AMC dual SFP+ and XAUI Media Converter/TAP

AMC225

KEY FEATURES

- AMC.2 compliant (XAUI based)
- 10GbE or 1GbE via front panel SFP+ (Copper GbE SFP is allowed)
- XAUI to the backplane
- Media converter or straight-through between two ports
- Ingress mirroring to third port
- Physical layer mirroring
- Fully Adaptive Electronic Dispersion Compensation (EDC)
- Integrated BER Tester, and PRBS, Packet, and programmable Pattern Generation and checking.
- Compliant to applicable IEEE and INCITS specs
- OS agnostic

The AMC225 is a single-width, mid-height (with full-height option) AdvancedMC™ (AMC) based on the AMC.2 specification. The AMC225 provides two front panel SFP+ ports (10GbE or 1GbE option) and a backplane XAUI port. The physical layer connectivity between these three ports can be configured using an on-board high-speed signal matrix to create a direct connection (with or without media conversion) between any two ports plus the ability to mirror the ingress traffic on one of the ports to a third port.

When mirroring is enabled, the AMC225 acts as a 10GbE network tap which can be used for critical security and monitoring applications such as network intrusion detection/prevention, performance analytic, etc. The mirrored port causes no degradation to the direct-connected ports which continue to operate at full line rate. Since the mirroring is done at the physical level (Layer 1) rather than the Ethernet frame level (Layer 2), there is never a possibility for the AMC225 to drop a frame due to congestion as can happen with a typical Layer 2 switch mirroring port.

VadaTech can modify this product to meet special customer requirements without NRE (minimum order placement is required).

SPECIFICATIONS

| Architecture		
Physical	**Dimensions**	Single-Width, Mid-Height Front Panel (option for full-height)
		Width: 2.89 in. (73.5 mm)
		Depth: 7.11 in. (180.6 mm)
Type	**AMC Ethernet**	10GbE
		Dual-port
		10 Gb/s per port
Standards		
AMC	**Type**	AMC.2
Module Management	**IPMI**	IPMI Version 2.0
XAUI	**Ports**	4-7
Configuration		
Power	**AMC225**	8W
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**	Dual SFP+ Connectors
	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.	
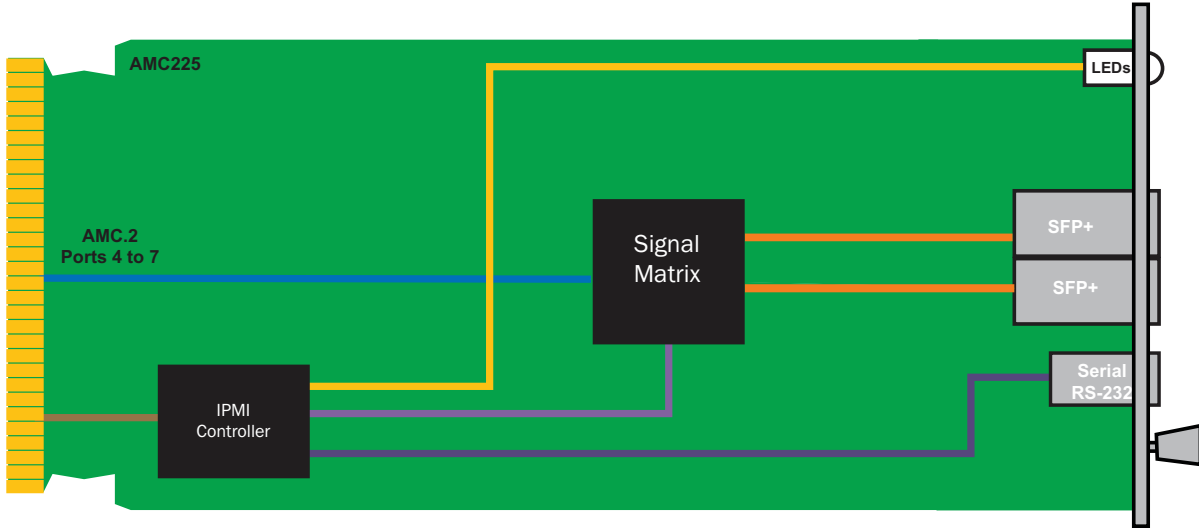
FIGURE 1. AMC225 Functional Block Diagram
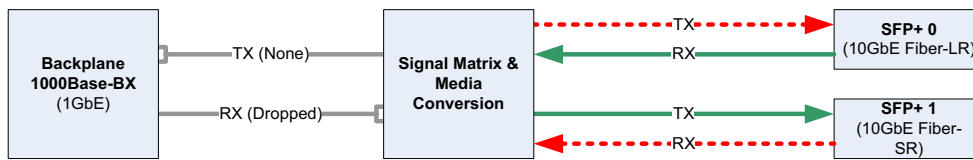
FIGURE 2. AMC225 Front Panel
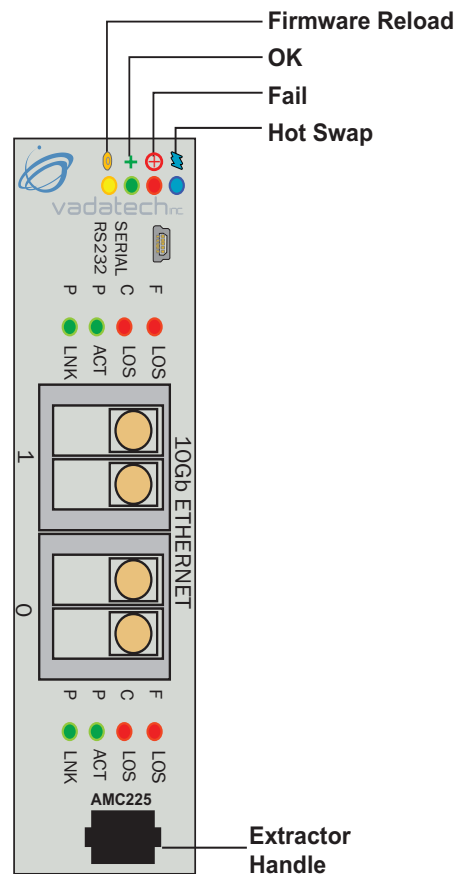
Use Case 1: 10 GbE Fiber Tap
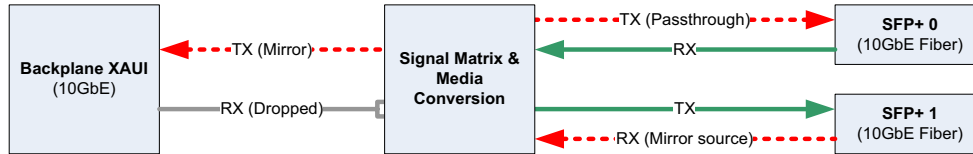
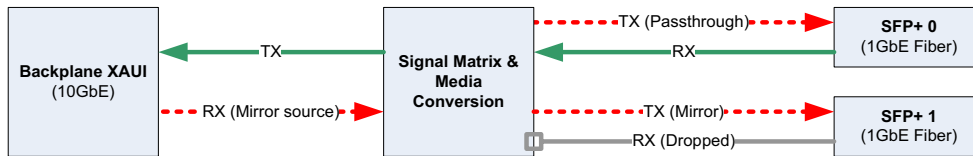| Backplane XAUI (10GbE)		Signal Matrix & Media Conversion		SFP+ 0 (10GbE Fiber)
	← TX (Mirror)		TX (Passthrough) →	
	RX (Dropped)		← RX	
			TX →	SFP+ 1 (10GbE Fiber)
			← RX (Mirror source)	

