



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

**Key Features**

- System on Chip
- Intel Atom Processor C5325,
- Single Socket FCBGA-2106 supported,
- CPU TDP support 41W
- Intel Quick Assist Technology
- Up to 128GB ECC RDIMM DDR4-2933MHz, in 2 DIMM slots
- 2 SFP+ ports and 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
- Expansion slots:
- 1 PCIe 3.0 x2 (in x8 slot)

**Optimized Servers**

[SYS-E200-12A-8C \(/en/products/system/iot/box\\_pc/sys-e200-12a-8c\)](#)    [SYS-E302-12A-8C \(/en/products/system/iot/compact/sys-e302-12a-8c\)](#)

**Specifications**

<b>Product SKUs</b> <b>MBD-A3SPI-8C-LN6PF</b>
<b>Physical Stats</b> <b>Form Factor</b> Mini-ITX
<b>Dimension</b> 6.7" x 7.1" (17.02cm x 18.3cm)
<b>Processor</b> <b>CPU</b> Intel® Atom® Processor C5325 Single Socket FCBGA-2106 supported, CPU TDP supports Up to 41W TDP
<b>Core</b> Up to 8 cores / 9MB Cache
<b>System Memory</b> <b>Memory Capacity</b> 2 DIMM slots Up to 128GB ECC RDIMM, DDR4-2933MHz
<b>Memory Type</b> 2933/2666/2400 MT/s ECC DDR4 RDIMM
<b>DIMM Sizes</b> 8GB, 16GB, 32GB, 64GB
<b>Memory Voltage</b> 1.2V
<b>Error Detection</b> Corrects single-bit errors Detects double-bit errors (using ECC memory)
<b>On-Board Devices</b> <b>Chipset</b> System on Chip
<b>SATA</b> SoC controller for 1 SATA3 (6 Gbps) ports
<b>IPMI</b> ASPEED AST2500 BMC
<b>Graphics</b> 1 Aspeed AST2500 BMC port(s)
<b>Network Controllers</b> Quad LAN with Intel® C5000 SoC, 1GbE Dual LAN with SoC
<b>Input / Output</b> <b>LAN</b> 4 RJ45 Gigabit Ethernet LAN ports 2 SFP+
<b>USB</b> 2 USB 2.0 port(s) (2 via header) 2 USB 3.0 port(s) (2 rear)
<b>Video Output</b> 1 VGA D-Sub Connector port(s)
<b>Serial Port</b> 1 COM Port(s) (1 header)
<b>DOM</b> 1 SuperDOM (/SATADOM/) (Disk on Module) ports
<b>TPM</b> 1 TPM Header & Chip both
<b>Others</b> 1.8-bit GPIO header 1 Oculink

<b>Expansion Slots</b> <b>PCIe</b> 1 PCIe 3.0 x2 (in x8 slot)
<b>M.2</b> 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
<b>System BIOS</b> <b>BIOS Type</b> 32MB AMI UEFI
<b>BIOS Features</b> UEFI 2.7 SMBIOS 3.0 or later ACPI 6.0 or later
<b>Management Software</b> <b>Redfish API</b> <a href="#">(/manuals/other/RedfishRefGuide.pdf)</a> , <b>Supermicro Server Manager (SSM)</b> ( <a href="#">/solutions/SMS_SSM.cfm</a> ), <b>Supermicro Update Manager (SUM)</b> ( <a href="#">/solutions/SMS_SUM.cfm</a> ), <b>SuperDoctor® 5</b> ( <a href="#">/en/solutions/management-software/superdoctor</a> ), <b>SuperDiagnostics Offline</b> ( <a href="#">/en/solutions/management-software/super-diagnostics-offline</a> ), <b>KVM with dedicated LAN</b> ( <a href="#">/manuals/other/BMC_IPMI_X13_H13.pdf#page=112</a> ), <b>IPMI 2.0</b> ( <a href="#">/solutions/IPMI.cfm</a> )
<b>System Management Software</b> IPMI (Intelligent Platform Management Interface) v1.5 / 2.0 with KVM support, SuperDoctor® 5
<b>Power Configurations</b> ATX Power connector, +12V DC Power Input, CPU thermal trip support for processor protection, Power-on mode for AC power recovery
<b>Security Hardware</b> Trusted Platform Module (TPM) 2.0
<b>Features</b> Cryptographically Signed Firmware Secure Boot Secure Firmware Updates System Lockdown
<b>PC Health Monitoring Voltage</b> VBAT, System level control, Supports system management utility, Monitors CPU voltages, Chassis intrusion header, 4 fan status, 3.3V standby, 1.2V (VDDMM), 1.05 (PCH), +5V standby, +5V, +3.3V, +12V
<b>LED</b> UID/Remote UID
<b>Temperature</b> CPU thermal trip support
<b>FAN</b> 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)
<b>Other Features</b> 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
<b>Operating Environment</b> <b>Operating Temperature Range</b> 0°C - 60°C (32°F - 140°F) <b>Non-Operating Temperature Range</b> -40°C - 85°C (-40°F - 185°F) <b>Operating Relative Humidity Range</b> 10% - 85% (non-condensing) <b>Non Operating Relative Humidity Range</b> 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 <a href="https://store.supermicro.com/supermicro-sata-flat-straight-straight-57-5cm-cable-cbl-0044l.html">/https://store.supermicro.com/supermicro-sata-flat-straight-straight-57-5cm-cable-cbl-0044l.html</a>
Qty	1
Description	57.5CM SATA FLAT S-SPBF

**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 <a href="https://store.supermicro.com/supermicro-50cm-oculink-to-4-sata-cable-cbl-sast-0933.html">/https://store.supermicro.com/supermicro-50cm-oculink-to-4-sata-cable-cbl-sast-0933.html</a>
Qty	1
Description	SATA Cables

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

SATA cable	
Part Number	CBL-0044L • eStore <a href="https://store.supermicro.com/supermicro-sata-flat-straight-straight-57-5cm-cable-cbl-0044l.html">/https://store.supermicro.com/supermicro-sata-flat-straight-straight-57-5cm-cable-cbl-0044l.html</a>
Qty	1
Description	57.5CM SATA FLAT S-SPBF

**Optional Parts**

I/O Shield	
Part Number	MCP-260-00175-0B
Qty	-
Description	1U E300/E302/E200 I/O Shield for A3SPI with EMI Gasket