Nuvo-9501 Series

Compact and fanless embedded PC with Intel® Core™ 13th/12th Gen. CPUs

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Features

- Intel® 13th/12th Gen. Core® 35W/65W CPU
- DDR4 3,200 SDRAM SODIMM, up to 32GB
- Intel® H610E chipset
- 2x 2.5GbE and 4x USB3.2 Gen 1 with screw locks
- 1x M.2 2280 Gen4 x4 NVMe and 1x 3.5″/2.5″ SATA HDD/SSD storage

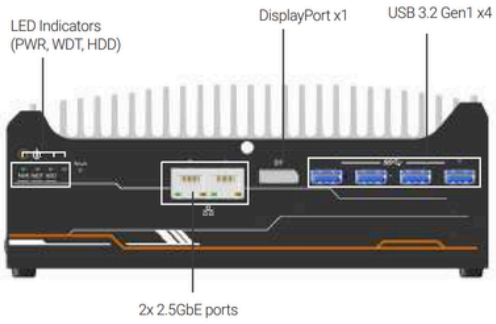
Nuvo-9501 – Cost-efficient and powerful embedded PC for industrial applications

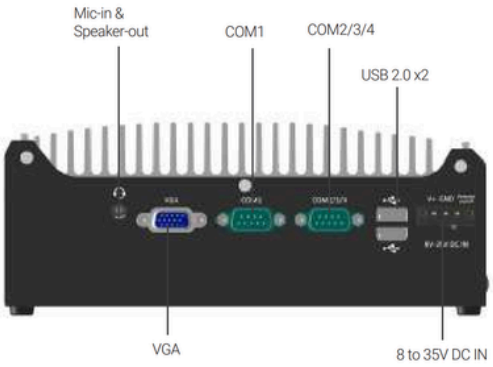
Nuvo-9501 is a cost-effective, compact and fanless embedded computer based on the Intel 13th/12th-Gen platform. Built on the advanced Intel 7 process, Intel 13th Gen processors offer up to 24 cores/ 32 threads to deliver up to 2x the performance when compared to previous Intel 10th or 11th Gen platforms. Nuvo-9501 is a cost-effective, compact and yet powerful fanless embedded PC that offers the ultimate computing for various industrial applications.

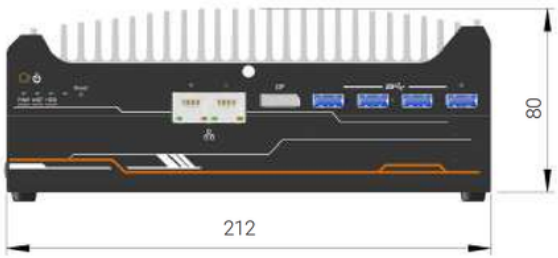
Nuvo-9501 offers essential I/O functions for general industrial needs including dual 2.5GbE ports, dual display ports and four USB3.2 ports. In addition, it features a Gen4 x4 M.2 NVMe slot for the latest NVMe SSDs with read/ write speeds up to 7000 MB/s. Also, it supports a 2.5” or 3.5” HDD storage for high capacity storage needs such as data collection or surveillance applications. It also offers two mPCIe and one M.2 E key slots for installing WiFi or 5G/ 4G wireless communication modules.

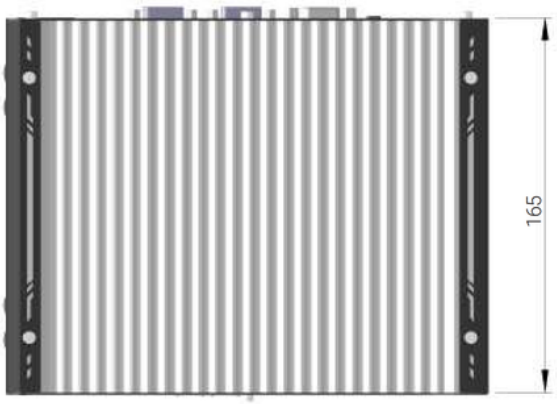
As a cost-effective and compact embedded computer, Nuvo-9501 delivers excellent computing performance and offers essential necessary I/O connectivity to meet customers’ needs and cost. It is suitable for a variety of industrial applications.

