

AutonomouStuff Spectra 2

Introduction

The AutonomouStuff Spectra 2 is the world's first dual GPU edge ai platform with industrial-grade design and in-vehicle features. Designed specifically to support a high-end 250W NVIDIA® graphics card, it offers tremendous GPU power up to 28 TFLOPS in FP32 for emerging GPU-accelerated edge computing, such as autonomous driving, vision inspection and surveillance/security.



Features

- Intel XEON E2278G 8th Gen 2.1/4.4GHz 8C | 12T, 80W TDP processor
- 64GB DDR4-2666Mhz SODIMM (2X32GB)
- (1) 512GB M.2 2280 Solid State Drive Primary
- (1) 1TB 2.5" SATA III Solid State Drive
- (1) RTX QUADRO A4000
- Supports dual 250W NVIDIA GPUs (optional)
- Supports 8th/9th-Gen Intel® Core™ i7/i5 LGA1151, Xeon® E
- Up to 128GB ECC/non-ECC DDR4 2133 (4x SODIMM)
- Two x16, Two x8, one x4, Gen3 PCIe slots
- Two hot-swappable 2.5" SATA HDD/ SSD with RAID 0/1 support
- 12-35V wide-range DC input with ignition control
- Operating temperature range: -25°C to 60°C
- Up to 3Grms vibration

Specifications

System core

Processor	Supporting Intel® Xeon® E and 8th/9th-Gen CPU (LGA1151 socket) - Xeon E 2176G/ 2278GE (8C/16T) / 2278GEL (8C/16T) - i7-8700, i7-8700T, i7-9700E, i7-9700TE - i5-8500, i5-8500T, i5-9500E, i5-9500TE - i3-8100, i3-8100T, i3-9100E, i3-9100TE
Memory	Up to 128 GB ECC/non-ECC DDR4 2133 SDRAM (four SODIMM slots)
Graphics	Independent GPU via x16 PEG port, or integrated Intel® UHD Graphics 630
Chipset	Intel® C246 platform controller hub
AMT	Supports AMT 12.0
TPM	Supports TPM 2.0

I/O interface

Ethernet	1x Gigabit Ethernet port by Intel® I219-LM 1x Gigabit Ethernet port by Intel® I210-IT
Native Video Port	1x VGA connector, supporting 1920x1200 resolution 1x DVI-D connector, supporting 1920x1200 resolution 1x DisplayPort connector, supporting 4096x2304 resolution
Serial Port	2x software-programmable RS-232/422/485 ports (COM1/ COM2)
USB	4x USB 3.1 Gen2 (10 Gbps) ports 4x USB 3.1 Gen1 (5 Gbps) ports 1x USB 2.0 ports (internal for dongle use)
Audio	1x 3.5 mm jack for mic-in and speaker-out

Expansion BUS / internal I/O interface

PCI express	2x PCIe x16 slot@Gen3, 8-lanes 2x PCIe x8 slots@Gen3, 4-lanes 1x PCIe x4 slot@Gen3, 1-lane
M.2	1x M.2 2242 B key socket supporting dual SIM mode with selected M.2 LTE module
mini-PCIe	2x full-size mini PCI Express socket

Power supply

DC input	2x 4-pin pluggable terminal block for 8V to 35V DC input and 1x 3-pin ignition control */**
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Mechanical

Dimensions	235 mm (W) × 360 mm (D) × 185.6 mm (H)
Weight	8.6 kg
Mounting	Wall-mounting with damping brackets

Environmental

Operating temp.	with 35W CPU and dual NVIDIA® 250W GPU: -25°C ~ 60°C **** with >= 65W CPU and dual NVIDIA® 250W GPU: -25°C ~ 60°C **** (configured as 35W TDP mode) -25°C ~ 50°C ***/**** (configured as 65W TDP mode)
Storage temp.	-40°C - 85°C
Humidity	10% ~ 90%, non-condensing
Vibration	Operating, MIL-STD-810G, Method 514.6, Category 4; and 3 Grms, 5-500 Hz, 3 Axes
Shock	Operating, MIL-STD-810G, Method 516.6, Procedure I, Table 516.6-II
EMC	CE/ FCC Class A, according to EN 55024 & EN 55032

Storage interface

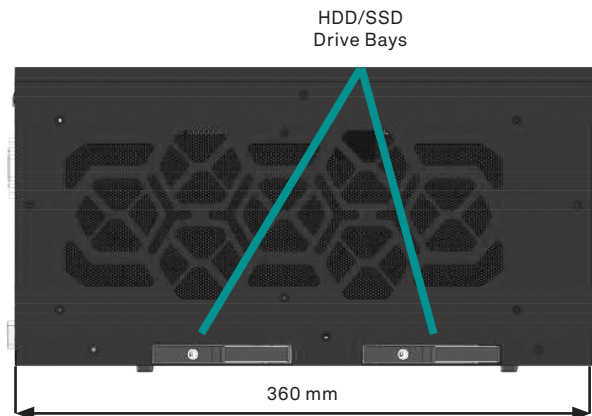
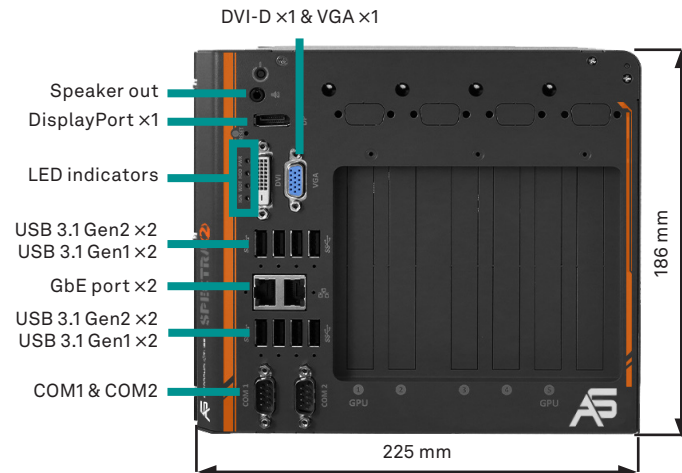
SATA	2x hot-swappable HDD trays for 2.5" HDD/ SSD installation (support RAID 0/1)
M.2	1x M.2 2280 M key socket (PCIe Gen3 x4) for NVMe SSD or Intel® Optane™ memory installation
mSATA	2x full-size mSATA port (mux with mini-PCIe)

* When NVIDIA® graphics card is used (single or dual), DC input should be greater than 12V.

** Max current for DC input is 30A (per PWR pin) and max power consumption for the system is 1000W.

*** For i7-8700 and i7-9700E running at 65W mode, the highest operating temperature shall be limited to 50°C and thermal throttling may occur when sustained full-loading applied. Users can configure CPU power in BIOS to obtain higher operating temperature.

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



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