Nuvo-3100VTC Series

Intel® 3rd-Gen Core™ i7/ i5 Fanless In-vehicle Controller with 4x 802.3at PoE+ Ports and Dual 2.5” Hard Drives with RAID Support

CE FC E13 10R-0413512

Key Features

- **Compact dimensions, 212 mm x 165 mm x 62 mm**
- **Intel® 3rd-Gen i7/ i5 PGA-type processor**
- **4x IEEE 802.3at (25.5W) Gigabit PoE+ ports**
- **Dual 2.5” SATA ports with one easy-swap HDD tray**
- **Patented damping bracket* for in-vehicle installation**
- **8 ~ 35V wide-range DC input and built-in ignition power control**
- **3x mini-PCIe/ mSATA slots for 3G/ WIFI/ GPS module installation**
- **E13 No. 10R-0413512 and EN 50155/EN 50121-3-2/EN45545 certificate**

*R.O.C Patent No. M491752

Introduction

Nuvo-3100VTC is a fanless controller with E-Mark and EN 50155/ EN 50121-3-2 certificate for in-vehicle use. It supports 3rd-Gen i7 quad-core CPU for to meet most in-vehicle computing needs. There are also four IEEE 802.3at PoE+ ports to facilitate Ethernet connectivity and power IP cameras for surveillance applications.

Nuvo-3100VTC takes into account all demands of in-vehicle applications. It has a very compact footprint to fit into restricted space, allows 8~35V wide-range DC input and enhanced surge protection to make Nuvo-3100VTC highly robust when implemented as an in-vehicle system. Nuvo-3100VTC support dual 2.5” hard drives in RAID configuration (RAID 0/ 1) or alternatively, take advantage of the easy-swap HDD tray for easy HDD replacement (non-RAID configuration). For in-vehicle installation, our patented mounting bracket can absorb shock/ vibration and extend overall system reliability.

Combining superior performance, PoE+ and comprehensive design, Nuvo-3100VTC offers more possibilities for in-vehicle applications!

Specifications

	Nuvo-3100VTC	Nuvo-3110VTC
System Core		
Processor	Supports Intel® 3rd-Gen Core™ - Intel® Core™ i7-3610QE (2.3/ 3.3 GHz, 6 MB cache) - Intel® Core™ i5-3610ME (2.7/ 3.3 GHz, 3 MB cache) - Intel® Celeron® 1020E (2.2 GHz, 2 MB cache)	
Chipset	Intel® QM77 platform controller hub with AMT & RAID support	
Graphics	Integrated Intel® HD graphics 4000 controller	
Memory	Up to 8GB DDR3 1333/ 1600 MHz SDRAM (single SO-DIMM slot)	
I/O Interface		
Ethernet	1x Gigabit Ethernet port by Intel® 82579LM, supporting Wake-on-LAN 3x Gigabit Ethernet ports by Intel® I210	
PoE	Compliant to IEEE 802.3at (25.5W) with per-port power on/ off control 75W total power budget for 4x PoE+ ports	-
Video Port	1x DVI-I connector for VGA/DVI output, supporting 2048x1536 (VGA) or 1920x1080 (DVI) resolution 2x DisplayPort, supporting 2560x1600 resolution	
USB	4x USB3.0 ports and 2x USB2.0 ports	
Serial Port	2x software-programmable RS-232/ 422/ 485 (COM1 & COM2)	
Isolated DIO	4x isolated DI with COS interrupt and 4x isolated DO	
Audio	1x Mic-in and 1x speaker-out	
Storage Interface		
SATA HDD	1x internal SATA port for 2.5” HDD/ SSD 1x easy-swap HDD tray for 2.5” HDD/ SSD	
mSATA	1x full-size mSATA (SATA/ USB/ W_DISABLE#) with USIM socket	
Expansion Bus		
Mini PCI-E	1x full-size mini PCI Express socket with USIM socket 1x half-size mini PCI Express socket	

