



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.

Section 1 / System Overview

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	2 nd	Yes	8/16	2.00 GHz	35W
i7-9700TE	9 th	Yes	8/8	1.80 GHz	35W
i3-9100TE	9 th	No	4/4	2.20 GHz	35W
i3-8100T	8 th	Yes	4/4	3.10 GHz	35W
i7-8700T	8 th	No	6/12	2.40 GHz	35W
i5-8500T	8 th	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:

- 1x DisplayPort
- 1x VGA Port

LAN:

- 2x RJ-45 Gigabit Ethernet LAN ports
- 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

84W Power Brick, 12 Vdc, 7A

**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 environmental.*

ENVIRONMENTAL STANDARDS & MTBF

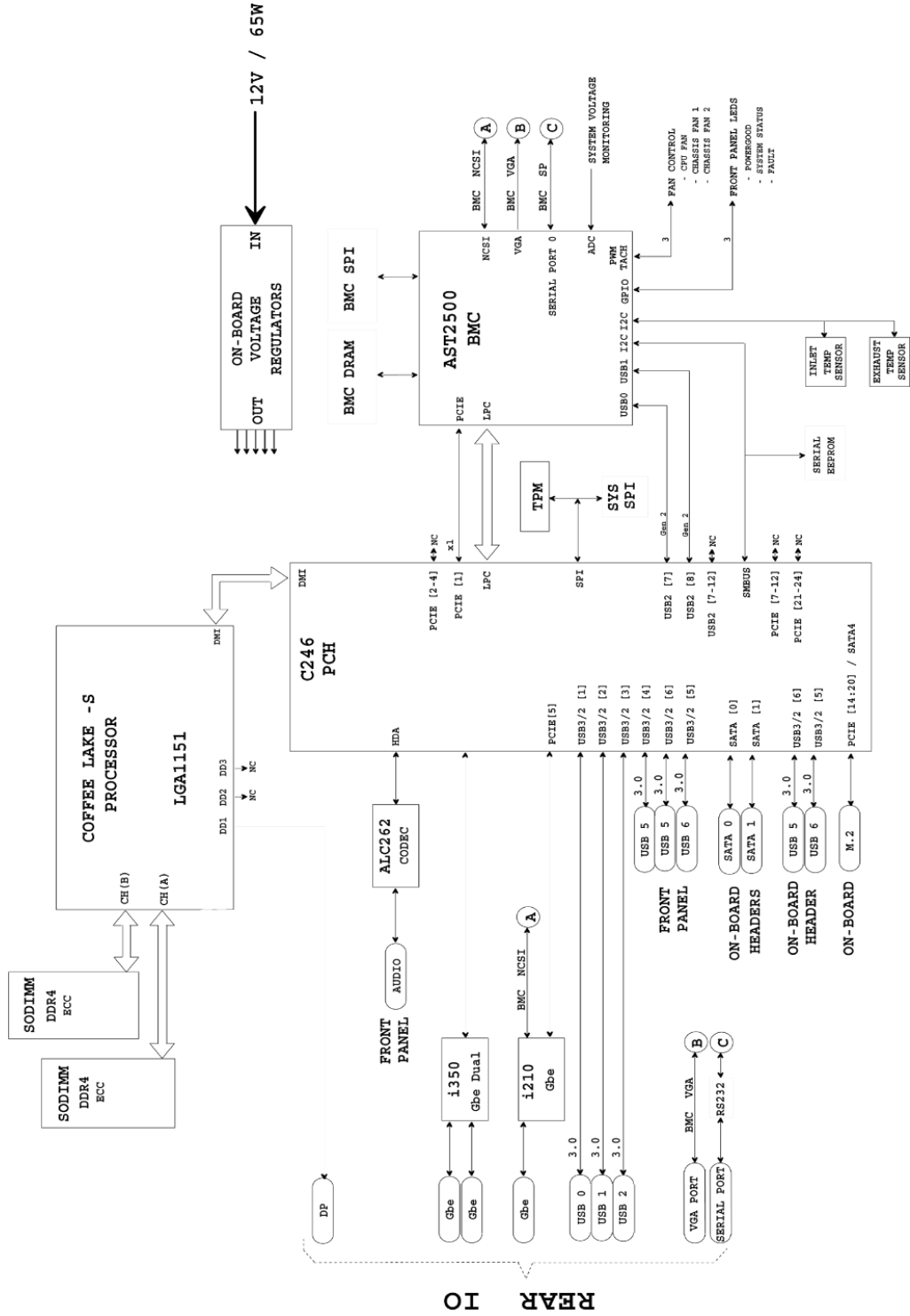
- ▶ **RTCA DO-160 Shock:** 11ms Terminal Peak Pulse with amplitude 6G – 3 axis
- ▶ **RTCA DO-160 Vibration:** Random vibration – 10Hz – 2000Hz – 3 axis
- ▶ **CE certified** to health, safety, and environmental protection standards for products sold within the European Economic Area
- ▶ **MTBF:** ANSI/VITA MIL-HDBK-217: 163,662 MTBF Hours GB Env. | 57,779 MTBF Hours GF Env.

