The AMC217 is a single-width, full-height AdvancedMC™ (AMC) based on the AMC.2 specification. The AMC217 provide 8 front panel 10/100/1000 Mbit ethernet ports via RJ-45. It has two additional GbE ports that are routed to the rear per the AMC.2 specification.

The switch is managed via http and supports a rich set of features such as VLAN, Spanning tree, QoS, Mirroring, etc. VadaTech can modify this product to meet special customer requirements without NRE (minimum order placement is required).

**KEY FEATURES**

- AMC.2 compliant
- Managed Layer two switch
- Eight 10/100/1000 Mbit Ethernet ports
- Front I/O via RJ-45
- Two GbE routed to the rear
- Support up to 8K MAC address
- 4K IEEE 802.1Q VLANs
- VLAN-based packet filtering
- Packet classification using IEEE802.1p QoS
- 9K Jumbo frames
- Spanning tree
- Mirroring
- QoS
- SNMP and RMON
- OS support for:
  - OS independent
## SPECIFICATIONS

### Architecture

<table>
<thead>
<tr>
<th>Physical</th>
<th>Dimensions</th>
<th>Single-Width, Full-Height Front Panel</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Width</td>
<td>2.89 in. (73.5 mm)</td>
</tr>
<tr>
<td></td>
<td>Depth</td>
<td>7.11 in. (180.6 mm)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type</th>
<th>AMC Ethernet</th>
<th>GbE switch</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>10 ports</td>
<td></td>
</tr>
<tr>
<td></td>
<td>GbE per port</td>
<td></td>
</tr>
</tbody>
</table>

### Standards

<table>
<thead>
<tr>
<th>AMC</th>
<th>Type</th>
<th>AMC.2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Module Management</td>
<td>IPMI</td>
<td>IPMI Version 2.0</td>
</tr>
<tr>
<td>1000BASE-BX</td>
<td>Ports</td>
<td>0 and 1</td>
</tr>
</tbody>
</table>

### Configuration

<table>
<thead>
<tr>
<th>Power</th>
<th>AMC217</th>
<th>8W</th>
</tr>
</thead>
</table>

### Environmental

| Temperature | Operating Temperature: 0° to 65° C (Air flow requirement is to be greater than 200 LFM) |
|            | Storage Temperature: -40° to +90° C                                               |
| Vibration  | 1G, 5-500Hz each axis                                                              |
| Shock      | 30Gs each axis                                                                      |
| Relative Humidity | 5 to 95 percent, non-condensing                                                   |

### Front Panel

<table>
<thead>
<tr>
<th>Interface Connectors</th>
<th>RJ-45</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEDs</td>
<td>IPMI Management Control</td>
</tr>
<tr>
<td>Mechanical</td>
<td>Hot Swap Ejector Handle</td>
</tr>
<tr>
<td>Software Support</td>
<td>Operating Systems</td>
</tr>
<tr>
<td></td>
<td>Independent</td>
</tr>
</tbody>
</table>

### Other

<table>
<thead>
<tr>
<th>MTBF</th>
<th>MIL Handbook 217-F &gt; TBD Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Certifications</td>
<td>Designed to meet FCC, CE and UL certifications where applicable</td>
</tr>
<tr>
<td>Standards</td>
<td>VadaTech is certified to both the ISO9001:2000 and AS9100B:2004 standards</td>
</tr>
<tr>
<td>Compliance</td>
<td>RoHS and NEBS</td>
</tr>
<tr>
<td>Warranty</td>
<td>Two (2) years.</td>
</tr>
</tbody>
</table>

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10 Port AMC Managed Layer Two Switch

**FIGURE 1.** AMC217 Functional Block Diagram

**FIGURE 2.** AMC217 Front Panel
Managed Layer Two GbE

The GbE layer two managed switch fabric routes eight GbE to front panel and two to the rear.

