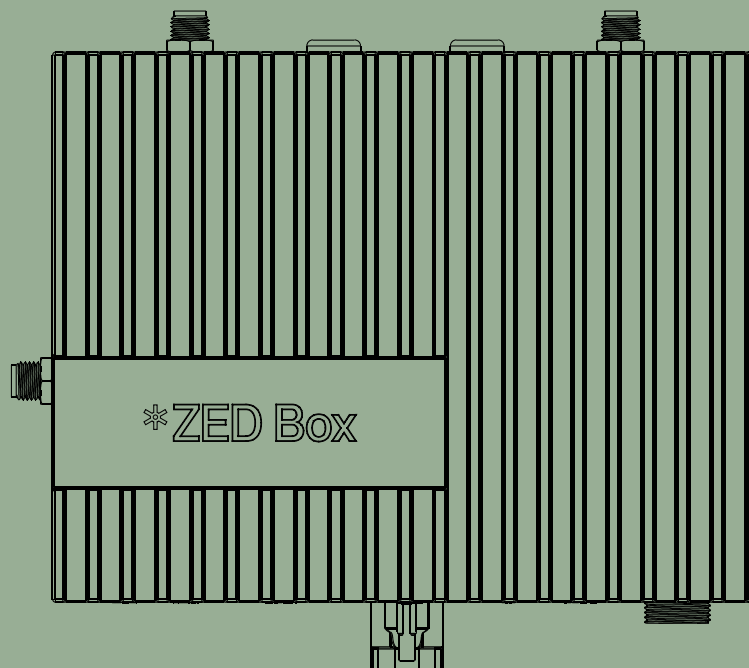# *ZED Box Orin™ NX 16GB

Overview & Datasheet

The embedded mini-PC for spatial AI 5x more powerful than the Jetson Xavier NX.

The ZED Box Orin™ NX takes advantage of NVIDIA® Jetson™ modules to propel your AI capabilities to new heights. It revolutionizes 3D sensor data processing by delivering real-time performance, transforming this compact embedded PC into a fully autonomous AI system. With its small form factor and PoE+ power connection, it offers a complete solution in a convenient package.

Powered by NVIDIA® Jetson™ Orin NX

StereoLabs*

*ZED Box Orin™ NX 16GB Overview

Designed for stereo cameras
Thanks to 3 USB 3.2 gen2 ports, the ZED Box Orin unleashes the full capabilities of the ZED camera series and beyond, supporting natively all current Stereolabs depth camera models including up to two ZED X/ZED X Mini (the ZED X series require the GMSL2 option), ZED 2i, ZED Mini, and ZED 2.

Easy to mount
Unlike the other systems out there, no drilling is required. Simply mount it, plug-in the connectors, and power up your ZED Box. With a variety of mounting options to choose from, your ZED Box Orin can be reliably and securely installed in nearly any environment.

