

2023 Edition

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# AI Computing Solutions

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**iBASE**  
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# EC-3500

## Edge AI Computing System

Expandable System with NVIDIA® Jetson AGX ORIN series



### Features

- 8-core NVIDIA Arm® Cortex A78AE v8.2 64-bit CPU 2MB L2 + 4MB L3 / 12-core NVIDIA Arm® Cortex A78AE v8.2 64-bit CPU 3MB L2 + 6MB L3
- 1792-core NVIDIA Ampere GPU with 56 Tensor Cores / 2048-core NVIDIA Ampere GPU with 64 Tensor Cores
- 1x M.2 B-Key 3042/3052 (LTE/5G - USB3) w/ micro sim holder: cellular function
- 1x M.2 E-Key 2230 (PCI-E/USB2): WiFi/BT/GPS function
- 1x M.2 M-Key (NVMe) 2280: storage
- 1x 16-Lane MIPI Expansion Connector
- Wide Power Input Range 9V~36V DC
- Supports Ubuntu 20.04 OS

### Specifications

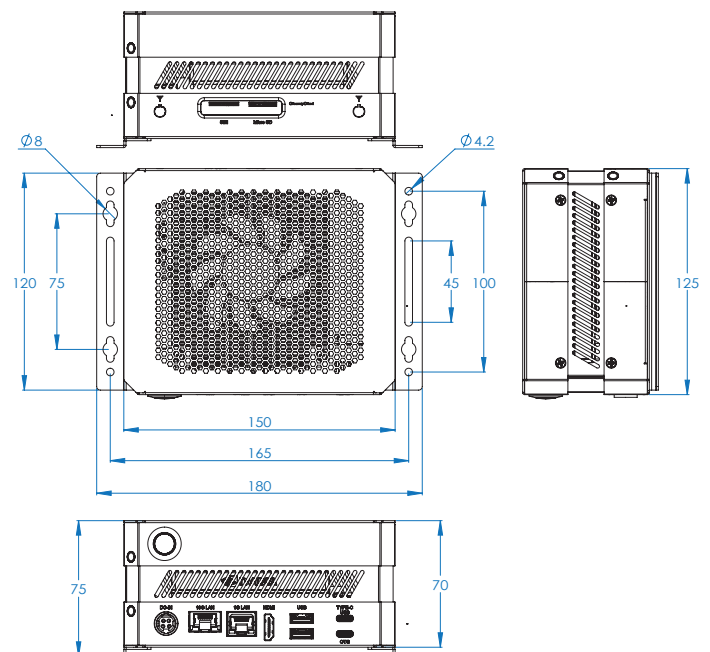
System Mainboard	NVIDIA® Jetson AGX ORIN 32GB/64GB SOM + Carrier Board
CPU Type	8-core NVIDIA Arm® Cortex A78AE v8.2 64-bit CPU 2MB L2 + 4MB L3 / 12-core NVIDIA Arm® Cortex A78AE v8.2 64-bit CPU 3MB L2 + 6MB L3
System Speed	NA
Memory	32/64 GB 256-bit LPDDR5 204.8 GB/s
Accelerator Card	1792-core NVIDIA Ampere GPU with 56 Tensor Cores / 2048-core NVIDIA Ampere GPU with 64 Tensor Cores
LAN	1x RJ-45 GbE port, 1x RJ-45 10GbE port
Front Panel External I/O	1x HDMI 2.1 Type-A 1x RJ-45 GbE port 1x RJ-45 10GbE port 2x USB 3.2 Gen1 Type-A, 1x USB 2.0 Type-C (OTG only), 1x USB 3.2 Type-C Gen 2 1x DC-in 9 to 36 VDC / 4-pin DC Jack Power Connector 1x Power button
Rear Panel External I/O	1x microSD slot 1x micro sim holder 1x Recovery button 1x Reset button 2x Antenna holes
Expansion Slot	1x M.2 B-Key 3042/3052 (LTE/5G - USB3) w/ micro sim holder: cellular function 1x M.2 E-Key 2230 (PCI-E/USB2): WiFi/BT/GPS function 1x M.2 M-Key (NVMe) 2280 1x microSD slot
Storage	64GB eMMC 5.1
Auto Control and Monitoring	N/A
Power Requirement	9V~36V DC-in
Power Supply	150W 12V power adapter
Construction	SGCC
Chassis Color	Black & Red
Mounting	Desktop & wall mount
Weight	TBD
Dimensions	150mm (W) x 125mm (D) x 70mm (H)
Others	NA
Operating Temperature	-0 ~ 50 °C
Storage Temperature	-20°C~80°C (-4°F~176°F)
Relative Humidity	5%~90%@50°C (non-condensing)

