AMC241

36x36 Cross Bar Switch (CBS)

AMC241 QSFP+

AMC241 SFP+

Key Features

- Flexible routing of ports 1-11, 12-15 and 17-20 to front panel via Cross Bar Switch
- Cross Bar Switch is protocol agnostic and supports one-to-many connections
- 16 ports to the front panel
- 20 lanes to the backplane
- Front-panel I/O via SFP+ or QSFP+
- Single-module, mid-size (option for full-size) per AMC.0
- IPMI 2.0 compliant

Benefits

- Provides front-panel access to common options, fat pipes and extended options
- CBS supports rear-to-rear routing, bridging ports
- CBS supports one-to-many routing, providing fan-out capability
- Design utilizes proven VadaTech subcomponents and engineering techniques
- Electrical, mechanical, software, and system-level expertise in house
- AS9100 and ISO9001 certified company

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The AMC241 is an AMC form factor with a 36x36 CBS which allows any of the 20 lanes from the backplane to be routed to the front. Since the CBS is agnostic to the protocol, any protocol such as PCIe, SRIO, 40GbE, 10GbE, GbE, Aurora, etc. can be routed between the backplane and the front panel.

The CBS allows one-to-many (any transmit lane could be sent to any number of receivers) and supports rear-to-rear and front-to-front routing (i.e. the unit could be used for routing just external signals). CBS routing is controlled via IPMI, which can be through the shelf manager or front-panel RS-232.

The AMC241 has option for 4/8 SFP+ or 2/4 QSFP+. The QSFP+ ports have four lanes of TX/RX.