Multiple power supply options
The ZED Box Orin can be powered either via PoE+ (up to 15W) or by an external 12V/5A power supply. Powering the ZED Box Orin via PoE+ is a powerful advantage as a single Ethernet cable can stream the data and power the ZED Box. Users can deploy ZED cameras anywhere reachable by Ethernet cabling, enabling long-range and outdoor coverage.
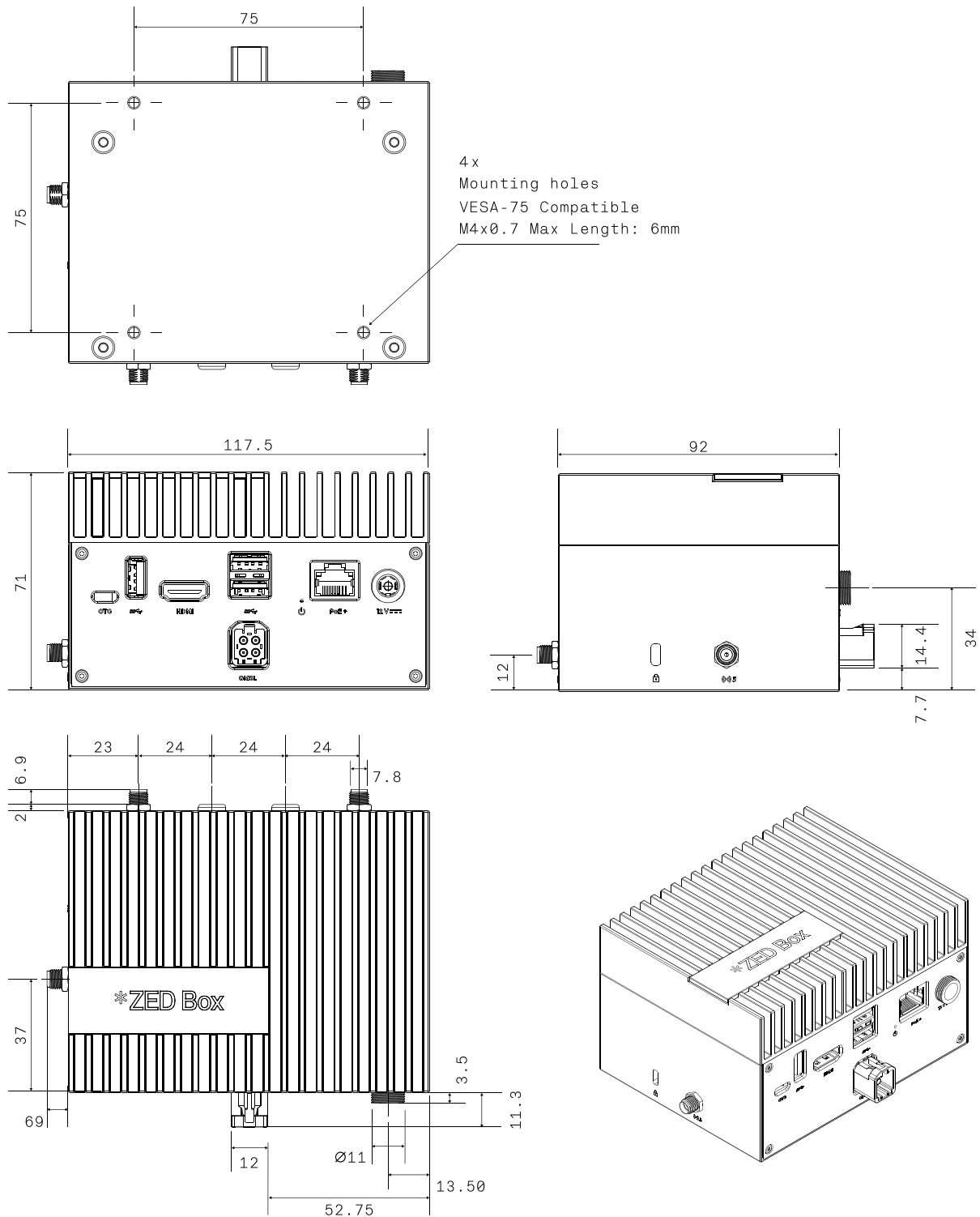
Ready-to-use out of the box
The ZED Box comes set up with all the necessary components for development, such as the latest JetPack with CUDA, TRT, CUDNN, OpenCV, VisionWorks, Docker. In the box, you'll find 2 mounting brackets, 1 mini-USB to USB cable, 1 1-to-4 GMSL2 cable*, 2 2.4/5GHz WiFi antennas.

ZED Box Orin™ NX 16GB

Reference	STEREOLABS-ZBX-320000
AI Performance	100 TOPS
GPU	1,024-core NVIDIA Ampere architecture GPU with 32 Tensor Cores @ 918 MHz
CPU	8-core Arm® Cortex®-A78AE @ 2 GHZ
Memory	16 GB 128-bit LPDDR5 102.4GB/s
DL Accelerator	2x NVDLA v2 @ 614 MHz
Storage	256GB to 1TB* M.2 NVMe SSD
I/Os	3x USB 3.2 Gen2 (10 Gbps) 1x Micro USB OTG (Flash) 1x Gigabit Ethernet 1x HDMI 4x Gigabit Multimedia Serial Links (GMSL2)** 1x WiFi 6 connectivity** 1x RTK GNSS GPS Ublox ZED F9P**
Operating System	Ubuntu 20.04 (L4T)