Vibration	Operating: 2.0 Grms / 5~500Hz / random operation (with IEC 60068-2-64)
Shock	Operating: 30G/11 ms Duration Non-operating: 40G/11 ms Duration
Certification	CE, FCC & LVD
Operating System	Ubuntu 20.04

### Ordering Information

EC-3500-32	NVIDIA Jetson AGX ORIN 32GB, 1792-core NVIDIA Ampere GPU with 56 Tensor Cores, 8-core NVIDIA Arm® Cortex A78AE v8.2 64-bit CPU 2MB L2 + 4MB L3, 32 GB 256-bit LPDDR5 204.8 GB/s & 64GB eMMC 5.1
EC-3500-64	NVIDIA Jetson AGX ORIN 64GB, 2048-core NVIDIA Ampere GPU with 64 Tensor Cores, 12-core NVIDIA Arm® Cortex A78AE v8.2 64-bit CPU 3MB L2 + 6MB L3, 64GB 256-bit LPDDR5 204.8 GB/s & 64GB eMMC 5.1

### Dimensions and Drawing



# AMI241-AI

## Industrial AI Computer

Expandable Fanless System with 13th Gen Intel® Core™ i9/i7/i5/i3 desktop processors (35W TDP)



# Coming soon



## Features

- High-performance 13th Gen Intel® Core™ desktop processors
- With Hailo-8™ AI accelerator module supporting up to 26 Tera-Operations Per Second (TOPS)
- Supports Four independent display outputs
- 2x Intel® 2.5G LAN, 2x Intel® GbE ( Support 802.3at PoE++)
- 1x flexible PCI-E/PCI expansion slot
- 3x M.2 sockets (M-Key/B-Key/E-Key)
- Over/Under/Reverse voltage protection

## Specifications

System Mainboard	MBE240 with Intel® Q670E PCH
CPU Type	13th Gen Intel® core i9/i7/i5/i3 desktop processors (35W TDP)
System Speed	Up to 5.0GHz
Memory	2x DDR5-4800/5600 SO-DIMM, Max. 64GB
Accelerator Card	Hailo-8™ AI Acceleration module (26 TOPS), support extended operating temperature
LAN	2x Intel® 2.5G LAN, 2x Intel® GbE
Front Panel External I/O	2x RS232/422/485 port for COM#1~COM#2 2x RS232 ports for COM#3~COM#4 2x RS232 ports for COM#5~COM#6 (via riser-card) 2x DisplayPort 2x RJ-45 GbE port (Supports 802.3at PoE++) 1x 5-pins DC-in terminal block type for +24V 2x Antenna holes 1x expansion slot
Rear Panel External I/O	1x DVI-D + HDMI 4x USB 3.2 ports 2x Antenna holes 2x RJ-45 2.5G port + Dual USB3.2 stack ports 1x RED HDD LED 1x Power button with Green LED indicator 2x SIM card slots
Expansion Slot	1x Flexible PCI-E/PCI expansion slot 1x M.2 B-Key 3052 (LTE/5G/4G) 1x M.2 E-Key 2230 (WIFI/BT) 1x M.2 M-Key 2280 (NVMe / SATA SSD)
Storage	2x 2.5" storage
Auto Control and Monitoring	N/A
Power Requirement	+24V DC-in
Power Supply	N/A
Construction	Aluminum @ Gray
Chassis Color	Silver & Gray
Mounting	Desktop & wall mount
Weight	TBD
Dimensions	TBD
Others	TBD
Operating Temperature	0 ~ 50 °C
Storage Temperature	-20°C~70°C (-4°F~156°F)
Relative Humidity	5%~90%@50°C (non-condensing)

