

X-One

ANDROID
OCTAcore



CAN BUS Interface



GLONASS/GPS/BeiDou



USB Interface



DIGITAX SDK



Dedicated CPU for
Automotive Intensive
Task Processor



System on Chip Module



Cat.6 LTE Module



Serial Port Interface



WLAN 2.4G, 802.11b/g/n
BT 2.1 + EDR/3.0/4.1 LE



Android 9.x



Powerful Multimedia
Function

OCTA CORE



The new X-One Android device is industrial grade and automotive certificate mobile data terminal with stand-alone embedded taximeter.

FULLY CERTIFIED EMBEDDED TAXIMETER Special features:

The Taximeter runs on a dedicated standalone CPU, which make possible to certify the sole taximeter independently than Androids system and apps leaving free developers to keep updated their android application without involve taximeter certifications.

Furthermore the taximeter, been based on completely HW & SW CPU independent from Android system, will continue fully working even in case of android freeze, restarts, shut down ecc.

The mechanical buttons and printer are HW connected directly to the taximeter CPU, so in case android freeze or corrupts, as in this event the display and touchscreen will be not working, the taximeter can still be operated from mechanical bottoms and the journey amount and data printed on the receipt.

The custom Digitax/Android OS, do not allow to any application to overwrite the reserved windows for the taximeter.

Digitax's new generation device provided with multi-mode LTE Cat.6 module and Android 9.X OS. It includes short-range wireless communication via Wi-Fi 802.11b/g/n and BT4.1 LE, and offers data rates up to 150 Mbps.

The device also combines high-speed wireless connectivity with embedded multi-constellation and high-sensitivity GPS+GLONASS+BeiDou receiver for positioning.

A rich set of interfaces ad devices (embedded double Camera 2 and 5 Mpix, and or external ethernet IP Camera 7" Graphic display at 1024x800 resolution provided with capacitive Touch Panel, internal mic and speaker and or external microphone inputs and speaker audio outputs, a huge sets of UART peripherals 485, Can Bus, digital I/O, Power Out, One Wire Bus, etc), extend its functionalities the and permits the use of this devices in a wide range of applications and cases.

DUAL CPU

Primary CPU:

Qualcomm Octa-core SDM450 chipset, ARM Cortex-A53 64-bit CPU @1.8GHz with Adreno 506 GPU, OpenGL ES 3.0, OpenCL, content security and QDSP6 DSP inside, allows this Device to supply a remarkable flexibility and efficiency in computing power, together with reduced power consumption.

Secondary CPU:

AITP (Automotive Intensive Task Processor) dedicated to the embedded taximeter furthermore supplies the necessary functionalities in the automotive field, like power management, Safe Shutdown, Wheel Pulses Odometer, Distance and Speed calculation, Wake-Up on Ring, Over-the-Air services for software and firmware updates. The AITP is OTA programmable for remote automatic firmware and tariff upgrade, and is always powered ON; it can turn-ON and OFF the Device and its peripherals.

IDEAL FOR FLEET MANAGEMENT AND TAXIMETER JOB DISPATCHING

The Device represents the state-of-the-art device for job dispatching certified taximeter, security and fleets management, an ALL-IN-ONE industrial grade and automotive compliant, powerful and compact solution.

Its 4G LTE modem allows very reliable communication with operating headquarters.

The vehicle is located by the high performance GPS/GLONASS/BeiDo receiver.

CUSTOMIZABLE USER INTERFACE

The 7 inches 16:9 clear readable TFT Displays with HD 1024x800 @60fp resolution allow to develop versatile and high accessible applications, thanks also to the integrated TouchScreen controller, and to the 6 keys with LEDs available.

Hardware Keys avoid consumption and damage of Touch Screen for heavily used operations.

to choose The ambient light sensor allows an optimal brightness of the display in any environmental light.

The power key is a Smart Power Button, completely programmable and used to perform several important tasks.

Can be also disabled or programmed to trigger Ghost Mode (fake shutdown).

STEALTH MODE

Stealth mode is a special operating mode in which the system is working but the display and audio is OFF.

This feature can be useful in several situations:

Driver Control: System has also the wake up on ring feature, so at the central it is possible to remotely turn-ON the device (also in stealth mode so nobody can see that it is starting) in order to check vehicle position, internal audio listening and other data.

Ghost Mode: It is possible to set the device so that after pressing the shut down but on the system goes on stealth mode instead of turning OFF. This feature is useful if you want the device to remain always ON (it turns OFF only the display, reducing power consumption) or in an alarm situation.

Alarm managing: If system is OFF and alarm but on is pressed the system can be started in stealth mode, so nobody can see that the system starts. On this special start the system can be programmed for example to send an alarm message to the central, GPS position or also screenshots or audio..