Jetson Power Modes	10W | 15W | 25W | MAXN (30W)
Power	PoE+ (25W) or DC-IN (35W, 12-19V) available with a locking ring
Dimensions	118 x 92 x 71 mm (4.6 x 3.6 x 2.7")
Weight	700g (1.5 lb)
Operating Temperature	-25°C to 70°C (-13°F to 158°F)
Mounting Options	92x45mm mounting holes (3.6 x 1.7") wall brackets provided DIN-rail mounting possible (VESA-75)
Case	Industrial black aluminum case passively cooled

*   All ZED Box Orin comes with a 256GB NVMe SSD. As an option it can be replaced by a 1TB NVMe SSD.
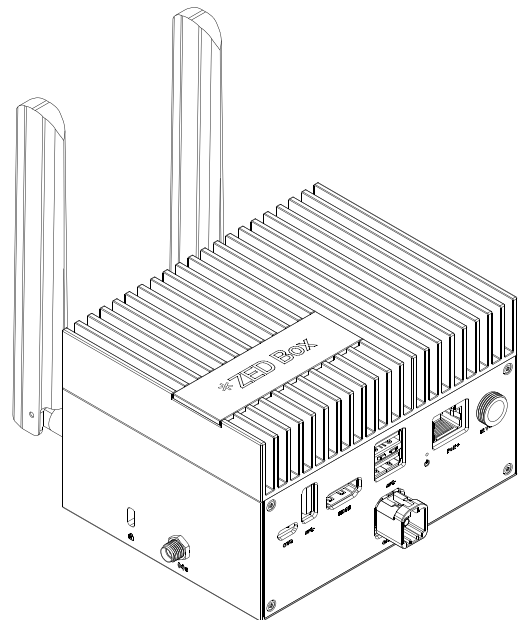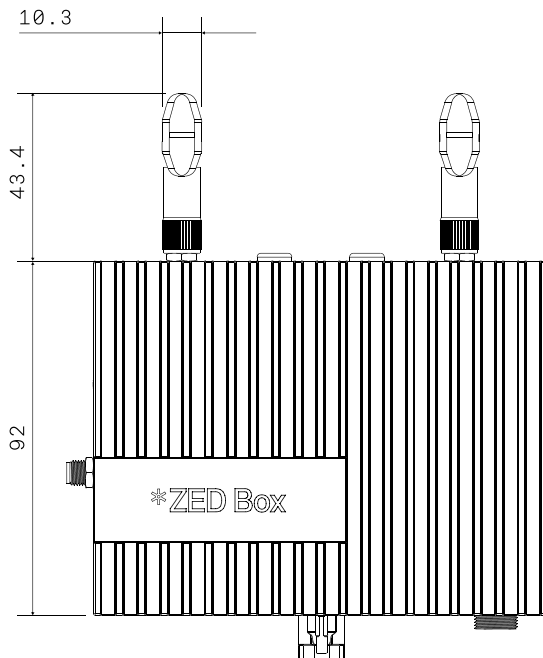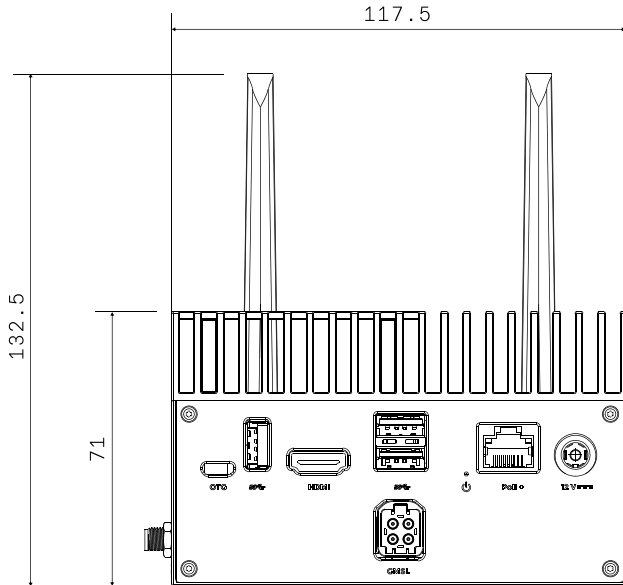
** The WiFi, GMSL2 and RTK GNSS modules are available as options.