Vibration	Operating: 3.0 Grms / 5~500Hz
Shock	Operating: 20G/11 ms Duration Non-operating: 40G/11 ms Duration
Certification	CE, FCC & LVD
Operating System	Windows 11 , Ubuntu

## Ordering Information

AMI241AFM-AI	(AMI) Aluminum Chassis with MBE240 (Q670E PCH) and Hailo AI module, Fanless Design w/o CPU/memory/SSD/Power adaptor, Supporting AI, iAMT (16.1), mounting brackets, 1x expansion slot (optional riser card) (RoHS2)
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# CMB100/CMB106 Series

## Industrial AI Computer

High Performance Expandable System with 7th/6th Gen Intel® Core™ DT processors



CMB106



CMB100



## Specifications

System Mainboard	C236 MicroATX motherboards
CPU Type	7th/6th Gen Intel® Core™ DT processors (TDP 65W)
System Speed	Up to 4.20 GHz (C236 supports ECC by CPU SKUs)
Memory	CMB100: 2x DDR4 UIMM, Max. 32GB CMB106: 4x DDR4 UIMM, Max. 64GB
Accelerator Card	Hailo-8™ AI accelerator module, up to 26 TOPS
LAN	2x Intel® GbE LAN
Front Panel External I/O	2-pin remote boot extension design Detachable side cover for GFX Card 4x Slots Power button Multi-HDMI 6x USB3.0 ports, 4x USB2.0 (expandable) 2x RJ45 Gigabit Ethernet port 2x RS232/422/485, 2x RS232
Rear Panel External I/O	Pluggable cooling-fan
Expansion Slot	1x PCI-E(x16), 1x PCI-E(x8), 1x PCI-E(x4)
Storage	4x 2.5" SATA (supports RAID 0/1)+ Mini PCI-E
Auto Control and Monitoring	Watchdog Timer 256 levels
Power Requirement	ATX power
Power Supply	500W 1U Flex ATX power supply
Construction	SECC
Chassis Color	Black
Mounting	Desktop & wall mount
Weight	Depends on the configuration of power supply and motherboard related components
Dimensions	362.4mm(W) x 350.0mm(D) x 156.0mm(H)
Others	N/A
Operating Temperature	0°C~45°C (32°F~113°F) (for 65W CPU) @60°C, non-condensing
Storage Temperature	-20°C~80°C (-4°F~176°F), @60°C, non-condensing
Relative Humidity	10~95%, non-condensing@60°C
Vibration	With SSD: 1Grms, IEC 60068-2-64, random, 5Hz~500Hz
Shock	With SSD: Operating 20G, IEC 60068-2-27, half-sine, 11 ms duration With SSD Non-Operating 40G, IEC 60068-2-27, half-sine, 11 ms duration With SSD
Certification	CE FCC ClassA / LVD
Operating System	Windows 10, Ubuntu

## Features

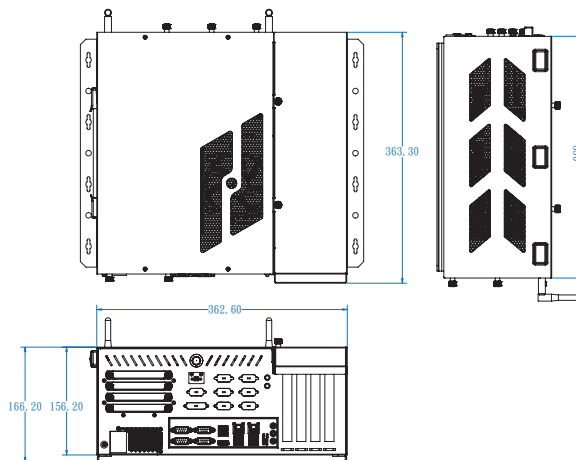
- Supports 7th/6th Gen Intel® Core™ DT processors (TDP 65W) with specified M/B
- Supports discrete GPU cards via reserved expansion slots
- Multiple expansion slots (C236 platform): 1x PCI-E(x16), 1x PCI-E(x8), 1x PCI-E(x4)
- 500W 1U Flex ATX power supply [Default]
- 2-pin remote boot extension design
- Supports multi-display interfaces [HDMI, DP, CRT] and GbE ports , USB 3.0 ports
- Four removable 2.5" storage bays (supports RAID 0/1)
- MiniPCI-E and M.2 M-Key (2280)
- TPM, DIO, iAMT, iSMART [Optional]