HIGH AVAILABILITY

The Device has been designed for professional automotive application, it is fully automotive certified, can withstand glitches at car engine start, over voltage up to 32V and immunity to ESD and EMC interferences

The AITP processor gives time to user applications and Android O.S. to close gracefully and safely in case of sudden disconnection of the Main Power.

INPUTS AND OUTPUTS

The Device supplies a wide range of communication channels with the external environment: Hi-Speed USB 2.0 Host, one USB Device and up to 7 RS232 and RS485 Serial Ports, Can Bus with OBD2 Protocol Interface, etc..

The special programmable digital inputs and outputs allow to control devices and read signals coming from generic external equipment's.

SYSTEM ON CHIP MODULE: SCALABLE AND UPGRADABLE SOLUTION

Thanks to the System-on-chip module option it is possible to upgrade the device chipset and its O.S. in a quickly and easily way. CPU, Memory and all other related components are located into a removable module.



MAIN FEATURES



Display

Viewing area 7" diagonal
Aspect Ratio 16:9
WVGA 1024x800 Resolution
Colour TFT LED Display
Display clearly viewable with 500 cd/m2
Ambient Light Sensor with Automatic Regulation

Touchscreen

Capacitive Touch screen.
Extended Temperature Range

CPUs

Fanless Device with Primary CPU Qualcomm SDM450 chipset, Octa-core ARM Cortex-A53 64-bit CPU @1.8GHz. Adreno 506 GPU: OpenGL ES 3.02, OpenCL3, content security, and decreased power consumption4
Secondary M16 CPU for Taximeter and Automotive Intensive Tasks

Ram Memory

+2GB LPDDR3

Storage Solid State Hard Disk Memory

16GB EMMC

External SD

Up to 256 GB for external storage

Communication Modem

LTE Cat 6
GSM / GPRS Class 12 HSUPA Modem with 300Mbit/s downlink and 50Mbit/s uplink data rates based on LTE network (max)
Warm reset and cold reset (dedicated electronic circuit) available through API calls
2 Sim Card slots.

GPS Receiver

Multi-constellation GNSS receiver available for applications requiring fast and accurate fixes in any environment.
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Antennas

Internal GPS-WiFi-BT-LTE or External GPS-WiFi-BT-LTE Rugged Combo antenna (option)
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USB Ports

2 USB 2.0 Host (with USB Support for Mouse and Keyboard) Hi-Speed
1 USB 2.0 / OTG Host / Device

Serial Ports

1 External Full Modem RS232 Port
2 External TX/RX RS232 / RS485 Port
4 External RS232 Serial Ports (option)

I/O ports connection

3 Digital Inputs
3 + 5 Power Output Ports
Dedicated Ignition input
2 Analog Ports input
External Speakers output
External Microphone input

Can Bus

Can Bus Interface OBD-II OBD2

Alarm and Security

Panic Button input / Emergency Switch input
Stealth Mode Controller (system ON display, audio and lightings off)

Hardware Keys

6 Lighted and Software programmable Hardware Buttons
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Power on key

1 Smart Power On/Off button

Multimedia

Audio: MP3, AAC+,eAAC, AMR-NB, -WB, G.711, WMA 9/10 Pro

Video: Encode:30fps 720P (H.264), 30fps WVGA (MPEG-4/VP8)

Decode:30fps 1080P (H.264/MPEG-4/VP8/H.265 DivX4/5/6), 30fps WVGA (H.263)

Internal and external Speaker and Microphone
Supports wave speaker volume control

API provided

Soft/Hard Reset
Soft Reset available through HW switch
Soft Reset available through API calls

Connectivity

Ethernet: 10/100 Mbps LAN Controller

Wi-Fi Connection 2.4G/5.8G, 802.11 a/b/g/n

Bluetooth class 2 BT2.1+EDR/3.0/4.1 LE

Operating System

Android 9.X
Development Tools
Adb/Android Studio IDE with USB debugging support
SDK for Android O.S.
Sample code for SDK
Digitax Framework (Digitax Libraries): GPS, Odometer, Taximeter, Hardware Keys, WatchDog, OTA, Stealth Mode Controller, Logs, And Restore, Light Dimmer, Hardware Identification, Alarm, Card Reader and Windows Status

Serial port driver and test tools
Digital I/O driver
System diagnostic tools
On Field Test (OFT) OnBoard Diagnostic Utilities included, with Customizable CheckList to make tests of GPS Fix, GPS Antenna, GPRS Connectivity and Base Station Signal Quality, Odometer, Ignition, Panic Button, TouchScreen calibration, Hardware Keys, Ambient Light Sensor, Device version, OS Version, AITP Version, Taximeter, UPS and Battery Status, Roof Light, Navigation Software
All On Field Tests and enrolling features can be used during first installation and swap of devices.

