

## BH12SSi-M25 (For A+ SuperBlade Only)



### Links & Resources

- ▶ [Tested Memory List](#)
- ▶ [Tested HDD List](#)
- ▶ [Tested M.2 List](#)
- ▶ [Tested AOC List](#)
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### Key Features

1. Single AMD EPYC™ 7003/7002 Series Processor  
(The latest AMD EPYC™ 7003 Series Processor with AMD 3D V-Cache™ Technology requires BIOS version 2.3 or newer)
2. 2TB Registered ECC DDR4 3200MHz SDRAM in 8 DIMMs
3. Expansion slots:
  - 1 PCI-E 4.0 x16 Proprietary Slot to Mezzanine (EDR/HDR/25G)
  - M.2 Interface:** 2 PCI-E 4.0 x4
  - M.2 Form Factor:** 22110
  - M.2 Key:** M-key
4. 2 SATA3/NVMe (hybrid)  
or 2 SAS3/NVMe (hybrid),  
2 M.2
5. 2x 25GbE LAN via Mellanox CX4
6. ASPEED AST2500 BMC graphics
7. 1 TPM 2.0 (header)



Note: Image above may show a varied configuration of optional parts. Please refer to parts list for standard parts included.

# Specifications

## Product SKUs

<b>MBD-BH12SSi-M25</b>	<ul style="list-style-type: none"> <li>BH12SSi-M25 (for SuperBlade SKUs only)</li> </ul>
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## Physical Stats

<b>Form Factor</b>	<ul style="list-style-type: none"> <li>Proprietary</li> </ul>
<b>Dimensions</b>	<ul style="list-style-type: none"> <li>6.3" x 11" (16cm x 27.94cm)</li> </ul>

## Processor/Chipset

<b>CPU</b>	<ul style="list-style-type: none"> <li>Single AMD EPYC™ 7003/7002 Series Processor (The latest AMD EPYC™ 7003 Series Processor with AMD 3D V-Cache™ Technology requires BIOS version 2.3 or newer)</li> <li>Socket SP3</li> <li>Supports CPU TDP up to 280W</li> </ul>
<b>Cores</b>	<ul style="list-style-type: none"> <li>Up to 64 Cores</li> </ul>
<b>Chipset</b>	<ul style="list-style-type: none"> <li>System on Chip</li> </ul>

## System Memory

<b>Memory Capacity</b>	<ul style="list-style-type: none"> <li>8 DIMM slots</li> <li>Supports up to 2TB Registered ECC DDR4 3200MHz SDRAM</li> <li>8-channel memory bus</li> </ul>
<b>Memory Type</b>	<ul style="list-style-type: none"> <li>DDR4 3200 MHz Registered ECC, 288-pin gold-plated DIMMs</li> </ul>
<b>DIMM Sizes</b>	<ul style="list-style-type: none"> <li>8GB, 16GB, 32GB, 64GB, 128GB, 256GB</li> </ul>
<b>Memory Voltage</b>	<ul style="list-style-type: none"> <li>1.2V</li> </ul>
<b>Error Detection</b>	<ul style="list-style-type: none"> <li>Corrects single-bit errors</li> <li>Detects double-bit errors (using ECC memory)</li> </ul>

## On-Board Devices

<b>SATA</b>	<ul style="list-style-type: none"> <li>Provided via SATA3 Mezzanine card</li> </ul>
<b>SAS</b>	<ul style="list-style-type: none"> <li>Provided via SAS3 Mezzanine card</li> </ul>
<b>IPMI</b>	<ul style="list-style-type: none"> <li>Support for Intelligent Platform Management Interface v.2.0 <b>via Chassis Management Module (CMM)</b></li> </ul>
<b>Network Controllers</b>	<ul style="list-style-type: none"> <li>Dual 25GbE LAN via Mellanox CX4</li> </ul>
<b>VGA</b>	<ul style="list-style-type: none"> <li>ASPEED AST2500 BMC</li> </ul>

