

# AMC640

NVMe HBA, with Quad M.2 NVMe  
Solid State Drives, AMC



AMC640

## Key Features

- AMC M.2 NVMe Host Bus Adapter with quad M.2 NVMe type SSD
- Allows for M.2 Type 2280 and/or 22110
- AMC.1 PCIe Gen3 x8 or dual x4 to the backplane
- PCIe x4 Gen3 to each M.2 Socket
- Single module, mid-size per AMC.0
- IPMI 2.0 compliant

## Benefits

- Multi-Terabit storage capacity in a single module AMC form factor carrier
- Electrical, mechanical, software, and system-level expertise in house
- Full system supply from industry leader
- AS9100 and ISO9001 certified company

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# AMC640

The AMC640 is an M.2 Host Bus Adapter (HBA) which supports up to four M.2 type 2280 and/or 22110 style storage devices. The NVMe storage provides high speed and low latency read/write to the SSD devices.

The AMC640 has PCIe Gen3 x8 or dual x4 routed to the fabric ports 4-11. Flexible user configuration allows each M.2 to be routed to ports 4-7, 8-11 or 4-11. The user can route ports 4-7 or 8-11 to any combination of the M.2 modules or to none (e.g. ports 4-7 to one M.2 and 8-11 to three more M.2). When not used, ports 4-7 or 8-11 can be disabled to avoid clashing with other fabrics in the system.

The AMC640 is available in both air-cooled (MTCA.0 and MTCA.1) and rugged conduction-cooled versions (MTCA.2 or MTCA.3, contact sales for details).



