ION Mini PC

RUGGEDIZED | MADE IN USA

A Revolutionary Mini PC

Industry-leading 5-year standard warranty, free lifetime support and over a decade long life cycle makes the ION the most durable, high-performance Mini PC on the market today!

PRODUCT HIGHLIGHTS

Lightning Fast CPU

Up to 8 cores / 16 threads and 35W TDP for increased performance and reduced cost.

Memory for Days

Up to 32GB of unbuffered DDR4-2666 RAM across two SODIMM slots to run all applications with ease.

Lots of Storage

Internal 2.5" SATA SSD and an M.2 NVMe PCIe card offer ample storage options.

MODEL NUMBER
MPC1000 | Form Factor: Mini PC

PROCESSOR BOARD
MXT8288 | Type: Mini-ITX

PROCESSOR

- Intel® Coffee Lake & Coffee Lake-R Processors
- CPU TDP support up to 35W

Processor	Gen	ECC	Cores/Threads	Frequency	Watts
E-2278GEL	2nd	Yes	8/16	2.00 GHz	35W
i7-9700TE	9th	Yes	8/8	1.80 GHz	35W
i3-9100TE	9th	No	4/4	2.20 GHz	35W
i3-8100T	8th	Yes	4/4	3.10 GHz	35W
i7-8700T	8th	No	6/12	2.40 GHz	35W
i5-8500T	8th	No	6/6	2.10 GHz	35W

Turbo Mode disabled for E-2278GEL CPU

MEMORY
Slots: 2x DDR4 SODIMM sockets
Capacity: Up to 32GB DDR4 ECC SODIMM
Type: 2400/2666 ECC DDR4 UDIMM
DIMM Sizes: 16GB, 8GB
Error Detection: Corrects single-bit errors and detects double-bit errors using ECC memory

STORAGE
Type(s): 1x 2.5" SSD/HDD SATA3 (6 Gbps) drive up to 15mm height; 1x M.2 NVMe x4 PCIe
Capacity: Up to 1TB (larger capacities available upon request)

ON-BOARD DEVICES
Chipset: Intel® C246
IPMI: Support for Intelligent Platform Management Interface v2, IPMI 2.0 with virtual media over LAN and KVM-over-LAN support, ASPEED AST2500 BMC
Network Controllers: Intel i350 Gigabit Ethernet, supports 1000BASE-T, RJ-45 output
Graphics: Intel Integrated Graphics & ASPEED AST2500 BMC
TPM 2.0: Secure cryptoprocessor that helps you with actions such as generating, storing, and limiting the use of cryptographic keys

INPUT / OUTPUT
Power: 1x Power Connector
USB: 3x USB 3.0 Ports
Display:
  o 1x DisplayPort
  o 1x VGA Port
LAN:
  o 2x RJ-45 Gigabit Ethernet LAN ports
  o 1x RJ-45 Gigabit Ethernet LAN/IPMI shared port
Serial: 1x RS232 Serial Port

SYSTEM DIMENSIONS
Width: 7.0" | 17.78 cm
Height: 1.4" | 3.56 cm
Depth: 6.8" | 17.27 cm
Average System Weight*: 3.2 lbs. | 1.45 kg
*dependent on component selection

FRONT PANEL
3x USB Ports
Power Button
Audio In/Out
Fault LED

SYSTEM COOLING
1x PWM CPU Blower Fan; DC 12 V

POWER SUPPLY
85W Power Brick, 12 VDC, 7A

- Level VI efficiency
- Universal input (90~264 VAC)
- Single regulated output +12V
- Over-voltage and short-circuit protections
- UL/cUL, GS, PSE safety approvals
- Power factor correction
- Certified to 60950-1 and 62368-1 standards

A rugged locking connector available upon request.