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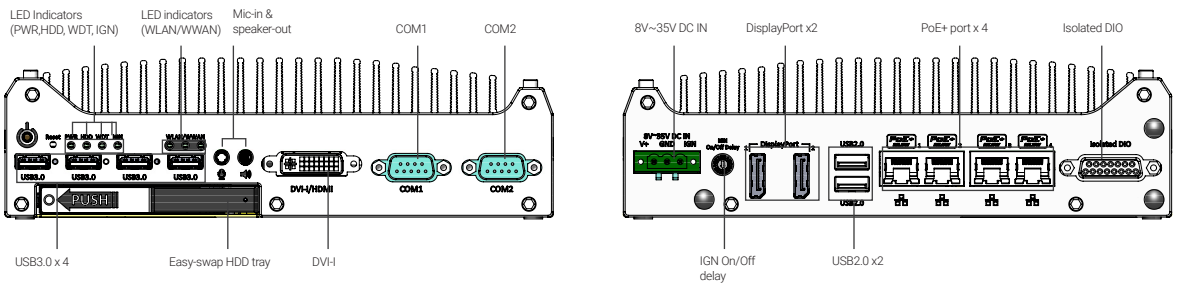
Power Supply & Ignition Control		
DC input	1x 3-pin pluggable terminal block for 8~35V DC input	
Ignition Control	Ignition power control with user-selectable on/ off delay	
Mechanical		
Dimension	212 mm (W) x 165 mm (D) x 62 mm (H)	
Weight	2.8 kg (incl. CPU, memory and HDD)	
Mounting	Damping bracket (standard) or DIN-rail (optional)	
Environmental		
Operating Temperature		i7-3610QE, 100% CPU loading* / i5-3610ME, 100% CPU loading* / Celeron 1020E, 100% CPU loading*
	Maximum Performance	-25°C ~ 50°C** / -25°C ~ 60°C** / -25°C ~ 70°C**
	General Performance	-25°C ~ 60°C** / -25°C ~ 70°C** / -25°C ~ 70°C**
	Extended Temperature	-25°C ~ 70°C** / -25°C ~ 70°C** / -25°C ~ 70°C**
Storage Temperature	-40°C ~85°C**	
Humidity	10%~90% , non-condensing	
Vibration	Operating, 1 Grms, 5-500 Hz, 3 Axes (w/ HDD, according to IEC60068-2-64) Operating, 5 Grms, 5-500 Hz, 3 Axes (w/ SSD, according to IEC60068-2-64)	
Shock	Operating, 50 Grms, Half-sine 11 ms Duration (w/ SSD, according to IEC60068-2-27)	
Certification	E-Mark for vehicle applications EN 50155/ EN 50121-3-2 CE/ FCC Class A, according to EN 55022, EN 55024 & EN 45545	

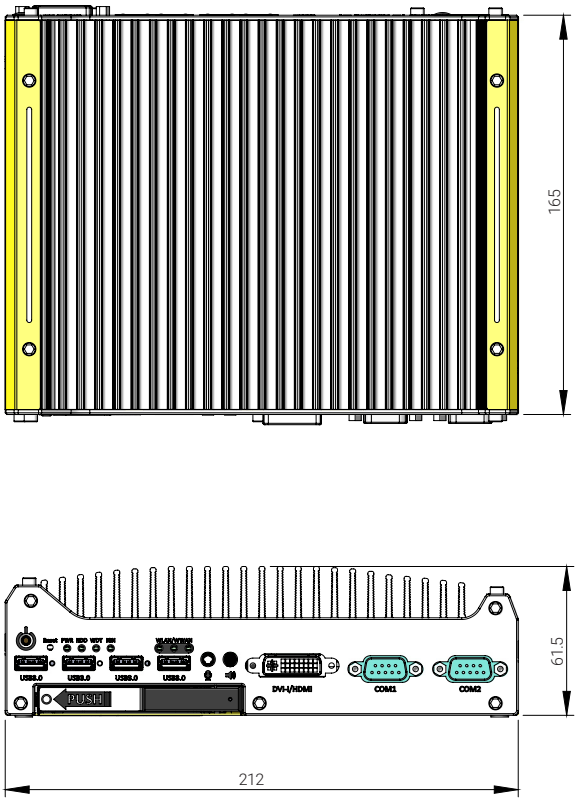
** The CPU loading is applied using Passmark® BurnInTest 8.0. For detail testing criteria, please contact Neousys Technology*

*** For sub-zero operating temperature, a wide temperature HDD drive or Solid State Disk (SSD) is required.*

Appearance



Dimensions



Unit : mm

Ordering Information

Model No.	Product Description
Nuvo-3100VTC	Intel® 3rd-Gen Core™ fanless in-vehicle controller with 4x IEEE 802.3at PoE+ ports and dual-drives RAID
Nuvo-3110VTC	Intel® 3rd-Gen Core™ fanless in-vehicle controller with 4x GbE ports and dual-drives RAID

Optional Accessories

DINRAIL-31	DIN-rail mounting assembly for Nuvo-3100VTC series
PA-120W-OW	120W AC/DC power adapter 20V/6A; 18AWG/120cm; cord end terminals for terminal block, operating temperature : -30 to 70 °C.

Optional Cellular Module

NSIO-LTE-7455	Cat. 6 LTE embedded socket modem