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Nuvo-2700DS Series

AMD Ryzen™ V1000 Rugged 4x 4K Interactive Digital Signage System Supporting 2x Google Edge TPU

Preliminary

◢ Key Features

· **AMD Ryzen™ embedded V1605B series quad-core 15W CPU**
· **Rugged -25°C to 70°C fanless operation**
· **4x 4K DP display, 3840 x 2160 resolution per output**
· **AI inference capability by 2x optional Edge TPU**
· **1x M.2 3042/3052 B-Key for 4G/5G module**
· **2x USB3.1 Gen 1 and 2x USB2.0**
· **8V to 35V wide-range DC input with built-in ignition power control**
· **Flexible power input options: mini-DIN or terminal block**

Introduction

Nuvo-2700DS series is a rugged digital signage system with AI inference capability for personalized user experience and audience measurement. Powered by AMD Ryzen™ Embedded V1605B, it can output to four 4K displays and playback 4K H.265 videos at 60fps. By supporting two Google Edge TPUs, it delivers a total of 8 TOPS AI inference performance in a fanless compact form factor.

The wide operating temperature and fanless design make it ideal for 24/7 applications in harsh indoor and outdoor environments, such as flight information display system (FIDS) or train schedule board. Furthermore, Nuvo-2700DS can also be deployed for mobile applications due to the inclusion of ignition power control and full bandwidth support of WIFI 6, 4G LTE, and 5G network modules.

The support of two Google Edge TPUs empower Nuvo-2700DS as a smart digital signage player to leverage real-time camera input and AI computer vision models (e.g., YOLO-lite or PoseNet) to offer audiences an interactive and personalized experience. Besides, it can get to know its audience by collecting anonymous data from people counting, body gesture recognition, facial recognition, attention measurement, and emotion analysis.

The Nuvo-2700DS series signifies a new age of AI enabled digital signage player for harsh environments and mobile applications. You can utilize Nuvo-2700DS as a video wall player to playback to 4K ultra high definition visual displays or deploy Nuvo-2700DS as a low power fanless Edge AI platform for emerging AI applications. With AI inference from Google Edge TPUs, Nuvo-2700DS creates an interactive and personalized experience, but moreover, it can quantify offline campaign like never before and offer insight data.
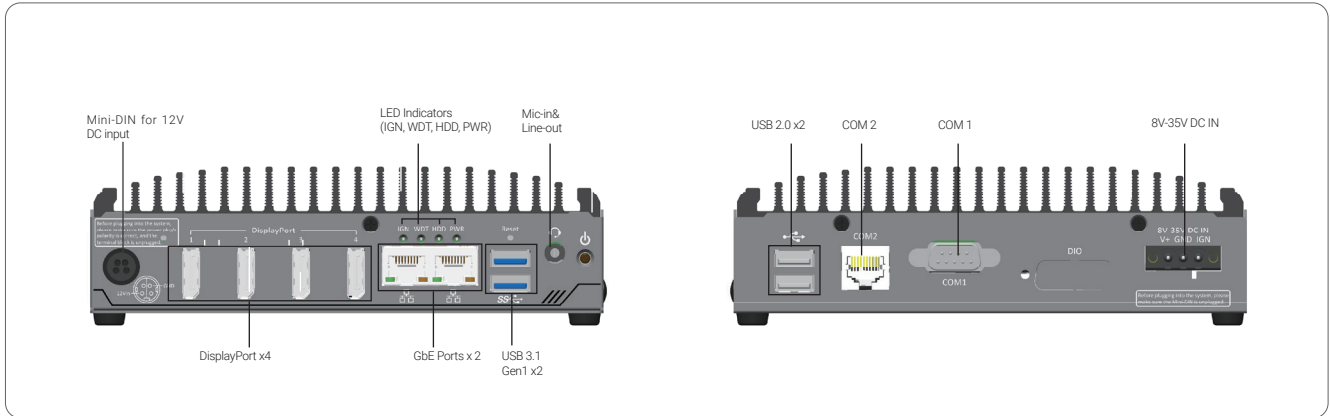
Specifications

System Core

Processor	AMD Ryzen™ Embedded V1605B CPU (4C/ 8T, 2M Cache, 2.0/ 3.6 GHz,12W - 25W TDP)
Graphics	Vega GPU with 8 compute units
Memory	Up to 64 GB DDR4-2400 SDRAM by two SODIMM sockets

Panel I/O Interface

Video Port	4x DisplayPort, supporting 4K UHD resolution
Ethernet Port	2x Gigabit Ethernet ports by 2x Intel I210® controller
USB 3.1	2x USB 3.1 Gen1 (5 Gbps) ports
USB 2.0	2x USB 2.0
Audio	1x 3.5mm jack for mic-in and line-out
Serial Port	2x RS-232 (COM1 in DB9, COM2 in RJ50)
DIO	4-CH isolated DI and 4-CH isolated DO (optional)

Internal I/O Interface

Mini PCI Express	2x half-size mini PCI Express socket for Google Edge TPU
M.2	1x M.2 3042/ 3052 B key (USB 3.1 Gen 1 + USB 2.0) for 4G/ 5G module with Micro SIM card slot 1x M.2 2230 E key (PCIe Gen3 x1 + USB 2.0) for WIFI module

Storage Interface

M.2 SATA	1x M.2 2280 M key (SATA signal only) socket for SATA SSD installation

Power Supply

DC Input	1x mini-DIN for 12V DC input or 1x 3-pin pluggable terminal block for 8V to 35V DC input (IGN/ GND/ V+)

Mechanical

Dimension	173 mm (W) x 174 mm (D) x 50 mm (H)
Weight	1.6 kg
Mounting	Wall-mount (optional)