Figure 1: AMC241 with QSFP+

Figure 2: AMC241 with SFP+

Block Diagram

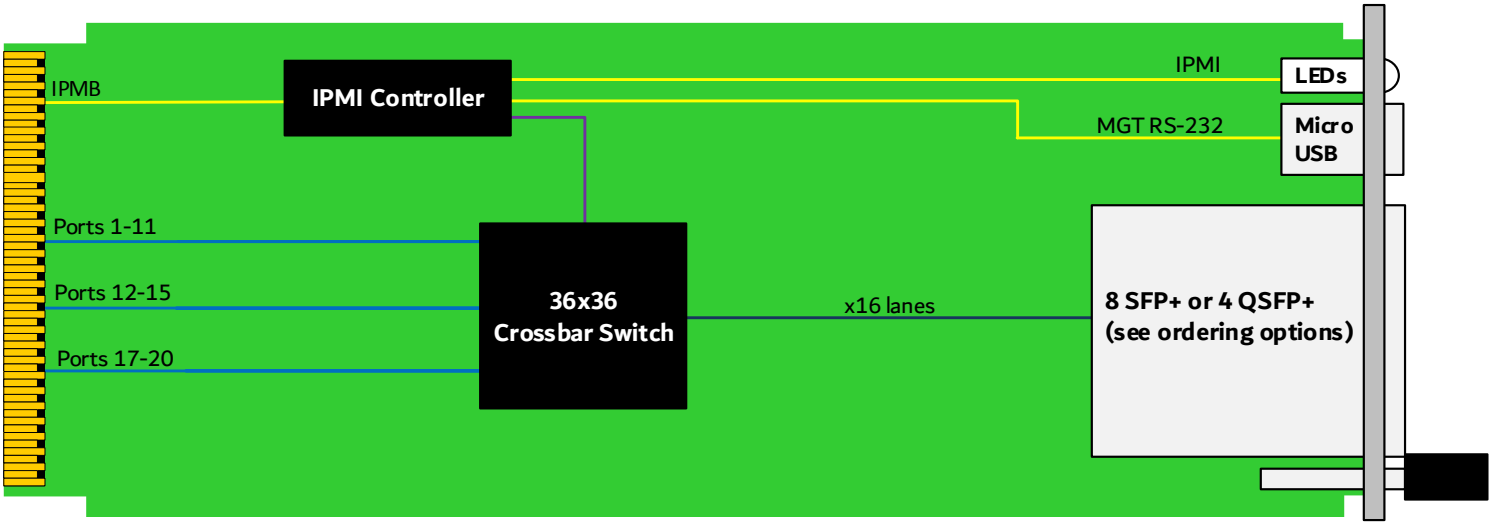

Figure 3: AMC241 Functional Block Diagram

Front Panel

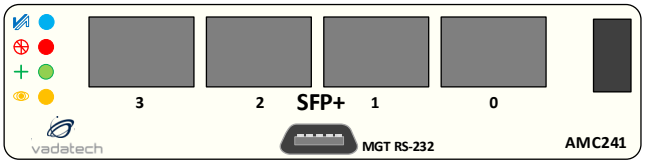

Figure 4: Mid-size SFP+ Option

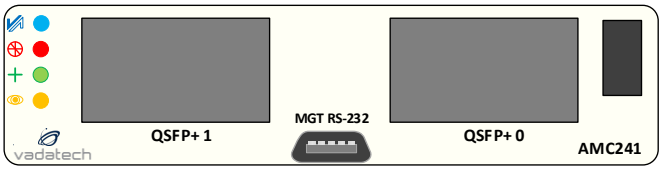

Figure 5: Mid-size QSFP+ Option

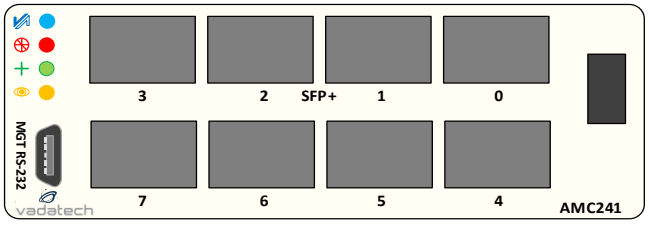

Figure 6: Full-size SFP+ Option

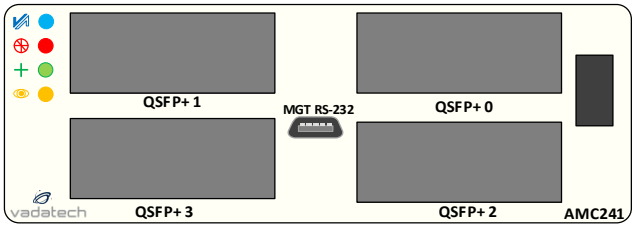

Figure 7: Full-size QSFP+ Option

SFP+ options route a single port per connector. So while the CBS supports 16 ports to the front, only 8 of these are connected if an SFP+ option is selected. SFP+ can be populated with copper or fiber as required by the customer application.

Each QSFP+ connector supports four ports, so the full-size QSFP+ option should be selected if all 16 ports are required.

Specifications

Architecture		
Physical	**Dimensions**	Single Module, mid-size (full-size optional)
		Width: 2.89” (73.5 mm)
		Depth: 7.11” (180.6 mm)
Type	**AMC Switch**	36 Ports
Standards		
AMC	**Type**	AMC.0 and AMC.2
Module Management	**IPMI**	IPMI v2.0
GbE	**Lanes**	20
Configuration		
Power	**AMC241**	8 W (without TXCVRs)
Environmental	**Temperature**	See ordering options and environmental spec sheet
		Storage Temperature: –40° to +85°C
	Vibration	Operating 9.8 m/s2 (1G), 5-500 Hz on each axis
	Shock	Operating 30Gs on each axis
	Relative Humidity	5 to 95% non-condensing
Front Panel	**Interface Connectors**	4/8 SFP+ or 2/4 QSFP+ connectors
		Micro USB for MGT RS-232
	LEDs	IPMI management control
	Mechanical	Hot swap ejector handle
Software Support	**Operating System**	Agnostic
Other		
MTBF	MIL Hand book 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	
Warranty	Two (2) years	

INTEGRATION SERVICES AND APPLICATION-READY PLATFORMS

VadaTech has a full ecosystem of OpenVPX, ATCA and MTCA products including chassis platforms, shelf managers, AMC modules, Switch and Payload Boards, Rear Transition Modules (RTMs), Power Modules, and more. The company also offers integration services as well as pre-configured Application-Ready Platforms. Please contact VadaTech Sales for more information.

Ordering Options

AMC241 – ABC-DE0-00J

A = SFP+ TXCVRs	D = Ports 12-15	
0 = No SFP+ 1 = SR 2 = LR	0 = Routed 1 = No Ports	
B = QSFP+ TXCVRs	**E = Ports 17-20**	
0 = No QSFP+ 1 = SR 2 = LR	0 = Routed 1 = No Ports	
C = Front Panel		**J = Temperature Range and Coating**
1 = Reserved 2 = Mid-size with 4 SFP+ 3 = Mid-size with 2 QSFP+ 4 = Full-size with 8 SFP+ 5 = Full-size with 4 QSFP+		0 = Commercial (–5° to +55°C), No coating 1 = Commercial (–5° to +55°C), Humiseal 1A33 polyurethane 2 = Commercial (–5° to +55°C), Humiseal 1B31 acrylic 3 = Industrial (–20° to +70°C), No coating 4 = Industrial (–20° to +70°C), Humiseal 1A33 polyurethane 5 = Industrial (–20° to +70°C), Humiseal 1B31 acrylic 6 = Extended (–40° to +85°C), Humiseal 1A33 polyurethane* 7 = Extended (–40° to +85°C), Humiseal 1B31 acrylic*

Notes: *Conduction cooled, temperature is at edge of module. Consult factory for availability

Related Products

UTC004

- Single module, full size per AMC.0
- Unified 1 GHz quad-core CPU for MicroTCA Carrier Management Controller (MCMC), Shelf Manager, Clocking, and Fabric management
- Automatic fail-over with redundant UTC004s

AMC726

- Intel® 4th Gen Core i7-4700EQ with QM87 chipset
- PCIe Gen3 x4 on ports 4-7 and 8-11 or single PCIe x8 on ports 4-11 (AMC.1)
- Serial over LAN

AMC347

- Dual RGsB Input
- Dual Video outputs capable of driving up to 110 feet over Coax
- Dual Display Port (DP) input

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