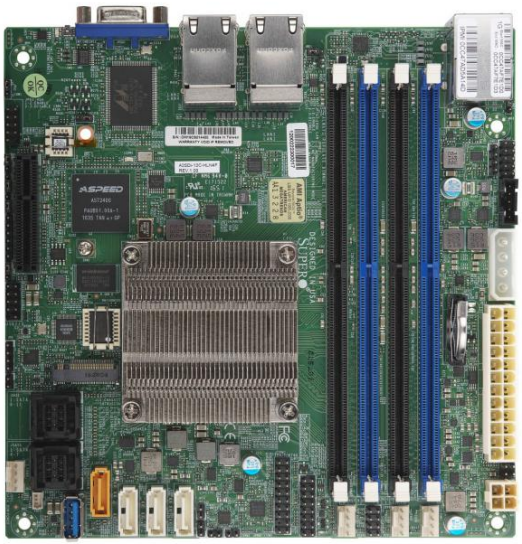
A2SDi-16C-HLN4F



16-Core Denverton
Quad 1GbE LAN
IPMI

Key Features

1. Intel Atom Processor C3955,
   Single Socket FCBGA1310 supported,
   CPU TDP support 32W
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. 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-16C-HLN4F	▪ A2SDi-16C-HLN4F

Physical Stats

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

Processor/Cache

CPU	▪ Intel® Atom□ Processor C3955. ▪ Single Socket FCBGA1310 supported, CPU TDP support 32W
Cores / Cache	▪ 16 cores, 16 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, 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-16C-HLN4F	1	A2SDi-16C-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-16C-HLN4F

Parts List (Retail Package)			
Name	**Part Number**	**Qty**	**Description**
Motherboard	MBD-A2SDi-16C-HLN4F	1	A2SDi-16C-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-16C-HLN4F

Optional Parts List			
Name	**Part Number**	**Qty**	**Description**
1U I/O Shield	MCP-260-00085-0B	--	1U I/O Shield for A2SDi-16C-HLN4F in SC505/504 Chassis
1U I/O Shield	MCP-260-00079-0N	--	1U I/O Shield for A2SDi-16C-HLN4F in SC813/512 Chassis

Chassis (Optimized for A2SDi-16C-HLN4F)

Embedded Compact	1U	2U	3U	Mid/Mini-Tower	4U/Tower
	SCE300 SC504-203B SC505-203B				

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