Nuvo-7531 Series

Intel® 9th/ 8th -Gen Core™ i7/ i5/ i3 Compact Fanless Computer with 4x GbE , 4x USB3.1 and 1x hot-swappable HDD tray

Key Features

- **212 x 165 x 63 mm low-profile design**
- **Intel® 9th/ 8th-Gen Core™ 35W/ 65W LGA1151 CPU**
- **Rugged, -25°C to 60°C fanless operation**
- **4x GbE and 4x USB3.1 Gen1 with screw-lock**
- **1x hot-swappable HDD tray and 1x M.2 2280 socket for storage**
- **4-CH isolated DI and 4-CH isolated DO**
- **DVI-I + DP dual display outputs**
- **Optional ignition power control**

Introduction

Nuvo-7531 is one of the most compact fanless embedded controller supporting Intel® 9th/ 8th-Gen Core™ CPUs. Measuring just 212 x 165 x 63 mm, it comfortably fits into confined spaces. Despite its compact size, Nuvo-7531 does not compromise on performance. Based on Intel® 9th/ 8th-Gen Core™ 65W/ 35W CPUs, it can deliver more than 50% extra performance compared to the previous generation. Nuvo-7531 is a compact and powerful fanless embedded controller for a variety of industrial applications.
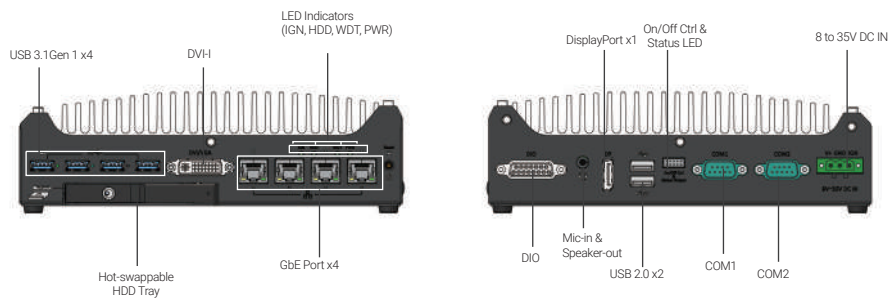
The Nuvo-7531 has abundant I/O functions. It features four GbE ports and four USB3.1 ports for multiple GbE and USB cameras.There is a hot-swappable HDD tray for you to hot-swap the storage drive without turning off the system or dismantle the chassis. There are three mPCIe slots to install WIFI or 3G/ 4G for wireless communication needs. In addition, Nuvo-7531 is also equipped with 8x DIO, 2x COM ports and dual display outputs for your application needs.

For a compact embedded controller, Nuvo-7531 delivers amazing computing power and provides rich I/O functions. It is suitable for a variety of industrial applications, especially when space is limited. Nuvo-7531 is a little giant in the world of rugged embedded controllers.
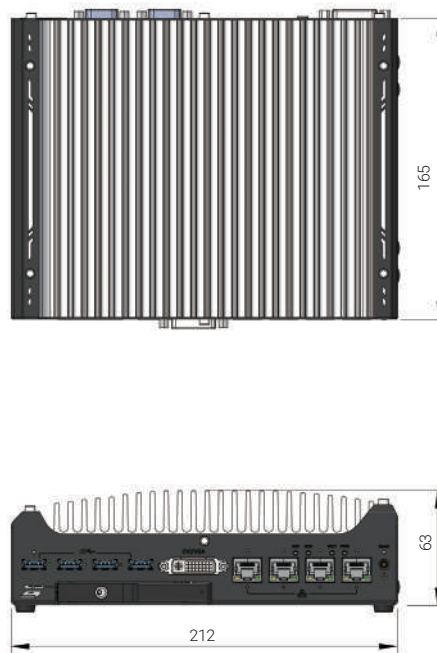
Specifications

System Core

Processor	Supporting Intel® 9th/ 8th-Gen Core™ CPU (LGA1151 socket) - Intel® Core™ i7-9700E/ i7-9700TE/ i7-8700/ i7-8700T - Intel® Core™ i5-9500E/ i5-9500TE/ i5-8500/ i5-8500T - Intel® Core™ i3-9100E/ i3-9100TE/ i3-8100/ i3-8100T
Chipset	Intel® H310 platform controller hub
Graphics	Integrated Intel® UHD graphics 630
Memory	Up to 32 GB DDR4 2666/ 2400 SDRAM (one SODIMM slot)
TPM	Supports fTPM 2.0

I/O Interface

Ethernet	4x Gigabit Ethernet ports by I219 and 3x I210
USB 3.1	4x USB 3.1 Gen1 (5 Gbps) ports
USB 2.0	2x USB 2.0 ports
Video Port (Integrated Graphics)	1x DVI-I for DVI/VGA output, supporting 1920 x 1200 resolution 1x DisplayPort, supporting 4096 x 2304 resolution
Serial Port	2x software-programmable RS-232/ 422/ 485 ports (COM1/ COM2)
Audio	1x 3.5 mm jack for mic-in and speaker-out
Isolated DIO	4-CH isolated DI and 4-CH isolated DO

Storage Interface

SATA HDD	1x hot-swappable 2.5" HDD/ SSD tray
M.2	1x M.2 2280 SATA interface

Internal Expansion Bus

Mini PCI Express	3x full-size mini PCI Express sockets with internal SIM sockets

Power Supply

DC Input	1x 3-pin pluggable terminal block for 8 to 35V DC input with optional ignition power control
Remote Ctrl. & LED Output	1x 10-pin (2x5) pin header for remote on/off control and status LED output

Mechanical

Dimension	212 mm (W) x 165 mm (D) x 63 mm (H)
Weight	2.5 kg
Mounting	Wall-mount (standard) or DIN-rail mount (optional)

Environmental

Operating Temperature	**with 35W CPU** **-25°C ~ 60°C */**** **with 65W CPU, optional fan kit is required** **-25°C ~ 60°C */****
Storage Temperature	-40°C ~ 85°C
Humidity	10%~90% , non-condensing
Vibration	Operating, MIL-STD-810G, Method 514.6, Category 4
Shock	Operating, MIL-STD-810G, Method 516.6, Procedure I, Table 516.6-II
Safety	EN62368-1
EMC	CE/FCC Class A, according to EN 55032 & EN 55024

* For sub-zero operating temperature, a wide temperature HDD or Solid State Disk (SSD) is required.
** For i7 CPUs, thermal throttling may occur when sustained full-loading applied at 60°C ambient temperature.

Appearance

USB 3.1Gen 1 x4
DVI-I
LED Indicators (IGN, HDD, WDT, PWR)
DisplayPort x1
On/Off Ctrl & Status LED
8 to 35V DC IN

Hot-swappable HDD Tray
GbE Port x4
DIO
Mic-in & Speaker-out
USB 2.0 x2
COM1
COM2

Dimensions

165

63

212

Ordering Information

Model No.	Product Description
Nuvo-7531	Intel® 9th/ 8th -Gen Core™ i7/ i5/ i3 compact fanless computer with 4x GbE , 4x USB 3.1 and a hot-swappable HDD tray
Optional ignition power control	

Optional Accessories

PA-120W-OW	120W AC/ DC power adapter 20V/ 6A; 18AWG/ 120cm; cord end terminals for terminal block, operating temperature : -30°C to 70 °C
DINRAIL-31	DIN-rail mount assembly for Nuvo-7531 series
AccsyBx-FAN-Nuvo-7531	Fan kit with 92mm x 92mm fan for Nuvo-7531 series