

## IBOX-500

NXP® i.MX 8 QuadXPlus Automotive Grade SoC / On-board LPDDR4 4GB /  
On-board eMMC 5.1 32GB / 2 x GbE / 2 x RS-232 / 1 x DVI-D Single-Link / 2 x USB 3.2



- NXP® i.MX 8 QuadXPlus Automotive Grade Soc (AEC-Q100 Grade 3)
- On-board LPDDR4 4GB and eMMC 5.1 32GB
- Built-in Accelerometer, Gyroscope, and Magnetics Sensor
- 3 x CAN / CAN FD
- 1 x DVI-D Single-Link (Sintrones proprietary pin define)
- 8 x DI, and 4 x DO and 2 x RS-232
- 1 x M.2 3042/3052 Key B, 1 x M.2 2242 Key B, 1 x M.2 Key E
- 1 x Micro-SD Slot
- 9-60V DC Power Input
- Operating Temp. : -40 ~ 70°C

## Edge Application

**GbE**

Expansion of IoT Devices  
via GbE Switch

**One Cable Link**

Effortless Connection to VDM enabling  
Driver's Terminal Applications

**CAN FD**

Enables In-Vehicle Networking

**Wide Range Power Input**

9~60V DC Input with  
Smart Power Management

**DIO**

Activates devices power state sensing  
and switching

## Specifications

## System

**Processor**

- NXP i.MX 8QuadXPlus Automotive SoC (AEC-Q100 Grade 3)
- Integrated 4 x Arm Cortex@-A35 Cores Up to 1.2 GHz
- 1 x Am Cortex@-M4F Core Up to 264 MHz

**Graphics**

- 1 x GC7000Lite with 4 x Vec4 shader cores (16 execution units)  
Max Resolution (DVI-D Single Link) : 1920x1080 @60Hz

**Memory**

- On-board LPDDR4 4GB

**Sensor**

- Built-in Accelerometer, Gyroscope, and Magnetic Sensor

**Watchdog**

- 1 ~ 255 Level Reset

## Interface

**Ethernet**

- 2 x RJ-45 for GbE

**USB**

- 2 x USB 3.2 5 Gbps

**Video**

- 1 x DVI-D Single Link (SINTRONES proprietary pin define)

**GPIO (DIO)**

- 8 x DI (5~60VDC)
- 4 x DO (5VDC, 100mA)

**Serial Port**

- 1 x RS-232, 1 x RS-232/422/485

**CAN Bus**

- 3 x CAN / CAN FD

## Internal Expansion

**M.2**

- 1 x M.2 3042/3052 Key B for WWAN w/ 1 x nano SIM Slot
- 1 x M.2 2242 Key B for GPS
- 1 x M.2 Key E for Wi-Fi

## Storage

**Type**

- Onboard eMMC 5.1 32 GB
- 1 x Micro SD Slot

## Power

**Power Input**

- 9V - 60V DC Power Input

**Power Protection**

- Automatics Recovery Short Circuit Protection

**Power Management**

- Vehicle Power Ignition for Variety Vehicle

**Power Off Control**

- Power off Delay Time Setting by Software

## Software

**Operating System**

- Yocto Linux

## Environmental

**Operating Temp.**

- -40 ~ 70°C, ambient w/ 0.6m/s airflow  
\*Operating Temp. Varies by Accessories Installed.

**Storage Temp.**

- -40°C ~ 80°C

**Relative Humidity**

- 10% RH – 90% RH (non-condensing)

**Vibration (with SSD)**

- IEC 60068-2-64, Random, 2.5G@5~500Hz, 1hr/axis
- MIL-STD-810G, Method 514.6, Procedure I, Cat.4, Operating