## Ordering Information

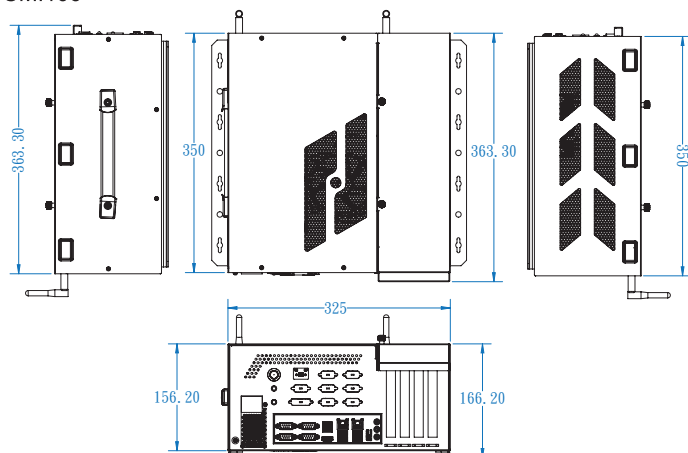
CMB100M	Chassis with MicroATX motherboard w/o CPU, memory, storage, support 7th/6th Gen Intel® i7/i5/i3 / Pentium® / Celeron® QC/DC processors, up to 4.2GHz
CMB106M	(CMB), Chassis with MicroATX 7th/6th motherboard w/o CPU, memory, storage, support Gen Intel® i7/i5/i3 / Pentium® / Celeron® QC/DC processors, up to 4.2GHz

## Dimensions and Drawing

CMB100



CMB106



# ASB210-953-AI

## Edge AI Computing System

Slim System with 11th Gen Intel® Core™ U-Series Processor & Hailo-8™ M.2 AI Acceleration Module



**HAILO**  
Empowering Intelligence

Hailo-8™ M.2 AI Module



## Features

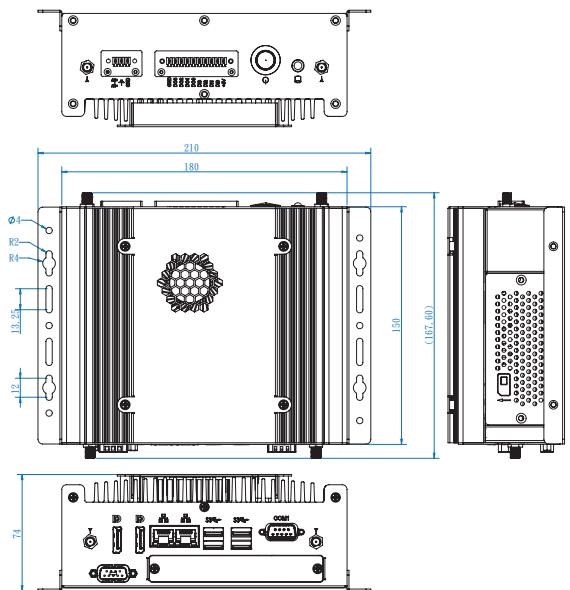
- With Hailo-8™ Accelerator Card module supporting up to 26 Tera-Operations Per Second (TOPS)
- System with IBASE IB953 3.5" Single Board Computer (TDP-up 28W)
- Onboard 11th Gen Intel® Core™ U-Series Processor
- Supports 2x M.2 sockets (B-Key/E-Key)
- 12V (-10%) ~ 24V (+10%) DC-in power input
- 2x DDR4-3200 SO-DIMM, Max. 64GB
- 3x USB 3.1, 1x USB 2.0, 2x Intel® GbE, 1x COM
- External GPIO, 2x DisplayPort, TPM (2.0)
- Optional VESA mount bracket