*ZED Box Orin™ NX 16GB Technical Drawings

75

75

4x
Mounting holes
VESA-75 Compatible
M4x0.7 Max Length: 6mm

117.5

71

92

12

14.4

7.7

34

23   24   24   24

6.9

2

7.8

*ZED Box

37

69

3.5

11.3

12

Ø11

13.50

52.75

Dimensions are in mm

*ZED Box Orin™ NX 16GB Technical Drawings

117.5

132.5

71

OTG   HDMI   Po E   12 V
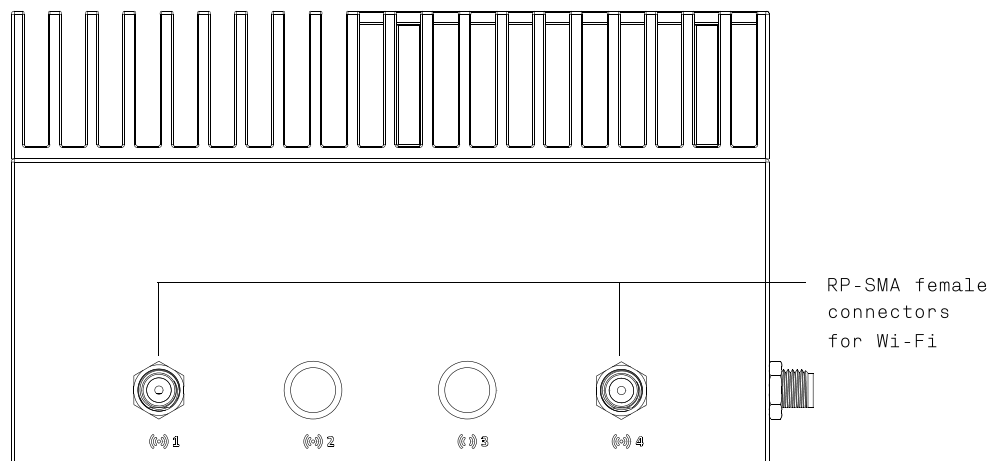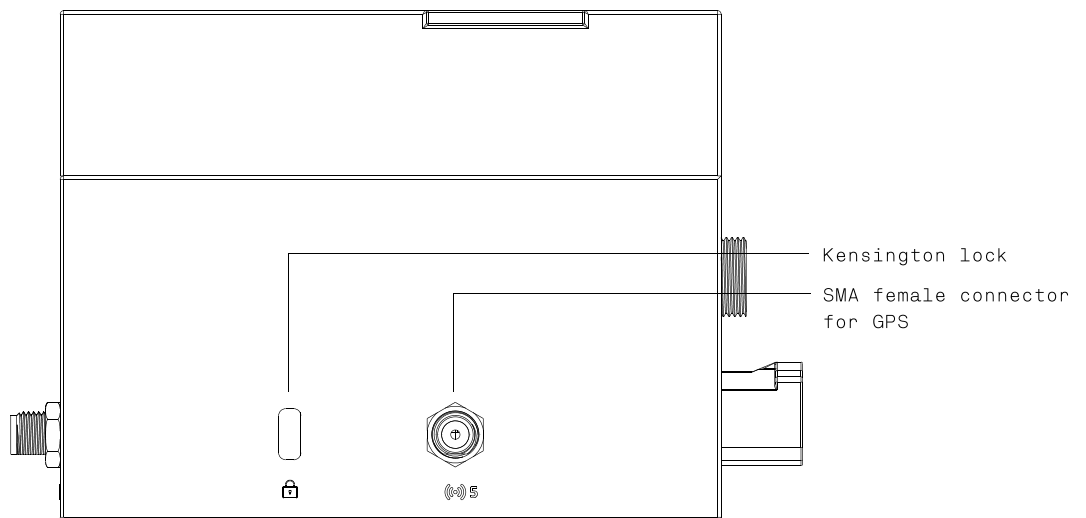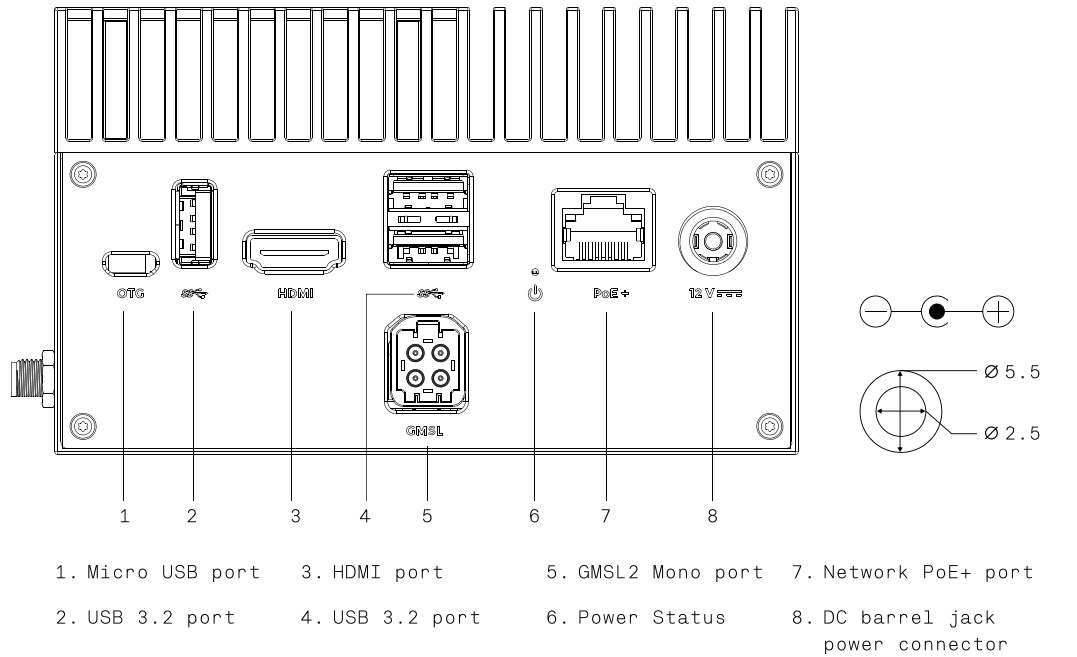
CAN L

