10 Port AMC Managed Layer Two Switch

AMC216

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KEY FEATURES

- AMC.2 compliant
- Managed Layer two switch
- Eight GbE Ethernet ports via front panel SFP
- Any combination of Fiber/Copper is allowed
- 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

The AMC216 is a single-width, full-height AdvancedMC^{TM} (AMC) based on the AMC.2 specification. The AMC216 provide 8 front panel GbE ethernet ports via SFP. It has two additional ports which are routed to ports 0 and 1 per the AMC.2 specification.

The SFP allows a mix of Fiber media such SX or LX transceivers as well as having copper interface on one module.

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).

AdvancedMC™

SPECIFICATIONS

Architecture		
Physical	**Dimensions**	Single-Width, Full-Height Front Panel
		Width: 2.89 in. (73.5 mm)
		Depth: 7.11 in. (180.6 mm)
Type	**AMC Ethernet**	GbE switch
		10 ports
		GbE per port
Standards		
AMC	**Type**	AMC.2
Module Management	**IPMI**	IPMI Version 2.0
1000BASE-BX	**Ports**	0 and 1
Configuration		
Power	**AMC216**	7W with all Fiber transceivers
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	**Interface Connectors**	RJ-45
	LEDs	IPMI Management Control
		Activity
	Mechanical	Hot Swap Ejector Handle
Software Support	**Operating Systems**	Independent
Other		
MTBF		MIL Handbook 217-F > TBD Hrs.
Certifications		Designed to meet FCC, CE and UL certifications where applicable
Standards		VadaTech is certified to both the ISO9001:2000 and AS9100B:2004 standards
Compliance		RoHS and NEBS
Warranty		Two (2) years.
Trademarks and Logos		The VadaTech logo is a registered trademark of VadaTech, Inc. Other registered trademarks are the property of their respective owners. AdvancedMC[TM] and the AdvancedTCA[TM] logo are trademarks of the PCI Industrial Computers Manufacturers Group. All rights reserved. Specification subject to change without notice.

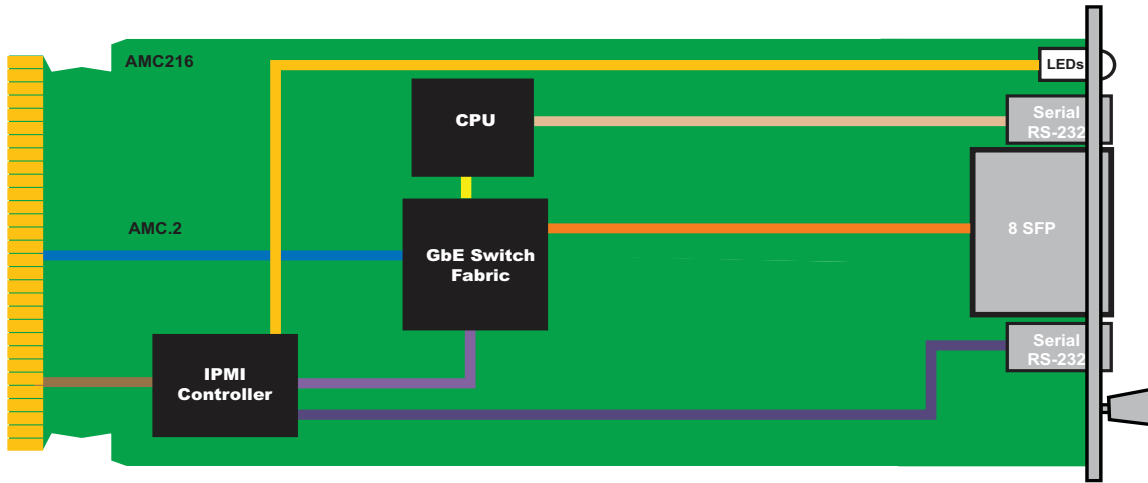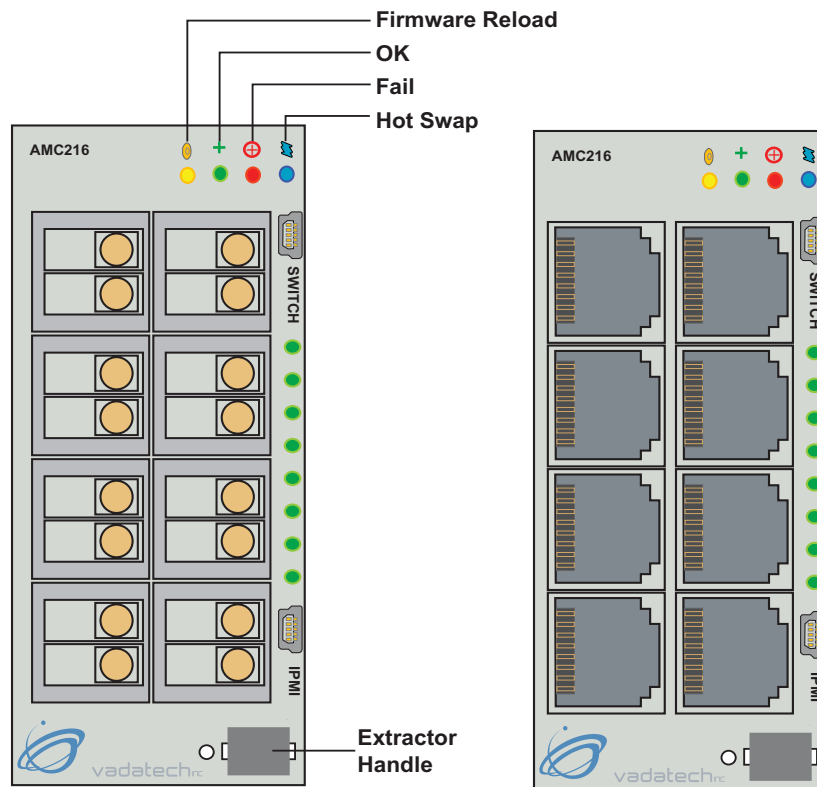**FIGURE 1.** AMC216 Functional Block Diagram

FIGURE 2. AMC216 Front Panel. Any combination of Fiber and Copper is allowed

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 802.1Q 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
  - ◆ Parses up to 128 bytes per packet
  - ◆ -512 ACL rules support
  - ◆ Multiple matches and actions per packet
  - ◆ ACL-based policing
  - ◆ Ingress/egress port based filtering
  - ◆ MAC destination address remarking
  - ◆ Traffic class definition based on the filter
  - ◆ Programmable meters allows policing of flows
  - ◆ Metering granularity from 64 Kbps to 1Gbps
  - ◆ Multiple look-ups per packet
  - ◆ Metering support on ingress ports and CPU queues
- ❖ QoS Features
  - ◆ Four CoS queues per port
  - ◆ Per-port, per CoS drop profiles
  - ◆ Port level shaping
  - ◆ Traffic shaping available on CPU queues
  - ◆ Programmable priority to CoS 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

ORDERING OPTIONS

AMC216 - ABC - D00 - 00J

A = Number of Fiber SX Transceivers

    0 = None
    X = Number of Transceivers

B = Number of Fiber LX Transceivers

    0 = None
    X = Number of Transceivers

C = Front Panel Height

    1 = Reserved
    2 = Reserved
    3 = Full-Height

D = Number of Copper Transceivers

    0 = None
    X = Number of Transceivers

J = Conformal Coating

    0 = None
    1 = Humiseal 1A33 Polyurethane
    2 = Humiseal 1B31 Acrylic

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