## Specifications

System Mainboard	IB953AF-i7/ IB953AF-i5/ IB953EF-i3
CPU Type	Intel® Core™ i7-1185G7E Processor Intel® Core™ i5-1145G7E Processor Intel® Core™ i3-1115G4E Processor
System Speed	Up to 4.4GHz
Memory	2x DDR4-3200 SO-DIMM, Max. 64GB
Accelerator Card	Hailo-8™ Accelerator Card module, up to 26 TOPS
LAN	IB953AF series: Intel® I219LM Gigabit LAN PHY IB953EF series: Intel® I219V Gigabit LAN PHY Intel® I211AT PCI-E Gigabit LAN (as 2nd LAN)
Front Panel External I/O	3x USB 3.1 1x USB 2.0 2x DisplayPort 1x DB9 for COM#1 (RS232/422/485) 2x Gigabit LAN
Rear Panel External I/O	1x Power button 1x Digital I/O (4-in/4-out) 2x Antenna holes 1x HDD LED 1x 3-pin DC-in terminal block for 12V (-10%) ~ 24V (+10%)
Expansion Slots	2x M.2 sockets (B-Key/ E-Key) 1x M.2 M-key for Hailo-8™ Accelerator Card module
Storage	1x 2.5" HDD or SSD
Auto Control and Monitoring	Watchdog Timer 256 levels
Power Requirement	12V~24V DC-in
Power Supply	90W power adaptor
Construction	Aluminum & steel 1x System fan
Chassis Color	Black
Mounting	Desktop or wall mount (wall mount kit included) Optional VESA mount kit
Weight	1.5kg
Dimensions	180mm (W) x 150mm (D) x 72mm (H) 7.08" (W) x 5.9" (D) x 2.83" (H)
Others	NA
Operating Temperature	0°C~45°C (32°F~113°F) *with airflow 0.9m/s
Storage Temperature	-20°C ~80°C (-4°F~176°F)

Relative Humidity	5%~90%@45°C (non-condensing)
Vibration	Operating: 3Grms / 5~500Hz
Shock	Operating : 20G / 11ms Non-operating : 40G / 11ms
Certification	CE/LVD/FCC Class-B
Operating System	Linux (Ubuntu 18.04 / 20.04)

## Dimensions and Drawing



# SI-624-AI

## Industrial AI Computer

Expandable System with 12th Gen Intel® Core™ Processor  
& NVIDIA Ampere Architecture MXM GPU cards



## Features

- iSMART intelligent energy-saving & Observer remote monitoring technologies
- 12th Gen Intel® Desktop Core™ i7/i5/i3 / Pentium® / Celeron® QC/DC processors
- 2x DDR4-3200 SO-DIMM, Max. 64GB, ECC compatible
- NVIDIA Ampere Architecture MXM GPU cards (Type A/B, up to 115W)
- 4x DP++ output
- 1x M.2 B-Key (3052) for 5G or LTE options
- 1x M.2 E-Key (2230) & 2x M.2 M-Key (2280) for Wi-Fi, Bluetooth, capture or storage options
- Supports OOB function via I210 LAN port (optional)
- Supports TPM 2.0

## Specifications

System Mainboard	MBD624
CPU Type	12th Gen Intel® Core™ processors
System Speed	Up to Max. 5.0/3.8 Ghz
Memory	2x DDR4-3200 SO-DIMM, Max. 64GB, ECC compatible
Accelerator Card	NVIDIA Ampere Architecture MXM GPU card/ up to 5888 CUDA cores / 17.66 TFLOPS peak FP32 performance / 184 Tensor Cores
LAN	2x Gigabit LAN
Front Panel External I/O	1x HDMI 1.4 for console 1x HDMI-in for capture card (optional) 2x USB 3.2 1x Power / HDD LED 1x Power button
Rear Panel External I/O	4x DisplayPort 2x USB 3.2 2x RJ45 for Gigabit LAN 2x RJ45 for RS-232 serial port 1x Audio connector for Line-in/out/MIC 1x Power jack connector
Expansion Slot	1x M.2 (M-Key, type:2280, supports NVMe with PCI-E(x4) Gen.4 signal only) 1x M.2 (E-Key, type: 2230, 2x PCI-E(x1), USB 2.0; supports CNVj) 1x M.2 (B-Key, type:3052, supports 5G/4G/LTE) 1x UIM/SIM card slot
Storage	1x M.2 M-Key (2280)
Auto Control and Monitoring	Watchdog Timer: 256 segments, 0, 1, 2...255 (sec/min)
Power Requirement	+19V DC
Power Supply	270W power adaptor
Construction	SGCC
Chassis Color	Black and white
Mounting	Standard system bracket
Weight	3kg (6.6lbs)
Dimensions	329mm(W) x 25.3mm(D) x 73mm(H) 12.9"(W) x 0.99"(D) x 2.87"(H)
Others	NA
Operating Temperature	0°C ~ 45°C (32°F ~ 113°F)

