports NVIDIA® Jetson Orin™ NX SoM
- 2 x Ethernet Ports
- Eight Lanes MIPI CSI-2 for Camera Support
- Option GMSL-2 Deserializer Board
- Standard Mini-ITX Form-factor Chassis

Edge AI Application



4 x FAKRA-Z for GMSL-2 Camera
SKU1: ADI MAX96724
SKU2: ADI MAX9296

Mini-ITX Thermal Plate
for Jetson SoM and NVMe SSD

Multiple Interfaces
for Data Transmission and Communication

3-Pin DC-IN 9- 60V w/ Ignition
for 12/19/24V Adapter

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

Power

Power Input
- DC 9V-60V for 12/24/48V via 3-pin Terminal Block

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

Power Management
- Supports Smart Power Managemen

RTC Battery
- High-capacity coin cell battery for RTC

Interface

Video
- 1 x HDMI Type-A

Audio
- 1 x HD Audio from the HDMI

Ethernet
- 2 x RJ-45 connectors

Camera
- 1 x Eight lanes MIPI CSI-2 | D-PHY 2.1 via 50-pin FFC

CAN
- 1 x CAN FD via DB-9

USB
- 2 x USB 3.2

DIO
- 4 x DI, 4 x DO (12VDC/100mA) via DB9 connector

Serial Port
- 1 x RS-232/422/485 via DB9 connector

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

Software

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

Environmental

Operating Temp.
- -25°C ~ 50°C (-13°F ~ 122°F), with SSD, ambient w/ air flow 0.6m/s (ONX16 model)

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

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

Internal Expansion

M.2
- 1 x M.2 3042/3052 Key B (Supports USB 3.2 Interface)
- 1 x M.2 2230 Key E (Supports PCIe and USB 2.0 Interface)

mPCIe
- 1 x mPCIe supports USB2.0 interface

Certification / Standard

- CE, FCC Class A, UKCA

Storage

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

Mechanical

Construction
• Aluminum Alloy

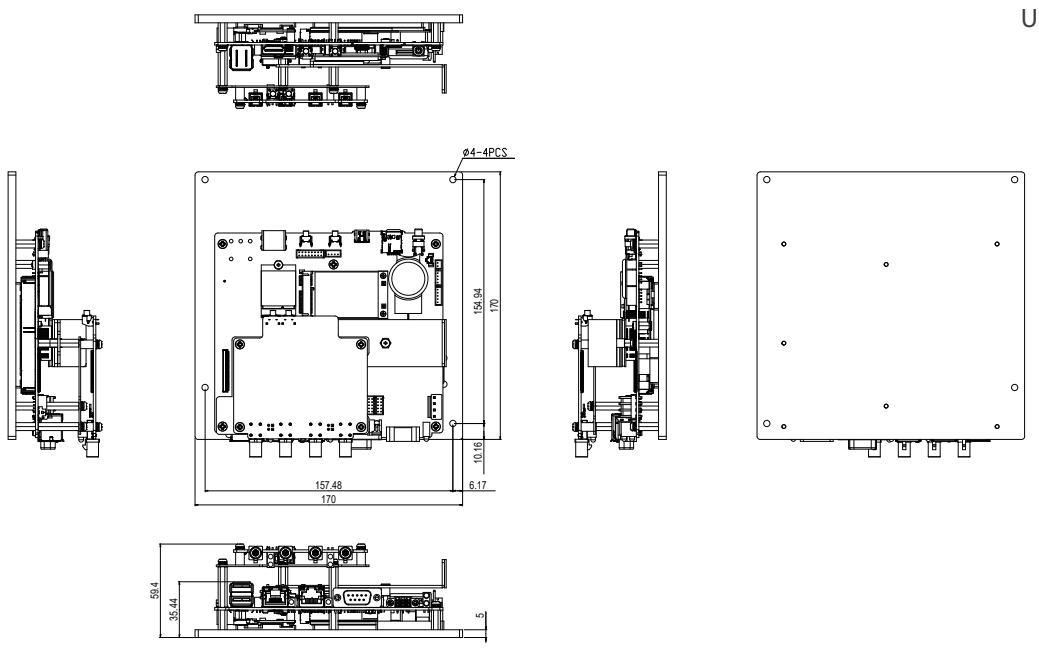
Mounting
• Mini-ITX Standard Mounting Holes

Weight
• 0.9 kg (1.98 lb)

Dimensions
• w/o VDB-100GDS4/101GDS4 :
170 (L) x 170 (W) x 35.44 (H) mm (6.7 x 6.7 x 1.4 inch)
• w/ VDB-100GDS4/101GDS4 :
170 (L) x 170 (W) x 59.4 (H) mm (6.7 x 6.7 x 2.34 inch)

Dimensions

Unit : mm



Ordering Information

Model Number	IMB-600-ONX16-DEV KIT	IMB-600 Carrier with Jetson Orin NX 16GB SoM
	IMB-600-ONX8-DEV KIT	IMB-600 Carrier with Jetson Orin NX 8GB SoM
	VDB-100GDS4 DEV KIT / 4-port GMSL-2 Deserializer - Analog Devices MAX96724 (Option for Plus Version)	
	VDB-101GDS4 DEV KIT / 4-port GMSL-2 Deserializer - Analog Devices MAX9296A (Option for Plus Version)	
	SSD 480 GB* / NVMe SSD 480GB w/ System BSP	
	SSD 240 GB* / NVMe SSD 240GB w/ System BSP	
	BBU-2300V2 / Battery Backup Unit 2350 mAh	
Description	NVIDIA® Jetson Orin™ NX Developer Kit	
State of Origin	Made in Taiwan (Carrier PCBA)	

*A Mandatory Accessory
*NVMe SSD performance could be limited according to the storage capacity
Jetson Orin SoM Lifecycle is available through January 2032.

Optional Accessories

Wi-Fi	M.2 2230 Wi-Fi Module
WWAN	M.2 3042/52 WWAN Modem
GNSS	mPCIe GPS Module
Camera	SINTRONES - VCM-1020G2 Series (Sony IMX390 2MP, 63.9°, GMSL-2, 63.9°/120°/186°)
	oToBrite - otoCAM223

All specifications are subject to change without notice.