

# IBOX-500

**NXP® i.MX 8QuadXPlus Automotive Grade Processor/ On-board LPDDR4 3GB/ On-board eMMC 5.1 32GB/ 1 x GbE / 2 x RS-232/ 1 x DVI-D Single Link/ 2 x USB 3.2**

## Features

- Intel® NXP i.MX 8QuadXPlus Automotive AEC-Q100 Grade 3 Processor
- On-board LPDDR4 3 GB and eMMC 5.1 32 GB
- Built-in Accelerometer, Gyroscope, and Magnetic 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 A-E
- 1 x Micro-SD Slot
- 9-60V DC Power Input
- Operating Temp.: -40~70°C



## Introduction

IBOX-500 is an ultra-compact fanless in-vehicle Computer with 5G or LTE connectivity. It utilizes NXP® i.MX 8QuadXPlus Automotive AEC-Q100 Grade 3 Processor up to 1.2 GHz. IBOX-500 features an ultra-compact design which can easily fit into restricted spaces. As robust connectivity, the system can select 5G, LTE, GPS, and Wi-Fi / Bluetooth by M.2 modules. It is the perfect solution for digital cluster and intelligent cockpit, and fleet management. Furthermore, it features smarter vehicle power Ignition and it can also effectively support cars in extreme weather and operating conditions, such as snowplows, Trucks, Buses, taxis, and Forklifts.

## Specifications

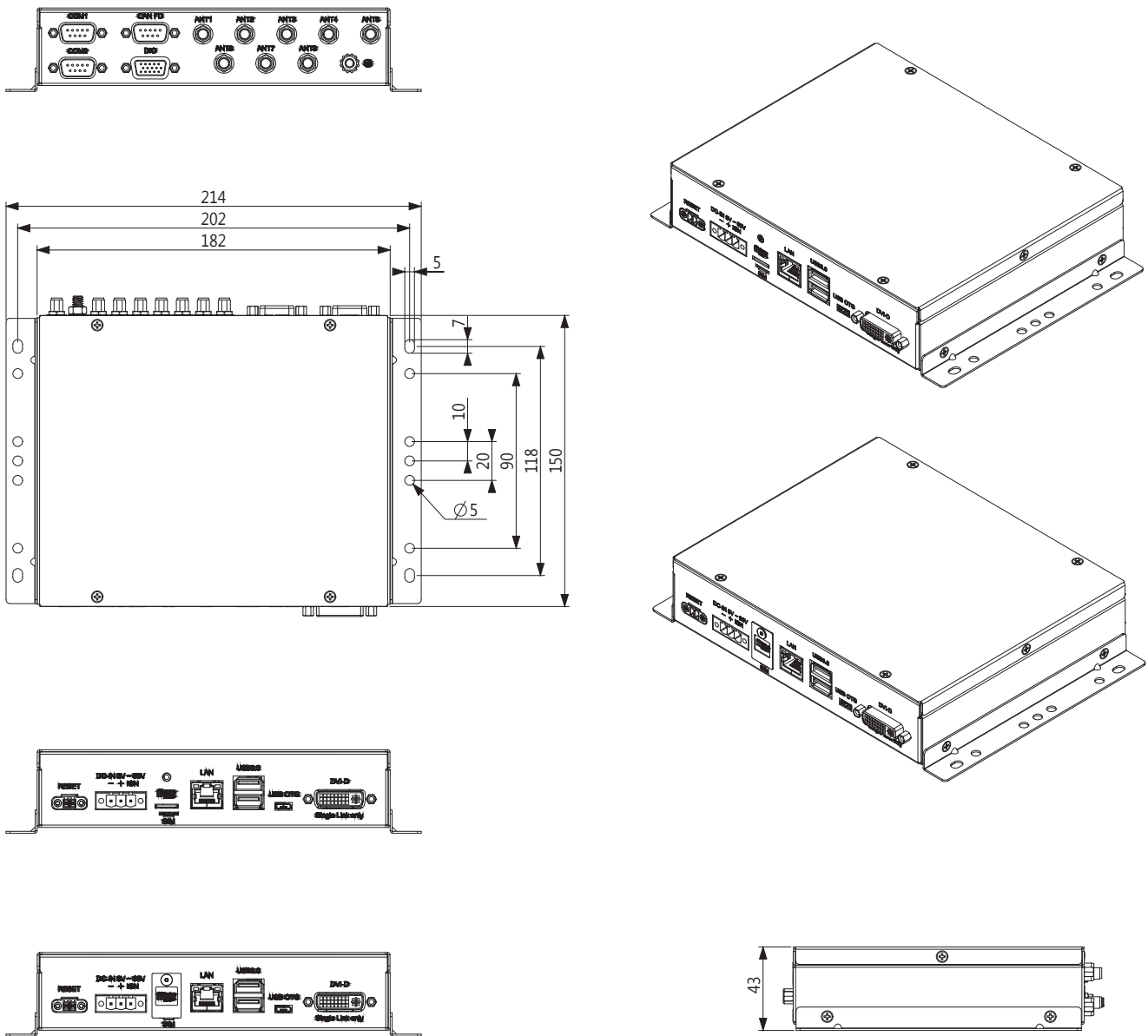
System	
CPU	NXP i.MX 8QuadXPlus Automotive AEC-Q100 Grade 3 Processor w/ 4 x Arm Cortex®-A35 Cores Up to 1.2 GHz, 512KB L2 Cache and 1 x Arm Cortex®-M4F Core Up to 264 MHz
Memory	On-board LPDDR4 3 GB
Sensor	Built-in Accelerometer, Gyroscope, and Magnetic Sensor
Watchdog	1 ~ 255 Level Reset
Graphics	
CPU Built-in Graphics	1 x GC7000Lite with 4 x Vec4 shader cores (16 execution units) Max Resolution (DVI-D Single Link) : 1920 x 1080 @ 60Hz
I/O	
USB	2 x USB 3.2 5 Gbps 1 x USB 2.0 OTG
LAN	1 x RJ-45 for GbE
Video	1 x DVI-D Single Link (SINTRONES proprietary pin define)
DIO	8 x DI (5~60VDC) 4 x DO (5VDC, 100mA)
CAN Bus	3 x CAN / CAN FD
Expansion Bus	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 A-E for Wi-Fi
Serial Port	2 x RS-232
Storage	
Type	Onboard eMMC 5.1 32 GB 1 x Micro SD Slot
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 ~ 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	Operating: MIL-STD-810G, Method 516.6, Procedure I, Trucks and semi-trailers=15G (11ms) with SSD
Certifications	CE, FCC Class A, E13, ECE R118
Power Requirement	
Power Input	9V - 60V DC Power Input
Power Protection	Automatics Recovery Short Circuit Protection
Power Mgmt.	Vehicle Power Ignition for Variety Vehicle
Power Off Control	Power off Delay Time Setting by BIOS and Software
Mechanical	
Construction	Steel
Mounting	Wall-mount
Weight	1000g (Barebone)
Dimensions	214(L) x 150(W) x 43(H) mm

All specifications are subject to change without notice.

## Dimensions

Unit : mm



## Ordering Information

Part Number	IBOX-500
Description	NXP i.MX 8QuadXPlus Automotive Grade Processor/ Onboard LPDDR4 3GB/ Onboard eMMC 5.1 32GB/ 1 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 A-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

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