SYSTEM BIOS
BIOS Type: *128 Mb SPI NOR Flash with Insyde BIOS*
BIOS Features: Plug and Play (PnP), APM 1.2, PCI 2.2, ACPI 1.0 / 2.0, USB Keyboard Support, SMBIOS 2.3, UEFI

SYSTEM MANAGEMENT
AST2500 Baseband Management Controller: rKVM, System Monitoring, Out of Band Management

ENVIRONMENTAL SPECIFICATIONS
Operating Temperature: 0°C - 45°C
Storage Temperature: -40°C - 70°C
Operating Humidity: 8% - 90% Non-Condensing
Non-operating Humidity: 5% - 95% Non-Condensing
Numbers noted are dependent on CPU selection. Please contact Trenton Systems for specific CPU environmentals.
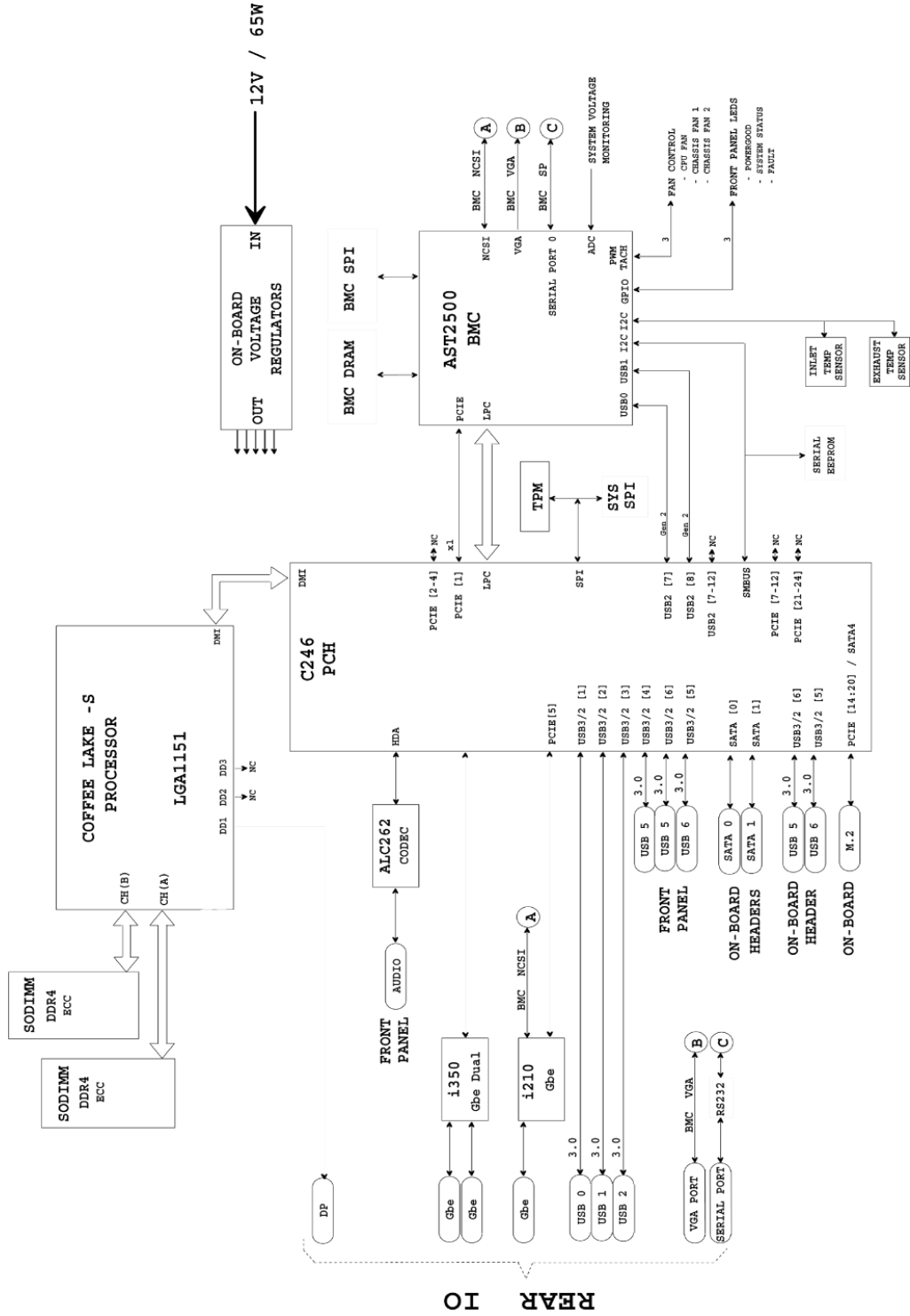
ENVIRONMENTAL STANDARDS & MTBF