Key features:

- Configuration
  - Ethernet/IEEE 802.3 Packet size (64 bytes to 1522 bytes)
  - Jumbo packets up to 9216 bytes

- L2 Switching
  - Supports up to 8K MAC address
  - Line rate switching for all packet sizes
  - Independent VLAN learning
  - VLAN flooding for broadcast and DLF packets
  - Hardware-based address learning
  - Six CPU-managed learning (CML) modes per port
  - Hardware-and-software-based aging
  - Software insertion/deletion/lookups of the L2 table
  - Same port bridging supported
  - Station movement control

- L2 Multicast
  - 4K VLANs
  - Protocol-based VLANs
  - IEEE 802.1p
  - IEEE 802.1Q
  - Independent VLAN learning (IVL)
  - Ingress filtering for IEEE 802.10 VLAN security
  - VLAN-based packet filtering
  - MAC-based VLAN

- Source Port Filtering
  - Egress port block masks
  - Trunk group blocking masks

- Storm Control Per-Port:
  - Unknown unicast packet rate control
  - Broadcast packet rate control
  - Multicast packet rate control

- Spanning Tree:
  - IEEE 802.1D spanning tree protocol (single spanning tree per port)
  - IEEE 802.1s for multi spanning trees
  - IEEE 802.1w rapid spanning tree protocol-delete and/or replace per:
    - Port
    - VLAN
    - Port, per VLAN
  - Spanning tree protocol packets detected and sent to the CPU

- Double-Tagging:
  - Unqualified learning/forwarding
  - IEEE 802.1 Q-in-Q

- Mirroring
  - Ingress/egress mirroring support
  - Mirror-to-port receives the unmodified packet for ingress mirroring
  - Mirror-to-port receives the modified packet for egress mirroring

- Content Aware Filter Processing
  - Intelligent Protocol Aware processor with backward-compatible, byte-based classification option

- QoS Features
  - Four QoS queues per port
  - Per-port, per QoS drop profiles
  - Port level shaping
  - Traffic shaping available on CPU queues
  - Programmable priority to QoS queue mapping
  - Provides two levels of drop precedence per queue
  - Strict Priority (SP), Weighted Round Robin (WRR), and Deficit round Robin (DRR) mechanisms for shaped queue selection

- DSCP
  - DSCP-based prioritization
  - Back pressure metering
  - DSCP to IEEE 802.1p mapping

- Port Security
  - Per port blocking
  - Supports IEEE 802.1x
  - MAC address blocking

- DoS Prevention
  - Denial of Service detection/prevention

- Management Information Base
  - SMON MIB, IETF RFC 2613
  - RMON statistics group, IETF RFC 2819
  - SNMP interface group, IETF RFC 1213, 2836
  - Ethernet-like MIB, IETF RFC 1643
  - Ethernet MIB, IEEE 802.3u
  - Bridge MIB, IETF RFC 1493

- Metering granuality from 64 Kbps to 1Gbps
- Multiple look-ups per packet
- Metering support on ingress ports and CPU queues

- Programmable meters allows policing of flows
- DSCP-based prioritization
- Back pressure metering
- DSCP to IEEE 802.1p mapping

- Denial of Service detection/prevention
- SMON MIB, IETF RFC 2613
- RMON statistics group, IETF RFC 2819
- SNMP interface group, IETF RFC 1213, 2836
- Ethernet-like MIB, IETF RFC 1643
- Ethernet MIB, IEEE 802.3u
- Bridge MIB, IETF RFC 1493
**ORDERING OPTIONS**

<table>
<thead>
<tr>
<th>AMC217 - 00C - 000 - 00J</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>J = Conformal Coating</strong></td>
</tr>
<tr>
<td>0 = None</td>
</tr>
<tr>
<td>1 = Humiseal 1A33 Polyurethane</td>
</tr>
<tr>
<td>2 = Humiseal 1B31 Acrylic</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>C = Front Panel Height</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>1 = Reserved</td>
</tr>
<tr>
<td>2 = Reserved</td>
</tr>
<tr>
<td>3 = Full-Height</td>
</tr>
</tbody>
</table>