10.3

43.4

92

*ZED Box

Wifi antennas are shipped with the ZED Box

Dimensions are in mm
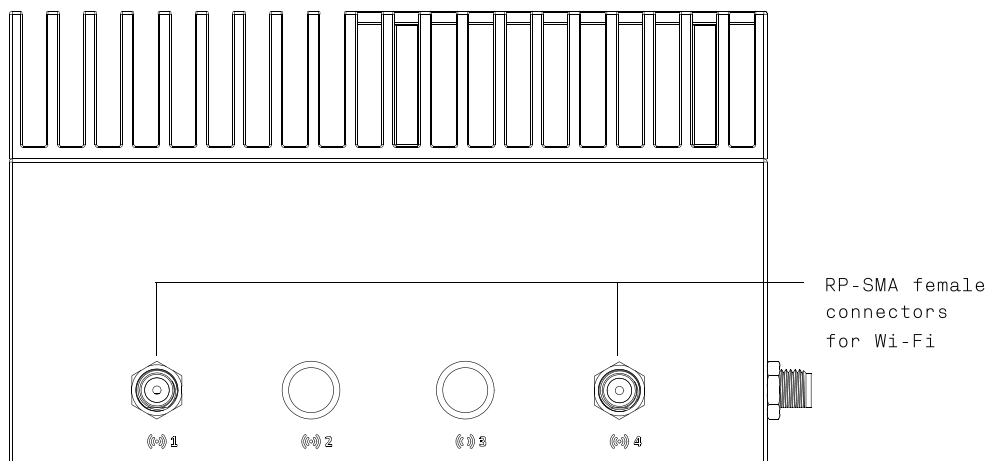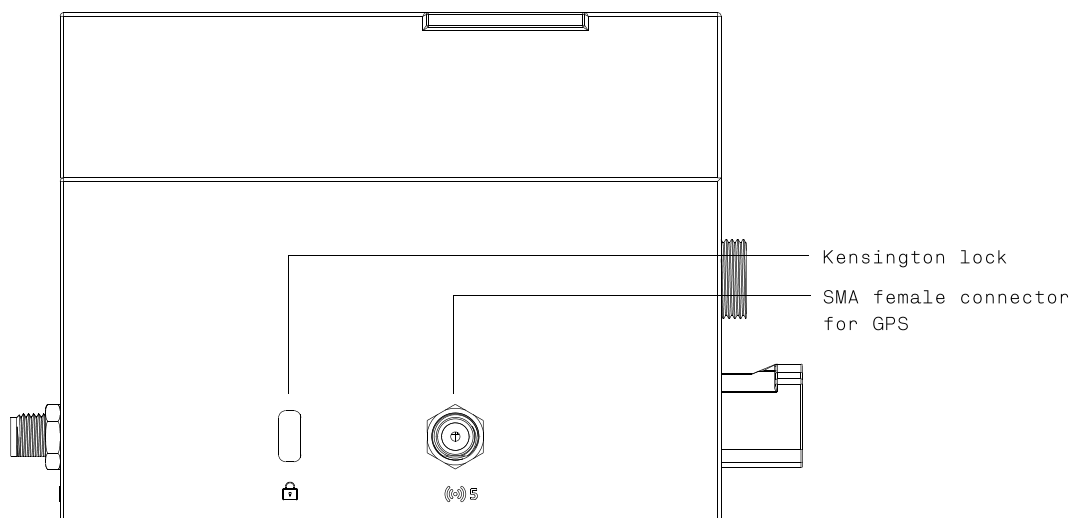
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*ZED Box Orin™ NX 16GB Technical Drawings