- **RTCA DO-160 Shock:** 11ms Terminal Peak Pulse with amplitude 6G – 3 axis
- **RTCA DO-160 Vibration:** Random vibration – 10Hz – 2000Hz – 3 axis
- **CE certified** to health, safety, and environmental protection standards for products sold within the European Economic Area

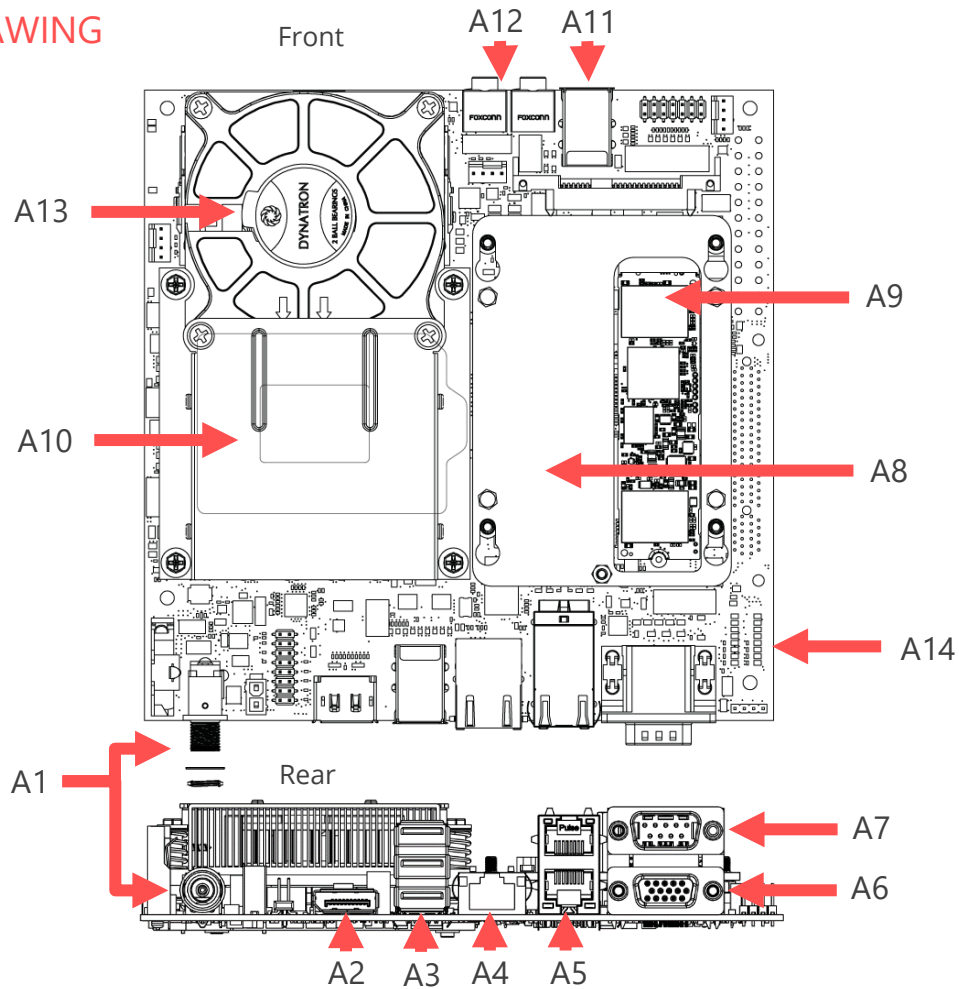## ADD-ONS (SEE LAST PAGE FOR MORE INFO)