**Shock (with SSD)**

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

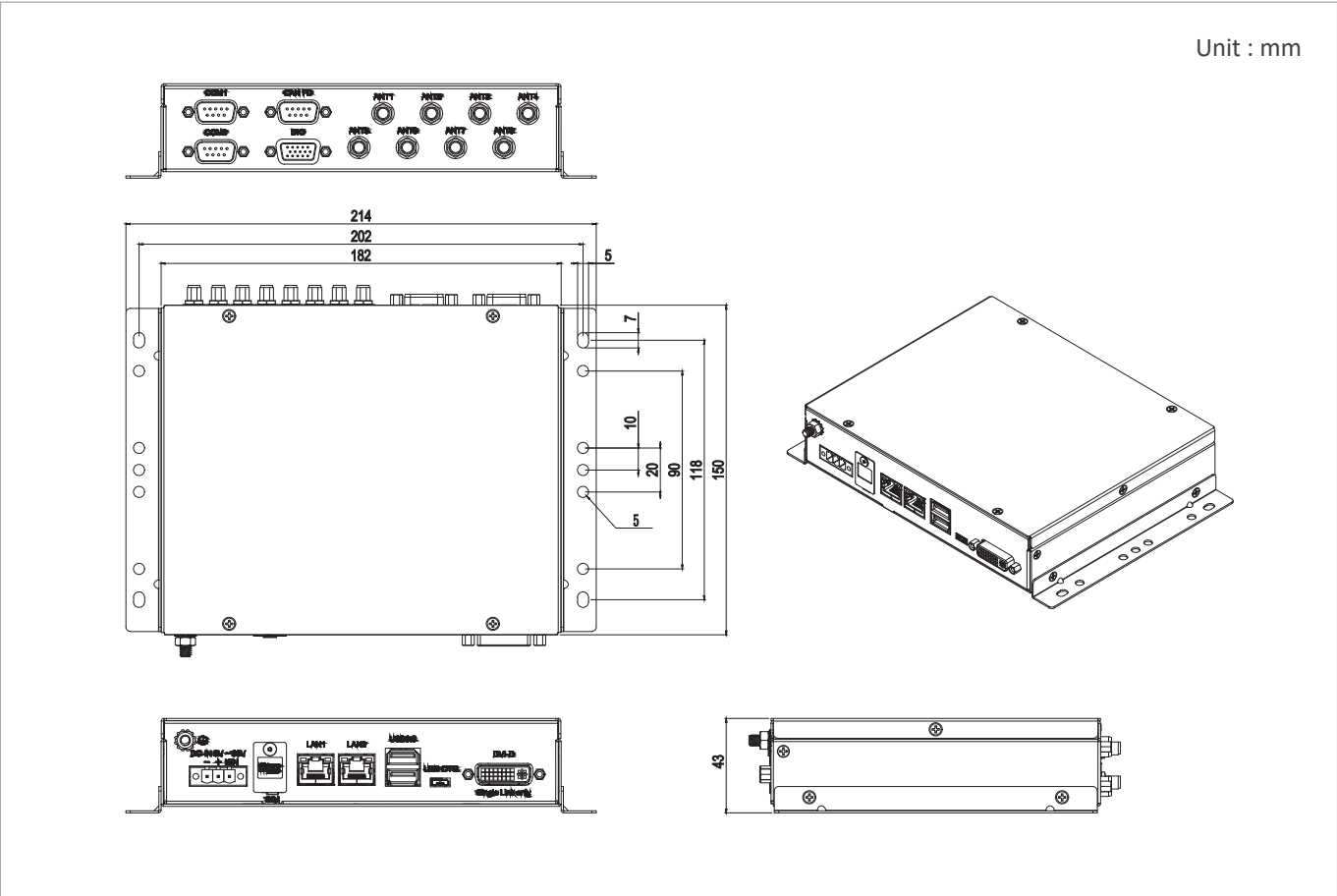
Certification / Standard

- CE, FCC Class A, E-Mark, ECE R118

Mechanical

- Construction**
- Steel
- Mounting**
- Wall-mount
- Weight**
- 1,000 g (Barebone)
- Dimensions**
- 214(L) x 150(W) x 43(H) mm

Dimensions



Ordering Information

|                 |                                                                                                                                                    |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| Model Number    | IBOX-500                                                                                                                                           |
| Description     | NXP i.MX 8QuadXPlus Automotive Grade SoC / Onbaord LPDDR4 4GB / Onboard eMMC 5.1 32GB / 2 x GbE / 2 x RS-232 / 1 x DVI-D Single Link / 2 x USB 3.2 |
| State of Origin | Made in Taiwan                                                                                                                                     |

Optional Accessories

|         |                                                   |
|---------|---------------------------------------------------|
| Storage | MicroSD Card 64 / 128 / 256GB 3D TLC WT           |
| Wi-Fi   | M.2 2230 Key E / IEEE 802.11 a/b/g/n/ac, Wi-Fi 6E |
| Modem   | M.2 3042 Key B 5G & LTE Module                    |
| GPS     | M.2 GPS Module                                    |

All specifications are subject to change without notice.