



## Main Features

- Intel® Atom™ processor quad core E3845, 1.91GHz
- Three SIM cards + dual WWAN modules support
- Built-in U-blox UBX-G6010 GPS, optional Dead Reckoning support
- Built-in CAN Bus 2.0B. Optional OBDII function (SAE J1939/J1708)
- Wake on RTC/SMS via WWAN module
- Compliant with MIL-STD-810G
- 4 x mini-PCIe sockets expansion
- Programmable 8 x GPIO
- Voice communication via WWAN module

## Product Overview

NViS 2310 features based on Intel® Core™ quad core processor E3845 (1.91GHz), its CPU performance gives the users the ability to adapt to what they need in any Surveillance applications. Its Intel® HD graphics engine allows users to fully take advantage of NViS 2310 providing a wide variety of display I/O configurations of 2 different video outputs (VGA, DP). NViS 2310 is not only suitable for video surveillance application, It allows NViS 2310 to comply with stringent MIL-STD-810G military standard in rugged, fanless and compact mechanism. NViS 2310 provides complete communication capability between automotive and computer with built-in CAN BUS 2.0B interface. Optional OBDII interface (J1939/J1708) is also available for vehicle diagnostics. NViS 2310 features rich PAN, WLAN and WWAN wireless connectivity. With dual SIM cards support, NViS 2310 allows three SIM cards backup each other for a better connectivity quality by software. In addition, three SIM cards and dual WWAN modules architecture can increase the bandwidth for a faster data transmission speed. Not only data transmission, NViS 2310 also supports two-way voice communication. Equipped with intelligent power management, NViS 2310 can be waked on by ignition, RTC timer or SMS message remotely. By integrating the variety of I/O ports and 4 x mini-PCIe sockets expansibility, NViS 2310 keeps the flexibility to meet the demand for different telematics applications, such as infotainment, fleet management, dispatching system and video surveillance.

## Specifications

### CPU

- Intel® Atom™ processor quad core E3845, 1.91GHz

### Memory

- 1 x 204-pin DDR3L SO-DIMM socket support 1066MHz/1333MHz up to 8GB (default built-in 4GB)

### Storage

- 1 x 2.5" SSD/HDD SATA 2.0 (externally accessible, optional lockable storage available)
- 1 x CFast (externally accessible)

### Function

- 1 x Default U-blox UBX-G6010 GPS module (50-channel and GALIELO) or optional modules with Dead Reckoning or GLONASS support
- Built-in G-sensor

### Expansions

- 1 x Full size mini-PCIe socket (USB 2.0)
- 1 x Full size mini-PCIe socket (USB 2.0)
- 1 x Full size mini-PCIe socket (USB 2.0 + PCIe)
- 1 x Half size mini-PCIe socket (USB 2.0 + PCIe)

