



Embedded Key Features

1. [Intel® Atom processor E3940 \(9W, 4C\)](#)
2. [Intel® Goldmont microarchitecture 14nm System-on-Chip](#)
3. [Up to 8GB 1866MHz DDR3L Non-ECC SO-DIMM in 1 socket](#)
4. [1 PCI-E 2.0 x2 \(in x8\), 1 Mini-PCIe \(mSATA support\) and 2 SATA 3.0](#)
5. [1 M.2 M-key with SATA](#)
6. [4 SATA 3.0 \(RAID 0, 1, 10\)](#)
7. [1 HDMI, 1 DP, 1 VGA, Intel HD Graphic 3 independent displays](#)
8. [Dual GbE LAN with Intel® i210-AT](#)
9. [2 USB 3.0 ports, 7 USB 2.0 ports, 3 COM ports, and 1 DOM connector](#)
10. [12V DC Input and ATX Power Source](#)

Links & Resources

- [Tested Memory List](#)
- [Tested HDD / SSD List](#)
- [Tested AOC List](#)
- [Motherboard Manual](#)
- [Quick Reference Guide](#)
- [Update Your BIOS](#)
- [Download the Latest Drivers and Utilities](#)
- [Download Driver CD](#)
- [OS Compatibility](#)
- [Tested M.2 List](#)
- [Optimization](#)

Specifications

Product SKUs

- **MBD-A2SAV** ■ A2SAV

Physical Stats

- **Form Factor** ■ Mini-ITX
- **Dimensions** ■ 6.7" x 6.7" (17.02cm x 17.02cm)

Processor/Cache

- **CPU** ■ Intel® Atom® Processor E3940.
■ Socket FCBGA1296 supported

System Memory

- **Memory Capacity** ■ Up to 8GB 1866MHz DDR3L Non-ECC SO-DIMM in 1 socket
- **Memory Type** ■ DDR3L up to 1866Mhz 8GB
- **DIMM Sizes** ■ 2GB, 4GB, 8GB
- **Memory Voltage** ■ 1.35V

On-Board Devices

- **Chipset** ■ System on Chip
- **SATA** ■ Marvel 88SE9230 controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,10
■ SoC controller for 2 SATA3 (6 Gbps) ports;
- **Network Controllers** ■ Dual LAN with Intel® Ethernet Controller I210-AT
- **Audio** ■ ALC 888S HD Audio
- **Graphics** ■ Intel® HD Graphics

Input / Output

- **USB** ■ 8 USB 2.0 ports (2 rear + 5 headers + 1 Type A)
■ 2 USB 3.0 ports (2 rear)
- **Video Output** ■ 1 DP (DisplayPort) port, 1 HDMI port, 1 VGA port
- **Serial Port / Header** ■ 3 COM Ports (1 rear, 2 headers)
- **Others** ■ 1x COM in RJ45, 1X COM in RS232, and 1X COM in RS485.

Expansion Slots

- **PCI-E** ■ 1 PCI-E 2.0 x2 (in x8 slot)
■ 1x Mini-PCI-E with mSATA
- **M.2** ■ Form Factor: 2242, 2280

System BIOS

- **BIOS Type** ■ AMI UEFI

Management

- **Software** ■ SuperDoctor® 5, Watchdog
- **Power Configurations** ■ ACPI Power Management

PC Health Monitoring

- **Voltage** ■ +1.8V, +12V, +3.3V, +5V, +5V standby, Monitors CPU voltages, System level control
- **FAN** ■ 2x 4-pin fan headers (up to 2 fans), Fan speed control, Low noise fan speed control, PWM fan speed control, System level control, Thermal control tachometer fan connectors
- **Temperature** ■ N/A
- **LED** ■ N/A
- **Other Features** ■ 4-pin 12v DC power connector, ACPI power management, ATX Power connector, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, M.2 NGFF connector, RoHS, System level control, WOL

Operating Environment

- **Operating Temperature Range** ■ 0°C ~ 60°C (32°F ~ 140°F)
- **Non-Operating Temperature Range** ■ -40°C - 70°C (-40°F - 158°F)
- **Operating Relative Humidity Range** ■ 8% - 90% (non-condensing)
- **Non-Operating Relative Humidity Range** ■ 10% ~ 95% (non-condensing)

Parts List

Parts List (Bulk Package)			
Name	Part Number	Qty	Description
Motherboard	MBD-A2SAV	1	A2SAV Motherboard
I/O Cables	CBL-0044L	2	57.5CM SATA FLAT S-S PBF
I/O Shield	MCP-260-00058-0N	1	Standard I/O Shield for A2SAV with EMI Gasket

Parts List (Retail Package)			
Name	Part Number	Qty	Description
Motherboard	MBD-A2SAV	1	A2SAV Motherboard
I/O Shield	MCP-260-00058-0N	1	A2SAV standard 2U I/O Shield
I/O Cables	CBL-0044L	6	57.5CM SATA FLAT S-S PBF
Motherboard	MBD-A2SAV	1	A2SAV Motherboard

Optional Parts List			
Name	Part Number	Qty	Description
1U I/O Shield	MCP-260-00068-0B	1	1U I/O Shield for A2SAV with EMI Gasket in CSE-510/505/504

Chassis (Optimized for A2SAV)

Embedded Compact	1U	2U	3U	Mid/Mini-Tower	4U/Tower
	<u>SC504-203B</u> <u>SC505-203B</u>				

● = Most optimized Chassis for SuperServer Configuration
 Blue color = Compatible
 Green color = Global SKU & Compatible
 Red dot & green color = Optimized + Global SKU

Server (Optimized for A2SAV)

Server Name
<u>SYS-5029AP-TN2</u>