## Input / Output

<b>SATA/SAS/NVMe Hybrid</b>	<ul style="list-style-type: none"> <li>2 SATA3/NVMe with SATA3 mezzanine card</li> <li>or 2 SAS3/NVMe with SAS3 mezzanine card</li> </ul>
<b>LAN</b>	<ul style="list-style-type: none"> <li>2x 25GbE Ethernet ports</li> </ul>
<b>TPM</b>	<ul style="list-style-type: none"> <li>1 TPM 2.0 header</li> </ul>

## Expansion Slots

<b>PCI-Express</b>	<ul style="list-style-type: none"> <li>1 PCI-E 4.0 x16 Proprietary Slot to Mezzanine (EDR/HDR/25G)</li> </ul>
<b>M.2</b>	<ul style="list-style-type: none"> <li>Interface: 2 PCI-E 4.0 x4</li> <li>Form factor: 22110</li> <li>Key: M-key</li> </ul>

## Blade Module(s) ( with BH12SSi-M25 )

<b>Model(s)</b>	<ul style="list-style-type: none"> <li><a href="#">SBA-4114S-C2N</a></li> <li><a href="#">SBA-4114S-T2N</a></li> <li><a href="#">SBA-4119SG</a></li> <li><a href="#">SBA-4119S-C2N</a></li> <li><a href="#">SBA-4119S-T2N</a></li> </ul>
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## System BIOS

<b>BIOS Type</b>	<ul style="list-style-type: none"> <li>AMI 256Mb SPI Flash EEPROM</li> </ul>
<b>BIOS Features</b>	<ul style="list-style-type: none"> <li>Plug and Play (PnP)</li> <li>DMI 2.3</li> <li>PCI 2.2</li> <li>ACPI 5.1</li> <li>USB Keyboard Support</li> <li>SMBIOS 3.1.1</li> </ul>

## Management

<b>Software</b>	<ul style="list-style-type: none"> <li><a href="#">Super Doctor 5</a></li> <li>Watch Dog</li> <li>NMI</li> <li><a href="#">SUM</a></li> <li><a href="#">IPMI 2.0</a>, KVM with dedicated LAN</li> </ul>
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<b>Power Configurations</b>	<ul style="list-style-type: none"> <li>ACPI Power Management</li> <li>Power-on mode control for AC power loss recovery</li> </ul>
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## PC Health Monitoring

<b>CPU</b>	<ul style="list-style-type: none"> <li>Monitors CPU Core Voltages, +12V standby</li> <li>CPU switching voltage regulator</li> <li>Supports system management utility</li> <li>VBAT</li> </ul>
<b>LED</b>	<ul style="list-style-type: none"> <li>Power LED</li> <li>UID / KVM LED</li> <li>Network Activity LED</li> <li>Fault LED</li> </ul>

## Operating Environment / Compliance

<b>Environmental Specifications</b>	<ul style="list-style-type: none"> <li>Operating Temperature: 10°C to 35°C (50°F to 95°F)</li> <li>Non-operating Temperature: -40°C to 70°C (-40°F to 158°F)</li> <li>Operating Relative Humidity: 8% to 90% (non-condensing)</li> <li>Non-operating Relative Humidity: 5% to 95% (non-condensing)</li> </ul>
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## Parts List

### Parts List

	Part Number	Qty	Description
<b>BH12SSi-M25</b>	MBD-BH12SSi-M25-P	1	BH12SSi-M25 Motherboard

### Optional Parts List

	Part Number	Qty	Description
<b>Add-on Card / Module</b>	AOM-BPNIO-SNEA-P	-	AOM card for 4U SuperBlade, 2xSATA/NVMe, RoHS,RoHS
	AOM-BPNIO-SCEA-P	-	AOM card for 4U SuperBlade, 2xSAS/NVMe, RoHS,RoHS
<b>TPM security module</b>	<u>AOM-TPM-9665V</u>	-	TPM 2.0 module with Infineon 9665, RoHS/REACH,PBF;
	<u>AOM-TPM-9665V-S</u>	-	TPM 2.0 module with Infineon 9665, RoHS/REACH,PBF; Provisioned for TXT