GMSL2 Option

OTG HDMI GMSL PoE+ 12V

1 2 3 4 5 6 7 8

Ø 5.5
Ø 2.5

1. Micro USB port   3. HDMI port   5. GMSL2 Mono port   7. Network PoE+ port
2. USB 3.2 port   4. USB 3.2 port   6. Power Status   8. DC barrel jack
                                                                 power connector

Kensington lock

SMA female connector
for GPS

((•)) 5

RP-SMA female
connectors
for Wi-Fi

((•))1   ((•))2   ((•))3   ((•))4

Dimensions are in mm

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*ZED Box Orin™ NX 16GB Technical Drawings

USB 3.2 Option

1	2	3	4

1. Micro USB port
2. USB 3.2 port
3. HDMI port
4. USB 3.2 port
5. Power Status
6. Network PoE+ port
7. DC barrel jack power connector

Ø 5.5
Ø 2.5

Kensington lock

SMA female connector for GPS

RP-SMA female connectors for Wi-Fi

Dimensions are in mm

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*ZED Box Orin™ NX 16GB Technical Drawings

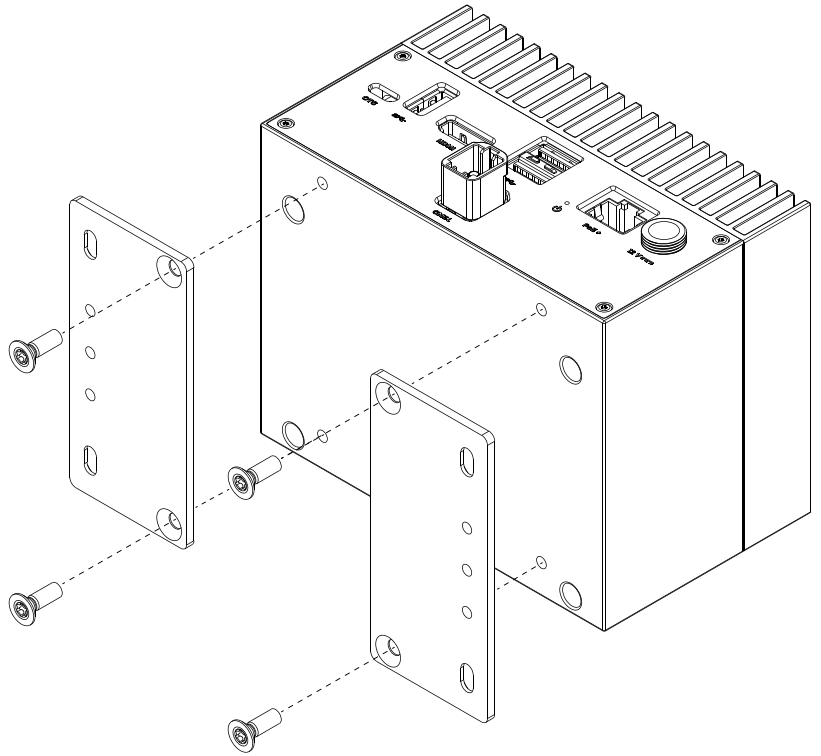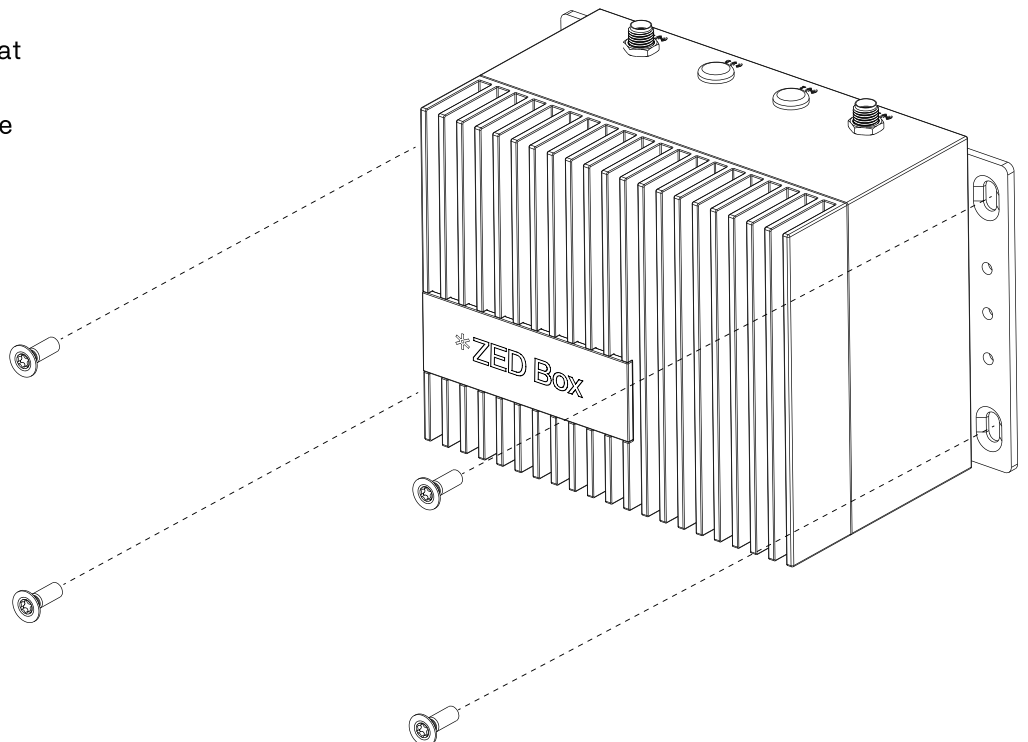1. Stereolabs provides mounting brackets for the ZED Gateways so it can be easily mounted to the walls and other areas as well.

   First, screw the brackets onto the bottom of the gateway using the slots provided.

2. Then position the gateway at the desired location and secure the gateway with the screw holes provided.

Dimensions are in mm

*ZED Box Orin™ NX 16GB Part Number

ZED Box Orin NX 16GB Part Number

Cable	WiFi 256GB No GPS	WiFi 256GB GPS	WiFi 1TB No GPS	WiFi 1TB GPS
No GMSL2	ZBX-321110	ZBX-311410	ZBX-321120	ZBX-311420
GMSL2	ZBX-322110	ZBX-312410	ZBX-322120	ZBX-312420

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[StereoLabs](#):

[Orin 16GB, 1TB, USB](#) [Orin 16GB, 256GB, USB](#) [Orin 16GB, 1TB, GMSL2, GPS](#) [Orin 16GB, 256GB, GMSL2](#) [Orin 16GB, 1TB, GMSL2](#)