ADD-ONS (SEE LAST PAGE FOR MORE INFO)

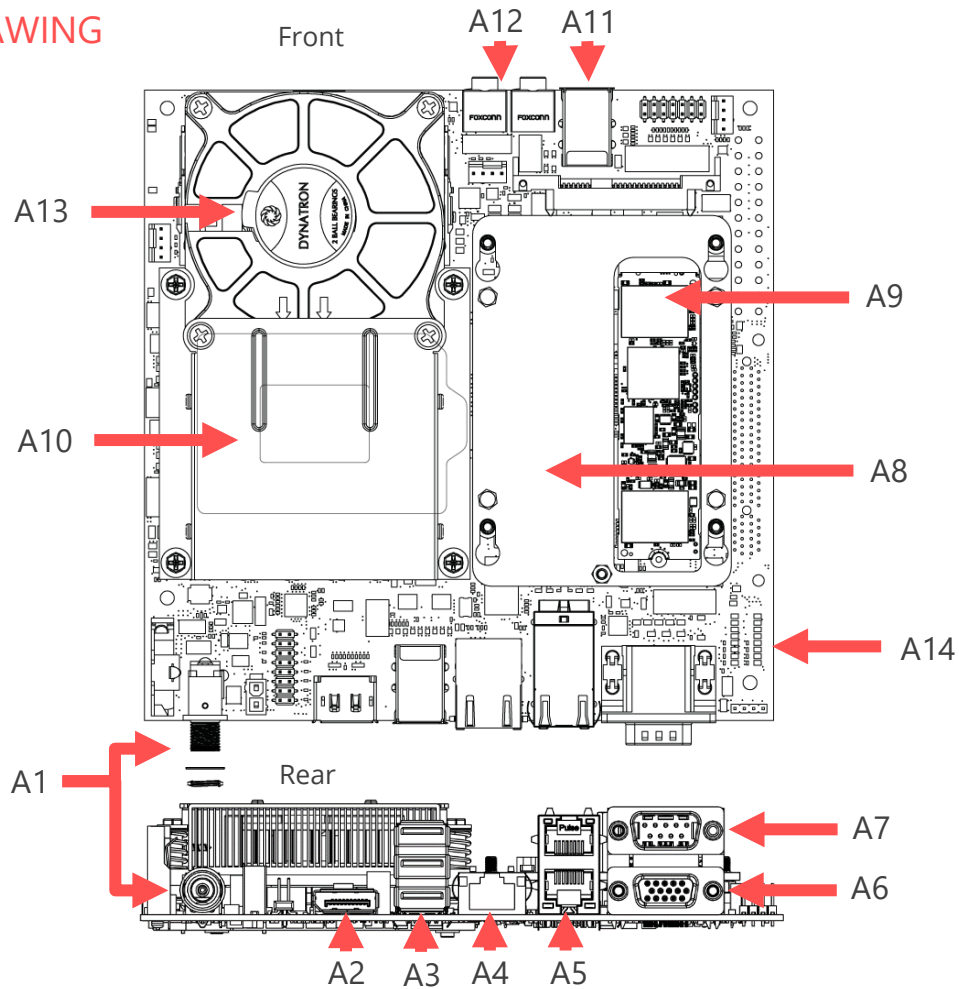
- ▶ 1pc Mounting Bracket
- ▶ 2pc Mounting Bracket