Note: This is just one example. All three ports are equally capable.
Any port may be designated the mirror port and the other two ports will be direct-connect.

Use Case 2: 10GbE SR to 10GbE / LR Fiber Media Converter

Backplane 1000Base-BX (1GbE)		Signal Matrix & Media Conversion		SFP+ 0 (10GbE Fiber-LR)
	TX (None)		TX →	
	RX (Dropped)		← RX	
			TX →	SFP+ 1 (10GbE Fiber-SR)
			← RX	

Note: This is just one example. All three ports are equally capable. Any two ports may be direct-connect.
See ordering options for supported media types.

Use Case 3: 1GbE Chassis Uplink Port with Monitoring

Backplane XAUI (10GbE)		Signal Matrix & Media Conversion		SFP+ 0 (1GbE Fiber)
	← TX		TX (Passthrough) →	
	RX (Mirror source) →		← RX	
			TX (Mirror) →	SFP+ 1 (1GbE Fiber)
			RX (Dropped)	

Note: This is just one example. All three ports are equally capable.
Any port may be designated the mirror port and the other two ports will be direct-connect.

ORDERING OPTIONS

AMC225 - ABC - 000 - 0HJ

A = SFP0+ Transceivers (port 0)*

0 = GbE Copper
1 = GbE SX
2 = GbE LX
3 = 10GBASE-SR
4 = Reserved
5 = 10GBASE-LRM
6 = 10GBASE-LR

B = SFP1+ Transceivers (port 1)*

0 = GbE Copper
1 = GbE SX
2 = GbE LX
3 = 10GBASE-SR
4 = Reserved
5 = 10GBASE-LRM
6 = 10GBASE-LR

C = Front Panel Height

1 = Reserved
2 = Mid-Height
3 = Full-Height

H = Operating Temp

1 = Commercial
2 = Industrial

J = Conformal Coating

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

*Note: Both Transceivers must have the same speed

Document No_____ Date:. March 2008, Pass two

vadatechinc
THE POWER OF VISION