- 1pc Mounting Bracket
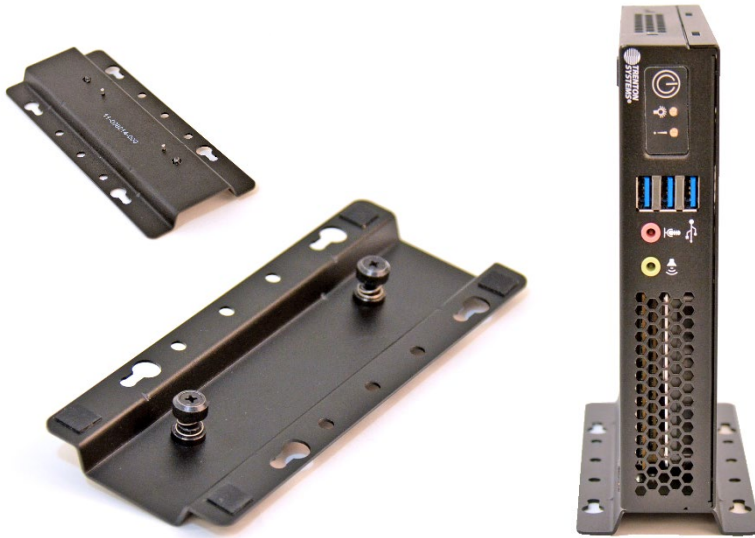- 2pc Mounting Bracket

BLOCK DIAGRAM

LAYOUT DRAWING

Front

A12 A11

A13

A10

A9

A8

A14

A1

Rear

A7

A6

A2 A3 A4 A5

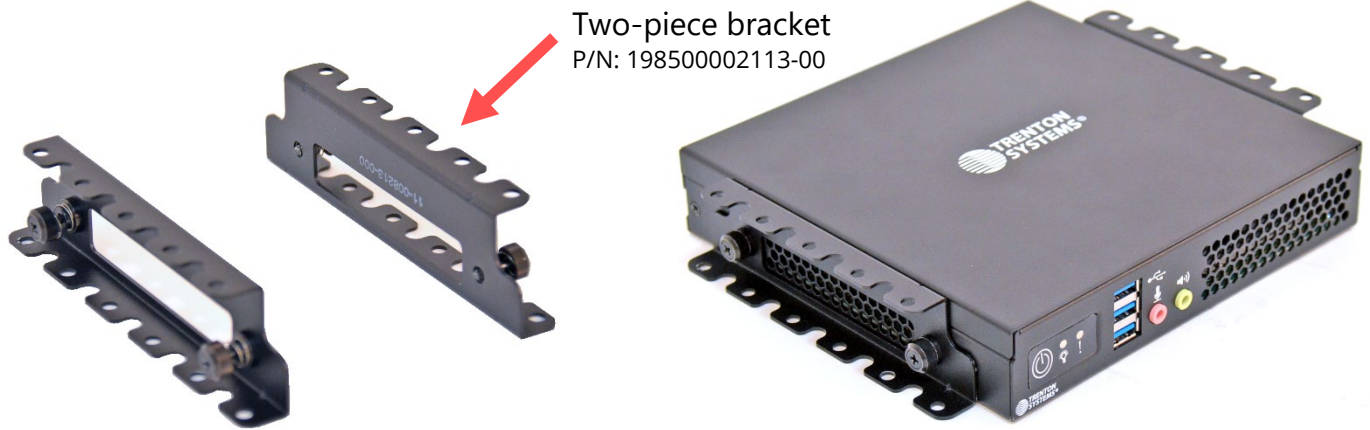| ITEM	DESCRIPTION
A1	Power Connector
A2	DisplayPort
A3	3x USB 3.0 Ports
A4	1GbE LAN Port (Management Port)
A5	2x 1GbE LAN Ports
A6	VGA Port
A7	Serial Port
A8	2.5" SATA SSD Drive
A9	M.2 NVMe x4 PCIe
A10	Heatsink over CPU
A11	3x USB 3.0 Ports
A12	Audio In/Out
A13	Fan over SODIMM slots
A14	LED Post Codes

Mounting Brackets

Choose between a 1-piece or 2-piece bracket that allows you to mount your ION Mini PC to just about any surface you desire.

One-piece bracket
P/N: 198500002114-00

Two-piece bracket
P/N: 198500002113-00