Dimensions (mm)









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Specifications	Product: Nuvo-9501 Series
SYSTEM	
CPU	Supporting Intel® 13th-Gen Core™ CPU* (LGA1700 socket, 65W/ 35W TDP) – Intel® Core™ i9-13900E/ i9-13900TE – Intel® Core™ i7-13700E/ i7-13700TE – Intel® Core™ i5-13500E/ i5-13400E/ i5-13500TE – Intel® Core™ i3-13100E/ i3-13100TE Support Intel® 12th-Gen Core™ CPU(LGA1700 socket, 35W/ 65W TDP) – Intel® Core™ i9-12900E/ i9-12900TE – Intel® Core™ i7-12700E/ i7-12700TE – Intel® Core™ i5-12500E/ i5-12500TE – Intel® Core™ i3-12100E/ i3-12100TE – Intel® Pentium® G7400E/ G7400TE – Intel® Celeron® G6900E/ G6900TE
Chipset	Intel® H610E platform controller hub
Graphics	Integrated Intel® UHD Graphics 770 (32EU) / 730 (24EU)
RAM	Up to 32GB non-ECC DDR4 3,200 SDRAM (one SODIMM slot)
Storage	1x internal SATA port for 3.5″ HDD or 2.5″ HDD/ SSD 1x M.2 2280 M key socket (PCIe Gen4 x4) for NVMe SSD
TPM	Supports TPM 2.0
Expansion	2x full-size mini PCI Express sockets with internal SIM sockets 1x M.2 2230 E key socket for WiFi5, WiFi6 or Google edge TPU module
INTERFACE	
Ethernet	2x 2.5GBASE-T Ethernet ports by Intel® I226-V GbE controllers (Nuvo-9501) 2x 2.5GBASE-T Ethernet ports by Intel® I226-IT GbE controllers (Nuvo-9505D)
USB	4x USB 3.2 Gen1 (5 Gbps) ports 2x USB 2.0 ports
COM	COM 1: 1x software-programmable RS-232/422/485 ports COM 2/3/4: 3x 3-wire RS-232 ports or COM 2: 1x RS-422/485 port
Digital I/O	4-CH isolated DI and 4-CH isolated DO (Nuvo-9505D only)
Video	1x VGA output, supporting 1920 x 1200 resolution 1x DisplayPort, supporting 4096 x 2304 resolution
Audio	1x 3.5 mm jack for mic-in and speaker-out
Power	1x 3-pin pluggable terminal block
ENVIRONMENTAL	
Cooling	Fanless
Power Supply	1x 3-pin pluggable terminal block for 8-35V DC input with remote on/off control
Operating Temperature	**With 35W CPU:** -10° ~ 60°C ** (Nuvo-9501) -25° ~ 60°C ** (Nuvo-9505D) **With 65W CPU (installation of the optional fan kit is recommended):** -10° ~ 60°C **/*** (Nuvo-9501) -25° ~ 60°C **/*** (Nuvo-9505D)
Storage Temperature	-40° ~ 85°C
Vibration / Shock Resistance	Vibration: MIL-STD-810H, Method 514.8, Category 4 Shock: MIL-STD-810H, Method 516.8, Procedure I
Humidity	10 ~ 90% , non-condensing
Dimensions	212 mm (W) x 165 (D) mm x 80 (H) mm
Weight	2.5 kg
Mounting	Wall-mount (optional) or DIN-rail mount (optional)
Certifications	CE/FCC Class A, according to EN 55032 & EN 55035

* A BIOS update may be required for the system to recognize 13th-Gen processors. Please contact Neousys Technology for more information.
** For sub-zero operating temperature, a wide temperature HDD or Solid State Disk (SSD) is required.
*** For 65W CPUs, the optional fan kit is recommended for operating at ambient temperatures higher than 50°C

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Ordering Information	Nuvo-9501	Nuvo-9505D
Model No.	Intel® 13th/12th-Gen Core™ compact fanless computer with 2x 2.5GbE and 4x USB3.2	Intel® 13th/12th-Gen Core™ compact fanless computer with 2x 2.5GbE, 4x USB3.2 and 8x isolated DIO

Optional Accessories	
PA-160W-OW	160 W-AC/DC-Netzstromadapter mit 20 V/8 A, 120 cm langes 18 AWG-Kabel mit Anschlüssen für den Terminalblock, Betriebstemperatur -30 °C bis 70 °C.
PA-280W-ET2	280 W-AC/DC-Netzstromadapter mit 24 V/11.67 A, 100 cm langes 16 AWG-Kabel mit Anschlüssen für den Terminalblock, Betriebstemperatur -30 °C bis 60 °C.(für 65 W-CPU empfohlen)
Wmkit-Nuvo9501	Wandmontagekit für die Nuvo-9501-Baureihe
DINRAIL-31	Hutschienenmontagekit für die Nuvo-9501-Baureihe
AccsyBx-FAN-Nuvo9531_9501	Lüfterkit mit 92 x 92 mm-Lüfter für die Nuvo-9501-Baureihe