

## SD-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

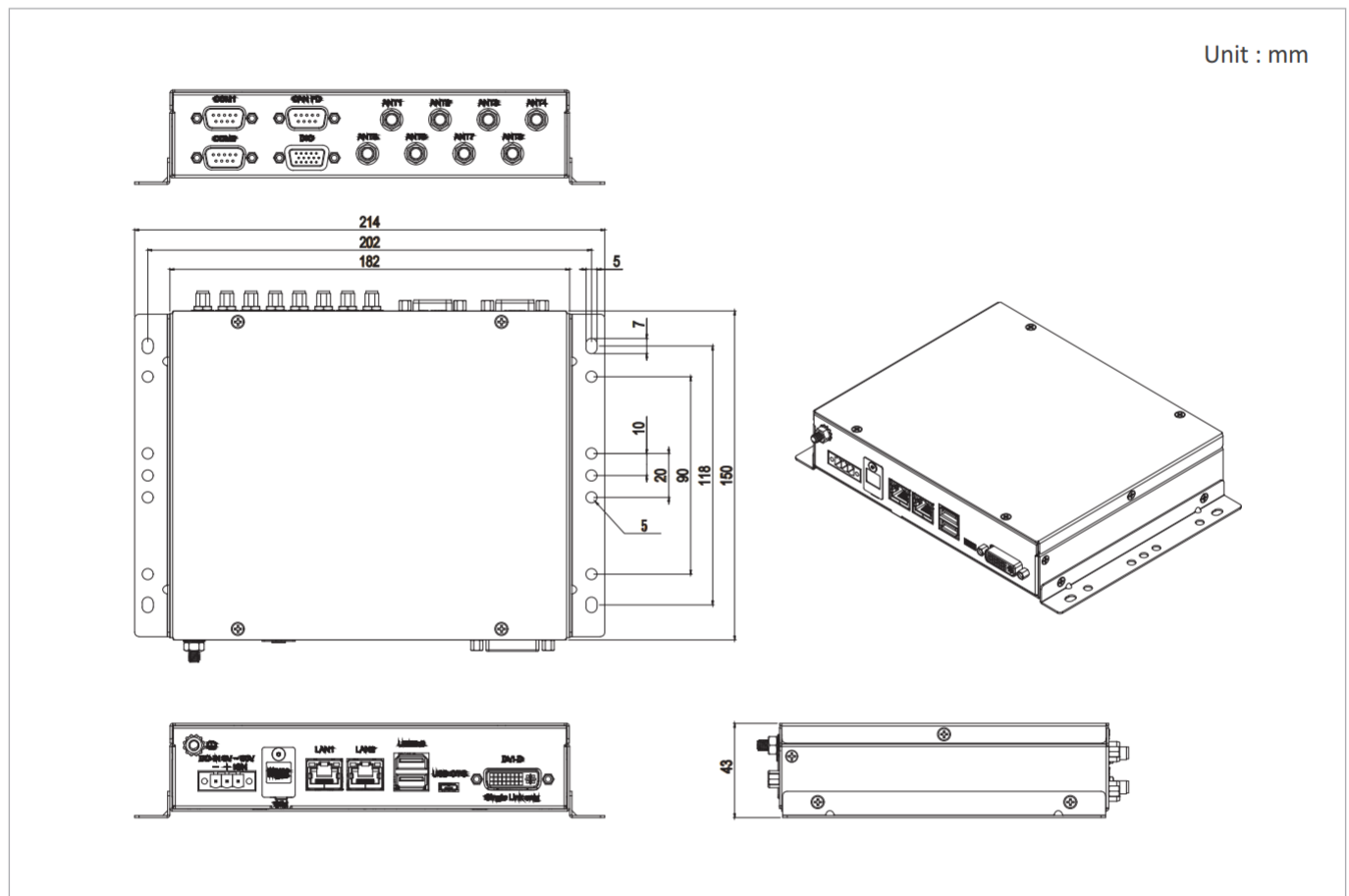
### Weight

- 1,000 g (Barebone)

### Dimensions

- 214(L) x 150(W) x 43(H) mm

## Dimensions



## Ordering Information

Model Number	SD-500
Description	NXP i.MX 8QuadXPlus Automotive Grade SoC / Onboard 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 China

## 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.