OS Image Loader
Over The Air (OTA) OS image loader or microSDHC Card Image Loader

System Update Fleet Management
Professional OTA (Over The Air) CLIENT allows the update of the whole Operating System and all the CPUs Firmware (option).
Professional OTA (Over The Air) SERVER with vehicles enrolling, group management and selective update, remote debugging and logging. Web based user interface (option)

Taximeter
Embedded Taximeter (Full Firmware and TARIF OTA Programmable)

Power Supply
8 - 32 V with Surge Protector

Battery
Internal Battery Package (option)

Mounting
All the External Connectors, Accessible slots (such as SIM Card, Micro SDHC, USB, etc.) and Screws are Mechanically Sealed

Operating Temperature
-20°C to 75°C

Humidity
Humidity up to 95% non-condensing.

Vibration
Vibration Sine wave, 10 ~ 500 ~ 10Hz, 1.5G, 0.37oct/min 3 axis, 1hour/axis.

Dust Ingress Protection
All connectors covers sealed, no open holes

Dimension
204 mm x 120 mm x 35 mm (WxHxD)

Weight
545 g



System on Chip Module



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GLONASS/GPS/BeiDou



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DIGITAX SDK



CAN BUS Interface



- All in One
- Automotive compliance fully certificate
- Extended Temperature Range
- Extended and filtered power supply system.
- Wide range of external interfaces
- Standalone certificate embedded taximeter
- Safe and inviolable tamper proof
- Mechanical keyboard for hot switch
- Wide range of software API for specific Hardware and easy user application.
- Extended 10 years supports parts and maintenance program.
- Upgradable with system on chip module option



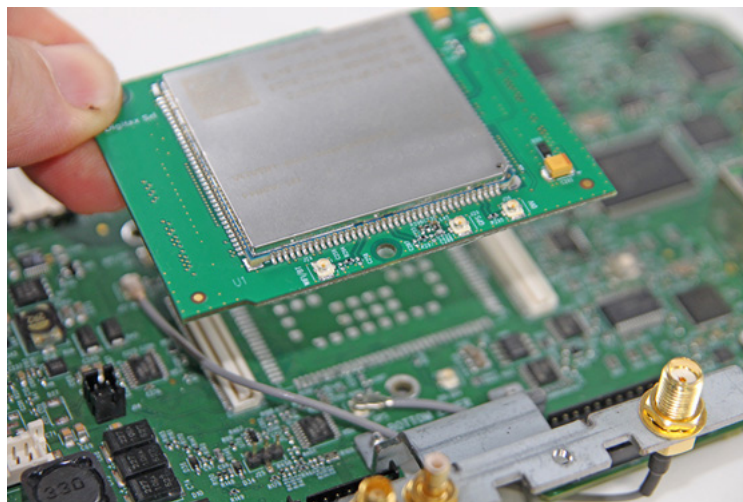
FULLY CERTIFIED EMBEDDED TAXIMETER



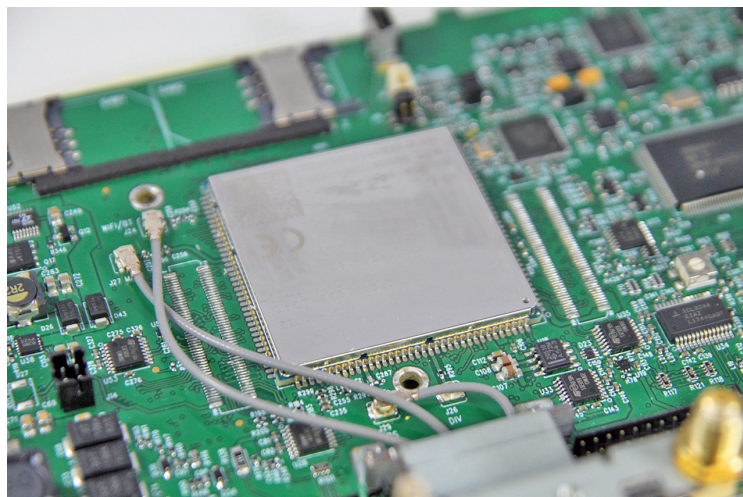
Upgradable Chipset

Digitax x-One Android device as option could be required with the “system on chip module”. This option permits to upgrade internal CPU to a new one with different features, updated O.S, and characteristics. This feature permits you to keep the device update tune the device your needs and requirements.

CHIP ON MODULE
VERSION



SOLDERED VERSION





3 different taximeter window color sets

4 different taximeter window positions



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