



**8-Core Denverton  
Intel® Quick Assist Technology  
Quad 1GbE LAN  
IPMI**

**Key Features**

1. Intel Atom Processor C3758,  
Single Socket FCBGA1310 supported,  
CPU TDP support 25W
2. System on Chip
3. Up to 256GB Registered ECC DDR4-2400MHz,  
Up to 64GB Unbuffered ECC/Non-ECC DDR4-2400MHz; in 4 DIMM slots
4. Expansion slots:  
1 PCI-E 3.0 x4,  
M.2 Interface: PCI-E 3.0 x2 and SATA  
M.2 Form Factor: 2242, 2280  
M.2 Key: M-Key
5. 4 GbE LAN ports
6. 12 SATA3 (6 Gbps) ports
7. I/O: 1 VGA, 1 COM, TPM header
8. 1 USB 3.0 (Type-A)  
4 USB 2.0 (2 rear, 2 via headers)
9. Intel Quick Assist Technology
10. Supports 12V DC power input

**Links & Resources**

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

# Specifications

## Product SKUs

- MBD-A2SDi-8C-HLN4F
- A2SDi-8C-HLN4F

## Physical Stats

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

## Processor/Cache

- **CPU** Intel® Atom™ Processor C3758.  
■ Single Socket FCBGA1310 supported, CPU TDP support 25W
- **Cores / Cache** 8 cores, 8 threads / 16MB cache

## System Memory

- **Memory Capacity** Up to 256GB Registered ECC RDIMM and DDR4-2400MHz  
■ Up to 64GB Unbuffered ECC/non-ECC UDIMM, DDR4-2400MHz, in 4 DIMM slots
- **Memory Type** 2400/2133/1866/1600MHz
- **DIMM Sizes** 4GB, 8GB, 16GB, 32GB, 64GB
- **Memory Voltage** 1.2V
- **Error Detection** Corrects single-bit errors  
■ Detects double-bit errors (using ECC memory)

## On-Board Devices

- **Chipset** System on Chip
- **SATA** SoC controller for 12 SATA3 (6 Gbps) ports;
- **IPMI** ASPEED AST2400 BMC
- **Network Controllers** Quad LAN with Intel® C3000 SoC 1GbE
- **Graphics** Aspeed AST2400 BMC

## Input / Output

- **LAN** 4 RJ45 Gigabit Ethernet LAN ports
- **USB** 4 USB 2.0 ports (2 rear + 2 headers),  
■ 1 USB 3.0 ports (+ 1 Type A)
- **Video Output** 1 VGA port
- **Serial Port / Header** 1 COM Port (1 header)
- **TPM** TPM Header

## Expansion Slots

- **PCI-E** 1 PCI-E 3.0 x4
- **M.2** Interface: PCI-E 3.0 x2 and SATA  
■ Form Factor: M-Key 2242, 2280

## System BIOS

- **BIOS Type** AMI UEFI
- **BIOS Features** UEFI 2.4  
■ SMBIOS 2.7.1

## Management

- **Software** IPMI2.0, KVM with dedicated LAN, NMI, SuperDoctor® 5, Watchdog
- **Power Configurations** ATX Power connector  
■ +12V DC Power Input  
■ CPU thermal trip support for processor protection  
■ Power-on mode for AC power recovery

## PC Health Monitoring

- **Voltage** +12V, +3.3V, +5V, +5V standby, 1.05 (PCH), 1.2V (VDIMM), 3.3V standby, 4 -fan status, 4 fans with tachometer monitoring, Chassis intrusion header, Monitors CPU voltages, Supports system management utility, System level control, System temperature, VBAT
- **FAN** 4x 4-pin fan headers (up to 4 fans), 4 fans with tachometer monitoring, Dual Cooling Zone, Fan speed control, Pulse Width Modulated (PWM) fan connectors, Status monitoring for speed control, Support 3-pin fans (w/o speed control), System level control, Thermal control tachometer fan connectors
- **Temperature** CPU thermal trip support
- **LED** UID/Remote UID
- **Other Features** 12V DC or ATX Power Source, 4-pin 12v DC power connector, ATX Power connector, Chassis intrusion detection, Chassis intrusion header, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, Dual Cooling Zones, Innovation Engine, Intel® QuickAssist Technology, M.2 NGFF connector, RoHS, SDDC, System level control, UID, WOL

## Operating Environment

- **Operating Temperature Range** 0°C ~ 60°C (32°F ~ 140°F)
- **Non-Operating Temperature Range** -40°C - 85°C (-40°F - 185°F)
- **Operating Relative Humidity Range** 10% ~ 85% (non-condensing)
- **Non-Operating Relative Humidity Range** 10% ~ 95% (non-condensing)

# Parts List

Parts List (Bulk Package)			
Name	Part Number	Qty	Description
Motherboard	MBD-A2SDi-8C-HLN4F	1	A2SDi-8C-HLN4F Motherboard
SATA Cables	CBL-0044L	2	57.5CM SATA FLAT S-S PBF
I/O Shield	MCP-260-00084-0N	1	Standard I/O Shield for A2SDi-8C-HLN4F

Parts List (Retail Package)			
Name	Part Number	Qty	Description
Motherboard	MBD-A2SDi-8C-HLN4F	1	A2SDi-8C-HLN4F Motherboard
QRG	MNL-1951-QRG	1	Motherboard Quick Reference Guide
SATA Cables	CBL-0044L	4	57.5CM SATA FLAT S-S PBF
SATA Cables	CBL-SAST-0616	2	MINI SAS HD-4 SATA, INT, 50CM, 50CM SB, 30AWG
I/O Shield	MCP-260-00084-0N	1	Standard I/O Shield for A2SDi-8C-HLN4F

Optional Parts List			
Name	Part Number	Qty	Description
1U I/O Shield	MCP-260-00085-0B	--	1U I/O Shield for A2SDi-8C-HLN4F in SC505/504 Chassis
1U I/O Shield	MCP-260-00079-0N	--	1U I/O Shield for A2SDi-8C-HLN4F in SC813/512 Chassis

## Chassis (Optimized for A2SDi-8C-HLN4F)

Embedded Compact	1U	2U	3U	Mid/Mini-Tower	4U/Tower
	<a href="#">SCE300</a> <a href="#">SC504-203B</a> <a href="#">SC505-203B</a>				

● = Most optimized Chassis for SuperServer Configuration  
● = Compatible  
● = Global SKU & Compatible  
● & ● = Optimized + Global SKU

## Server (Optimized for A2SDi-8C-HLN4F)

Server Name
<a href="#">SYS-5019A-FTN4</a>
<a href="#">SYS-E300-9A-8C</a>