Environmental

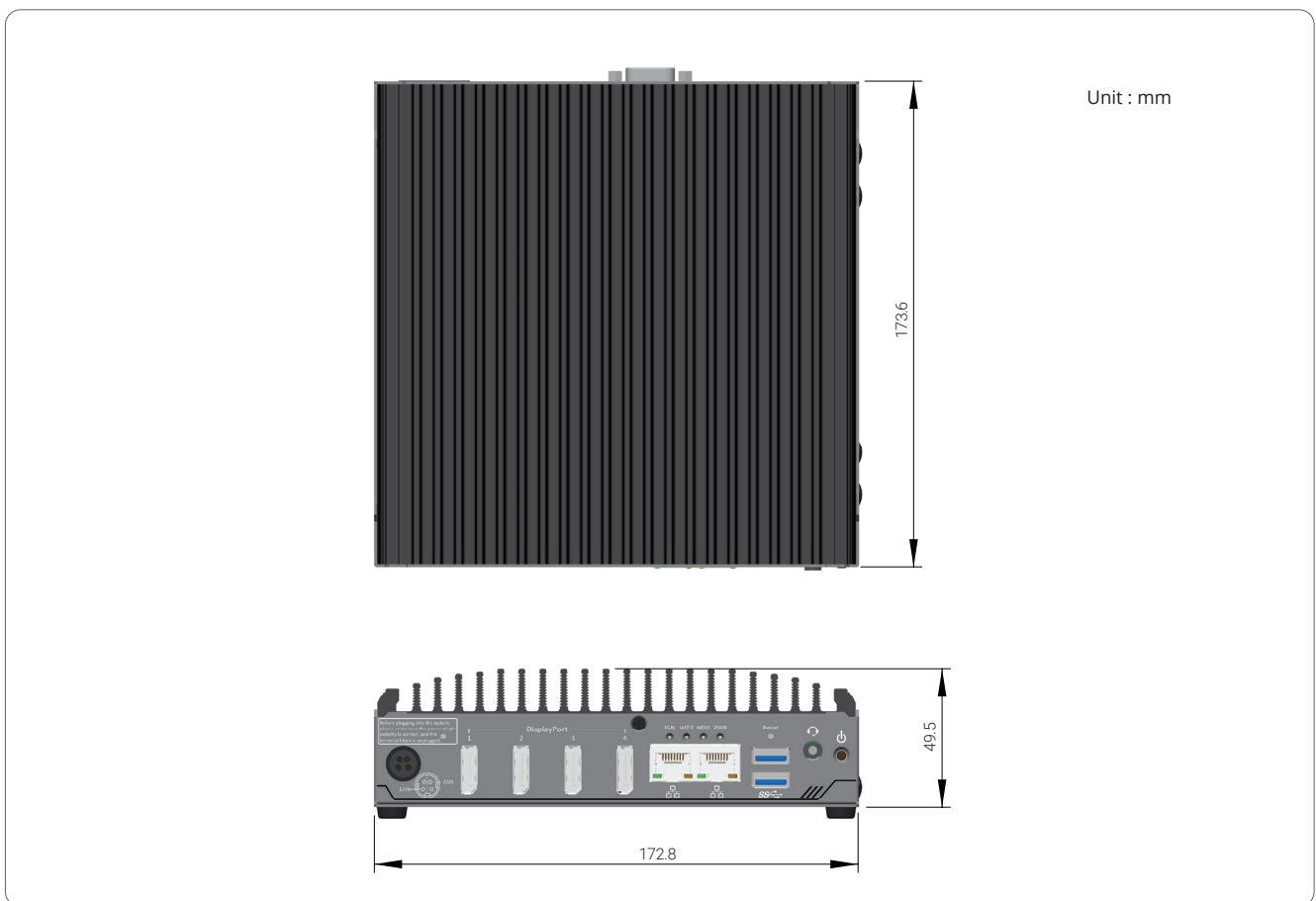|	
Operating Temperature	-25°C ~ 70°C
Storage Temperature	-40°C ~ 85°C
Humidity	10% ~ 90%, non-condensing
Vibration	Operating, MIL-STD-810G, Method 514.7, Category 4
Shock	Operating, MIL-STD-810G, Method 516.7, Procedure I
EMC	CE/FCC Class A, according to EN 55032 & EN 55035

* For sub-zero and over 60°C operating temperature, a wide temperature HDD or Solid State Disk (SSD) is required.

Appearance

Mini-DIN for 12V DC input

LED Indicators (IGN, WDT, HDD, PWR)

Mic-in& Line-out

USB 2.0 x2

COM 2

COM 1

8V-35V DC IN

DisplayPort x4

GbE Ports x 2

USB 3.1 Gen1 x2

Dimensions

Unit : mm

173.6

49.5

172.8

Ordering Information

Model No.	Product Description
Nuvo-2700DS	AMD Ryzen™ Embedded V1000 rugged 4x 4K interactive digital signage system
Nuvo-2700DS-1TU	AMD Ryzen™ Embedded V1000 rugged 4x 4K interactive digital signage system with 1x Google Edge TPU
Nuvo-2700DS-2TU	AMD Ryzen™ Embedded V1000 rugged 4x 4K interactive digital signage system with 2x Google Edge TPU

Optional Accessories

Wmkit-V-Nuvo2700DS	Wall mounting assembly for Nuvo-2700DS series, vertical type
PA-60W-OW	60W AC/DC power adapter 12V/5A; cord end terminals for terminal block. operating temperature: -30 to 60 °C.
PA-120W-OW	120W AC/DC power adapter 20V/6A; 18AWG/120cm; cord end terminals for terminal block, operating temperature: -30 to 70 °C.