



**Embedded
8-Core Parker Ridge
Intel QAT
Quad 1GbE LAN
IPMI
Oculink**

Key Features

- Intel Atom Processor C5325,
- Single Socket FCBGA-2106 supported,
- CPU TDP support 41W
- System on Chip
- Intel Quick Assist Technology
- Up to 128GB ECC RDIMM DDR4-2933MHz, in 2 DIMM slots
- Expansion slots:
 - 1 PCIe 3.0 x2 (in x8 slot)
 - 4 GbE LAN ports
- Supports 12V DC power input
- Up to 5 SATA3 ports from SoC (1 via SATA port, 4 via Oculink)
- I/O: 1 VGA, 1 COM, TPM 2.0 onboard and header both
- 2 USB 3.0 (Type-A on rear)
- 2 USB 2.0 (via headers)
- M.2 Interface:**
 - 1x M.2 B-Key 3052 w/PCIe 3.0 & SATA3 & USB3.0
 - 1x M.2 M-Key 2280 w/PCIe3.0

Specifications

Product SKUs	MBD-A3SPI-8C-HLN4F
Physical Stats	
Form Factor	Mini-ITX
Dimension	6.7" x 7.1" (17.02cm x 18.3cm)
Processor	
CPU	Intel® Atom® Processor C5325 Single Socket FCBGA-2106 supported, CPU TDP supports Up to 41W TDP
Core	Up to 8 cores / 9MB Cache
System Memory	
Memory Capacity	2 DIMM slots Up to 128GB ECC RDIMM, DDR4-2933MHz
Memory Type	2933/2666/2400 MT/s ECC DDR4 RDIMM
DIMM Sizes	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 1 SATA3 (6 Gbps) ports
IPMI	ASPEED AST2500 BMC
Graphics	1 Aspeed AST2500 BMC port(s)
Network Controllers	Quad LAN with Intel® C5000 SoC, 1GbE
Input / Output	
LAN	4 RJ45 Gigabit Ethernet LAN ports
USB	2 USB 2.0 port(s) (2 via header) 2 USB 3.0 port(s) (2 rear)
Video Output	1 VGA D-Sub Connector port(s)
Serial Port	1 COM Port(s) (1 header)
DOM	1 SuperDOM (SATA DOM) (Disk on Module) ports
TPM	1 TPM Header & Chip both
Others	1 8-bit GPIO header 1 Oculink

Expansion Slots	
PCIe	1 PCIe 3.0 x2 (in x8 slot)
M.2	M.2 Interface: 1 PCIe 3.0 x4; 1 SATA/PCIe 3.0 x2/USB 3.0 Form Factor: 2280, 3052 Key: M-Key, B-Key
System BIOS	
BIOS Type	32MB AMI UEFI
BIOS Features	UEFI 2.7 SMBIOS 3.0 or later ACPI 6.0 or later
Management Software	
Redfish API	(/manuals/other/RedfishRefGuide.pdf), Supermicro Server Manager (SSM) (/solutions/SMS_SSM.cfm), Supermicro Update Manager (SUM) (/solutions/SMS_SUM.cfm), SuperDoctor® 5 (/en/solutions/management-software/superdoctor), SuperDiagnostics Offline (/en/solutions/management-software/super-diagnostics-offline), KVM with dedicated LAN (/manuals/other/BMC_IPMI_X13_H13.pdf#page=112), IPMI 2.0 (/solutions/IPMI.cfm)
System Management Software	IPMI (Intelligent Platform Management Interface) v1.5 / 2.0 with KVM support, SuperDoctor® 5
Power Configurations	ATX Power connector, +12V DC Power Input, CPU thermal trip support for processor protection, Power-on mode for AC power recovery
Security Hardware	Trusted Platform Module (TPM) 2.0
Features	Cryptographically Signed Firmware Secure Boot Secure Firmware Updates System Lockdown
PC Health Monitoring Voltage	VBAT, System level control, Supports system management utility, Monitors CPU voltages, Chassis intrusion header, 4-fan status, 3.3V standby, 1.2V (VDDIMM), 1.05 (PCH), +3V standby, +5V, +3.3V, +12V
LED	UID/Remote UID
Temperature	CPU thermal trip support
FAN	4x 4-pin fan headers (up to 4 fans) Thermal control tachometer fan connectors, Fan speed control, Dual Cooling Zone, 4 fans with tachometer monitoring, Status monitoring for speed control, Pulse Width Modulated (PWM) fan connectors, Support 3-pin fans (w/o speed control)
Other Features	UID, RoHS, M.2 NGFF connector, Chassis intrusion header, ATX Power connector, ACPI power management, 8-pin 12V DC power connector, 12V DC or ATX Power Source, Intel® QuickAssist Technology
Operating Environment	
Operating Temperature Range	0°C - 80°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

Standard Parts (Bulk Package)

I/O Shield	
Part Number	MCP-260-00173-0N
Qty	1
Description	STD I/O Shield for A3SPI with EMI Gasket

SATA cable	
Part Number	CBL-0044L • eStore (https://store.supermicro.com/supermicro-sata-flat-straight-straight-57-5cm-cable-cbl-0044l.html).
Qty	1
Description	57.5CM SATA FLAT S-S PBF

Standard Parts (Retail Package)

I/O Shield	
Part Number	MCP-260-00173-0N
Qty	1
Description	STD I/O Shield for A3SPI with EMI Gasket

OCuLink to SATA Cable	
Part Number	CBL-SAST-0933 • eStore (https://store.supermicro.com/supermicro-50cm-oculink-to-4-sata-cable-cbl-sast-0933.html).
Qty	1
Description	SATA cable

QRG	
Part Number	MNL-2467-QRG
Qty	1
Description	Motherboard Quick Reference Guide

SATA cable	
Part Number	CBL-0044L • eStore (https://store.supermicro.com/supermicro-sata-flat-straight-straight-57-5cm-cable-cbl-0044l.html).
Qty	1
Description	57.5CM SATA FLAT S-S PBF

Optional Parts

IU I/O Shield	
Part Number	MCP-260-00175-0B
Qty	-
Description	IU E300/E302/E200 I/O Shield for A3SPI with EMI Gasket