BLOCK DIAGRAM



LAYOUT DRAWING

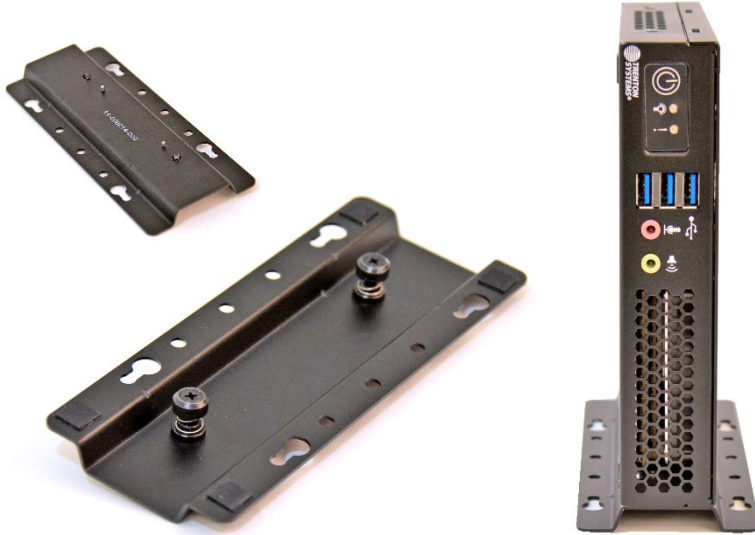


ITEM	DESCRIPTION
A1	Power Connector
A2	DisplayPort
A3	3x USB 3.0 Ports
A4	1GbE LAN Port (Management Port)
A5	2x 1GbE LAN Ports
A6	VGA Port
A7	Serial Port
A8	2.5" SATA SSD Drive
A9	M.2 NVMe x4 PCIe
A10	Heatsink over CPU
A11	3x USB 3.0 Ports
A12	Audio In/Out
A13	Fan over SODIMM slots
A14	LED Post Codes

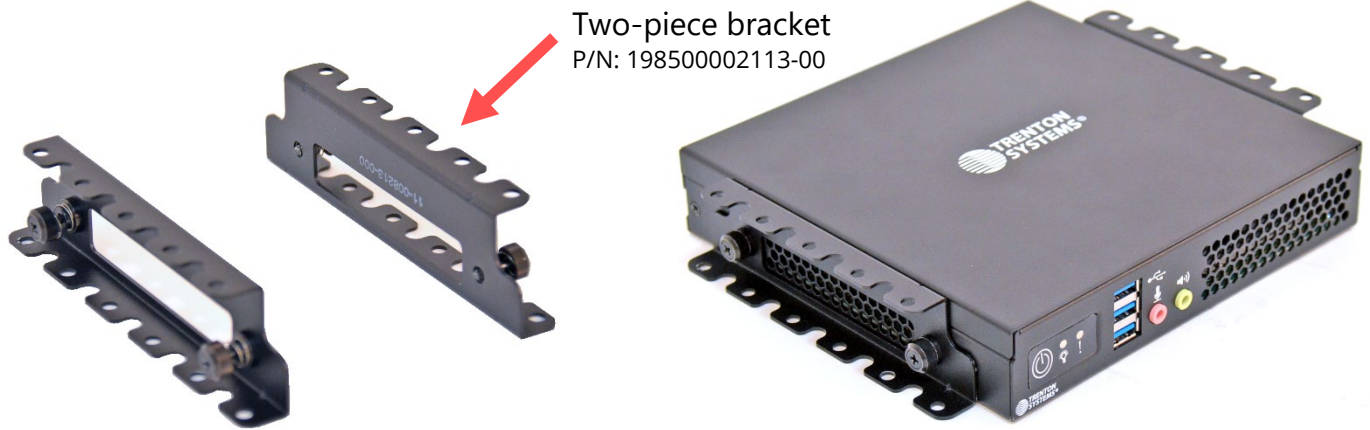


Mounting Brackets

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: 19850002114-00



Two-piece bracket
P/N: 19850002113-00

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