Storage Temperature	-20°C ~ 80°C (-4°F~176°F)
Relative Humidity	5%~90% @45oC (non-condensing)
Vibration	SSD: 5 grms / 5~500Hz / random operation
Shock	Operating : 20G / 11ms Non-operating : 40G / 11ms
Certification	CE, FCC class-B, UL & CCC
Operating System	Windows10 / Linux

## Ordering Information

SI-624-AI	Industrial AI computer with MBD624 with 12th Gen Intel® Core™ processor, 1x Nvidia MXM GPU card, M.2 128GB, 2x 8GB DDR4-3200 SO-DIMM and 270W power adaptor
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# SI-614-AI

## Industrial AI Computer

Expandable System with 7th Gen Intel® Core™ Desktop Processor & NVIDIA MXM GPU Cards



## Features

- iSMART - for auto-scheduling and power resume
- 7th Gen Intel® Core™ i7/i5/i3/ Processors
- NVIDIA Ampere Architecture MXM GPU cards (Type A/B, up to 115W)
- 2x DDR4 2133 SO-DIMM, dual channel, Max. 32GB
- 1x HDMI 1.4 for console, 4x DP 1.3 output
- 1x Mini PCI-E (full-size) for Wi-Fi, Bluetooth, 4G LTE or capture card options
- 1x M.2 B key (3042) for storage or 4G LTE options
- 2x 2.5" SATA III SSD device
- Compact and rugged design

## Specifications

System Mainboard	MBD614
CPU Type	7th Generation Intel® Core™ Desktop processor
System Speed	Up to 4.2 GHz
Memory	2x DDR4 2133 SO-DIMM, Dual Channel, Max. 32GB
Accelerator Card	NVIDIA Ampere Architecture MXM GPU card/ up to 5888 CUDA cores / 17.66 TFLOPS peak FP32 performance / 184 Tensor Cores
LAN	1x Intel® I219V Gigabit LAN controller
Front Panel External I/O	1x HDMI 1.4 for console 2x USB 3.0 1x power button, Power / HDD LED
Rear Panel External I/O	1x RJ45 for Gigabit LAN 1x RJ45 for RS-232 serial port 4x DP 2x USB 3.0 1x Audio connectors for Line out 1x Power jack connector 1x 2-Pin Terminal block for external power button 2x Antenna Hole
Expansion Slot	1x Mini PCI-E (full-size) for Wi-Fi, Bluetooth, 4G LTE or Capture card options 1x M.2 B key(3042) for storage or 4G LTE options 2x 2.5" SATA III SSD for storage 1x SIM card slot
Storage	1x M.2 M-Key (2280)
Auto Control and Monitoring	Watchdog Timer: 256 segments, 0, 1, 2...255 (sec/min)
Power Requirement	+19V DC
Power Supply	270W power adaptor
Construction	SGCC
Chassis Color	Black and white
Mounting	Standard system bracket
Weight	3kg (6.6lbs)
Dimensions	256mm(W) x 173mm(D) x 73mm(H) 10.07"(W) x 6.81"(D) x 2.87"(H)
Others	NA
Operating Temperature	0°C ~ 45°C (32°F ~ 113°F)
Storage Temperature	-20°C ~ 80°C (-4°F ~ 176°F)
Relative Humidity	5%~90% @45oC (non-condensing)
Vibration	SSD: 5 grms / 5~500Hz / random operation
Shock	Operating : 20G / 11ms Non-operating : 40G / 11ms
Certification	CE, FCC class B, UL & CCC
Operating System	Windows10 / Linux

## Ordering Information

SI-614-AI	Industrial AI Computer with MBD614 with Intel® Core™ i5-7500 processor (8M Cache, up to 3.4 GHz), 1x MXM NV1050 4GB 128bit/GDDR5 GPU card, 2x 8GB DDR4 memory, 2.5" SSD 128GB & 270W PSU.
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## Dimensions and Drawing