### Software Support

- Windows 8, WES8

- Window 7, WES7

- Linux kernel 3.X

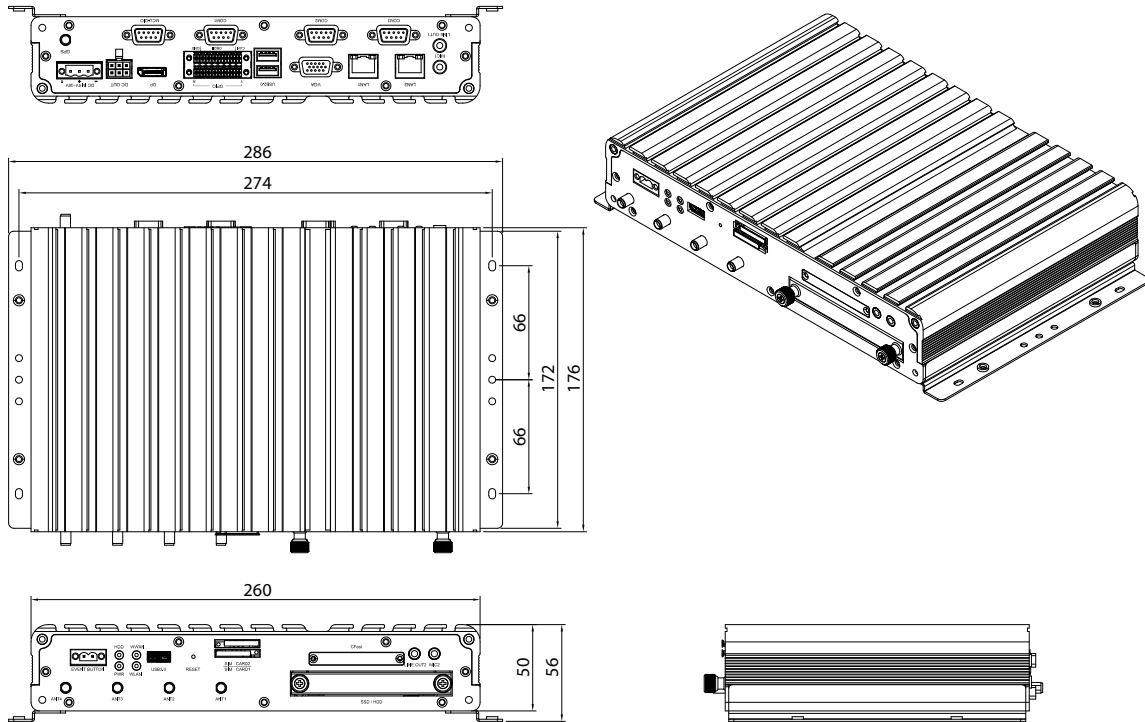
### I/O Interface-Front

- 4 x LED for power, storage, WWAN, WLAN
- 2 x Externally accessible SIM card socket (selectable)
- 1 x Phone jack 3.5mm for 1 x MIC-in
- 1 x Phone jack 3.5mm for 1 x Line-out
- 1 x Externally accessible 2.5" SATA 2.0 SSD/HDD tray
- 1 x Externally accessible CFast card socket with cover
- 1 x Event button (trigger type)
- 1 x Reset button
- 1 x Type A USB 3.0 compliant host, supporting system boot up
- 4 x Antenna hole for WWAN/WLAN/BT

### I/O Interface-Rear

- 1 x 9 ~ 36VDC input with Ignition
- 2 x Type A USB 2.0 compliant host, supporting system boot up
- 2 x RJ45 10/100/1000 Fast Ethernet with LED
- 1 x Phone jack 3.5mm for 1 x MIC-in
- 1 x Phone jack 3.5mm for 1 x Line-out
- 1 x DB-15 VGA, resolution up to 2560 x 1600 @60Hz
- 1 x DP port, resolution up to 2560 x 1600 @60H
- 1 x Antenna hole for GPS

## Dimension Drawing



- 2 x DB-9 RS232 (Ri/5V/12V selectable)
- 1 x DB-9 RS422/485
- 1 x DB-9 for CAN 2.0B (optional CAN Bus 2.0B mini-PCIe card)
- 2 x MCU-DI and 2 x MCU-DO
- 1 x 16-pin terminal block
- 1 x CAN Bus 2.0B (on board)
- 1 x Optional OBDII module (ASE J1939 or J1708)
- 8 x GPIO (Programmable Digital Input or optional isolation) (Digital Input)  
Input voltage (internal type): 5VDC TTL (default)  
Input voltage (source type): 3 ~ 12VDC (Programmable Digital Output or optional isolation) (Digital Output)  
Digital output (sink type): 5VDC TTL (default), max. current: 20mA  
Digital output (source type): 3 ~ 24VDC, max. current: 150mA
- 1 x 12VDC output (2A), SM Bus

### Power Management

- Selectable boot-up & shut-down voltage for low power protection by software
- Setting 8-level power on/off delay time by software
- Status of ignition and low voltage can be detected by software
- Support S3/S4 suspend mode

### Dimensions

- 260mm (W) x 176mm (D) x 50mm (H) (10.24" x 6.93" x 1.97")
- Weight: 2.1kg

### Environment

- Operating temperature: Ambient with air -30°C ~ 70°C (SSD)
- Storage temperature: -35°C ~ 85°C
- Relative humidity: 10% ~ 90% (non-condensing)
- Vibration (random): 1g@5 ~ 500Hz (in operation, HDD), 2g@5 ~ 500Hz (in operation, SSD)
- Vibration (SSD/HDD):  
Operating: MIL-STD-810G, Method 514.6, Category 4, common carrier  
US highway truck vibration exposure  
Storage: MIL-STD-810G, Method 514.6, Category 24, minimum integrity test

- Shock (SSD/HDD):  
Operating: MIL-STD-810G, Method 516.6, Procedure I, functional shock=20g  
Non-operating: MIL-STD-810G, Method 516.6, Procedure V, crash hazard shocktest=75g

### Certifications

- CE approval
- FCC Class B
- E13 Mark

## Ordering Information

- **NViS 2310 (P/N: 10C00231000X0)**