Advanced 25Gb Ethernet controller in Supermicro Advanced I/O Module (AIOM)
Supermicro® Advanced I/O Modules (AIOM) is the latest form factor designed to provide a wide range of networking options as well as other I/O technologies. The AOC-A25G-b2S is one of the most feature rich and low power consumption 25GbE controllers in the market. Based on the Broadcom® BCM57414 with features such as VXLAN, NVGRE, RoCE, and NIC Partitioning, it provides unparalleled density, performance, and functionality. The Supermicro® AOC-A25G-b2S is the most versatile 25GbE controller in the market and an excellent choice to enhance network connectivity in Data Centers and Enterprise environments.

Key Features:
- Advanced I/O Module (AIOM) Form Factor
- Broadcom® BCM57414 25GbE controller
- Dual SFP28 connectors
- RDMA over Converged Ethernet (RoCE)
- VXLAN, NVGRE and Geneve
- NIC Partitioning (NPAR)
- Broadcom® TruFlow™ flow processing engine
- Asset Management Features with thermal sensor
- NC-SI for Remote Management
- RoHS compliant 6/6

Specifications
- General:
  - Advanced I/O Module (AIOM) Form Factor
  - Broadcom® BCM57414 25GbE controller
  - 2 SFP28 ports
- Networking Features:
  - Jumbo frames (up to 9.6 KB)
  - IEEE 802.3x flow control
  - IEEE 1588 and Time Sync
  - IEEE 802.3ad Link Aggregation
  - Virtual LANs- 802.1q VLAN tagging
  - Configurable Flow Acceleration
  - PXE, UEFI, and iSCSI remote boot
- Stateless Offload Features:
  - TCP, UDP and IP checksum offloads
  - IPv4 and IPv6 offloads
  - Large Send Offload
  - Receive Segment Coalescing
  - TCP Segmentation Offload
  - Large Receive Offload
  - Receive Side Scaling (RSS)
  - Transmit Side Scaling (TSS)
  - Accelerate Received Flow Steering (RFS)
- NIC Partitioning (NPAR):
  - 16 Physical Functions
  - QoS per partition
  - Partitioning control via sideband communication
  - Up to 64 MAC/VLAN filter per partition
  - Per partition statistics support
  - Stateless offloads configuration per partition
  - VEB/VEPA support
- Virtualization Features:
  - NetQueue, VMQueue, and Multisqueue
  - SR-IOV with up to 128 Virtual Functions (VF)
  - VXLAN, NVGRE, and Geneve
  - Edge Virtual Bridging (EVB)
- RDMA over Converged Ethernet (RoCE):
  - RoCEv1 and RoCEv2
  - Data Center Bridging with RoCE
- Flow Processing:
  - Exact/Wildcard Match Flow Lookup
  - VLAN insertion/deletion
  - NAT/NAPT/Mirroring
- Data Center Bridging:
  - Priority-based flow control (PFC; IEEE 802.1Qbb)
  - Enhanced transmission selection (ETS; IEEE 802.1Qau)
  - Quantized Congestion Notification (QCN; IEEE 802.1Qau)
  - Data Center Bridging Capability eXchange (DCBX; IEEE 802.1Qaz)
  - 8 traffic classes per port; fully DCB compliant per 802.1Qbb
- Power Savings:
  - ACPI compliant power management
  - PCI Express Active State Power Management (ASPM)
  - Ultra-low-power mode
  - Pass-through Energy Efficient Ethernet (IEEE 802.3az-2010)
- Power Consumption:
  - Maximum: 7.7W
- Operating Conditions:
  - Storage temperature: -40°C to 70°C (-40°F to 158°F)
  - Storage humidity: 90% non-condensing relative humidity at 35°C
- Physical Dimensions:
  - Card PCB dimensions: 76mm x 115mm (W x D)

Please note that this product is sold only as part of an integrated solution with Supermicro server systems.

Available SKUs

<table>
<thead>
<tr>
<th>Product Part Number</th>
<th>Bracket Included</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AOC-A25G-b2S</td>
<td>BKT-0165L</td>
<td>2-port 25 Gigabit Ethernet Adapter with a 1U height bracket</td>
</tr>
<tr>
<td>AOC-A25G-b2SM</td>
<td>BKT-0166L</td>
<td>2-port 25 Gigabit Ethernet Adapter with a 0.5U height bracket</td>
</tr>
</tbody>
</table>

For the most current product information, visit: www.supermicro.com