Figure 1: AMC640

# Block Diagram

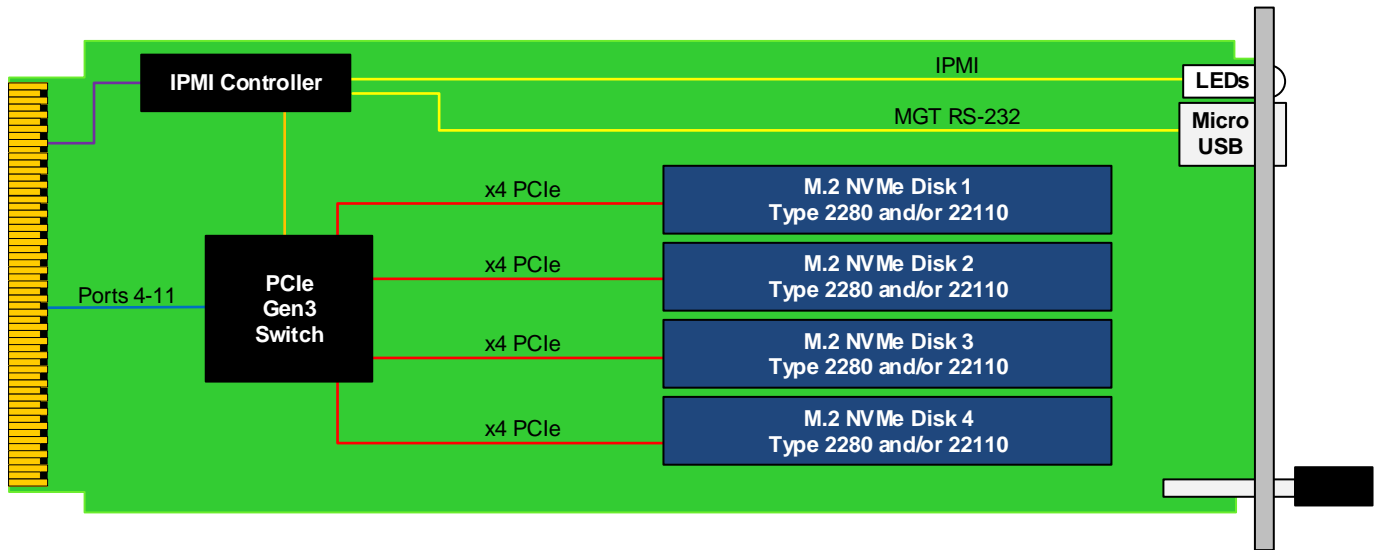


Figure 2: AMC640 Functional Block Diagram

# Front Panel

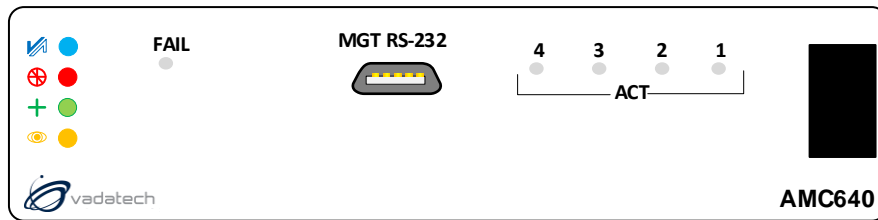


Figure 3: AMC640 Front Panel

# Specifications

Architecture		
<b>Physical</b>	<b>Dimensions</b>	Single module, mid-size (full-size optional) Width: 2.89" (73.5 mm) Depth 7.11" (180.6 mm)
<b>Type</b>	<b>AMC Storage</b>	M.2 NVMe SSD
Standards		
<b>AMC</b>	<b>Type</b>	AMC.1
<b>Module Management</b>	<b>IPMI</b>	IPMI v2.0
<b>PCIe</b>	<b>Lanes</b>	Dual x4 or single x8 as PCIe
<b>Storage</b>	<b>SSD</b>	Up to four M.2 NVMe SSD
Configuration		
<b>Power</b>	<b>AMC640</b>	8 W without SSD (with four 2 TB SSD: 32 W)
<b>Environmental</b>	<b>Temperature</b>	See ordering options and <a href="#">environmental spec sheet</a> Storage Temperature: -40° to +85°C
	<b>Vibration</b>	Operating 9.8 m/s <sup>2</sup> (1 G), 5 to 500 Hz on each axis
	<b>Shock</b>	Operating 325 G / 2 ms, 160G / 1 ms
	<b>Relative Humidity</b>	5 to 95% non-condensing
<b>Front Panel</b>	<b>Interface Connectors</b>	Micro USB connector for MGT RS-232
	<b>LEDs</b>	IPMI management control Activity
	<b>Mechanical</b>	Hot swap ejector handle
<b>Software Support</b>	<b>Operating System</b>	Linux, Windows, Solaris and VxWorks
Other		
<b>MTBF</b>		MIL Hand book 217-F@ TBD hrs
<b>Certifications</b>		Designed to meet FCC, CE and UL certifications, where applicable
<b>Standards</b>		VadaTech is certified to both the ISO9001:2000 and AS9100B:2004 standards
<b>Warranty</b>		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

## AMC640 – ABC-DEF-00J

<b>A = M.2 NVMe SSD 1</b> 0 = No SSD 1 1 = 512 GB 2 = 1 TB 3 = 2 TB	<b>D = M.2 NVMe SSD 3</b> 0 = No SSD 3 1 = 512 GB 2 = 1 TB 3 = 2 TB	
<b>B = M.2 NVMe SSD 2</b> 0 = No SSD 2 1 = 512 GB 2 = 1 TB 3 = 2 TB	<b>E = M.2 NVMe SSD 4</b> 0 = No SSD 4 1 = 512 GB 2 = 1 TB 3 = 2 TB	
<b>C = Front Panel</b> 1 = Reserved 2 = Mid-size 3 = Full-size 4 = Reserved 5 = Mid-size, MTCA.1 (captive screw) 6 = Full-size, MTCA.1 (captive screw)	<b>F = PCIe Interface</b> 0 = x4 1 = Dual x4 2 = Single x8	<b>J = Temperature Range and Coating</b> 0 = Commercial (–5° to +45°C), No coating 1 = Commercial (–5° to +45°C), Humiseal 1A33 Polyurethane 2 = Commercial (–5° to +45°C), Humiseal 1B31 Acrylic 3 = Reserved 4 = Industrial (–20° to +70°C), Humiseal 1A33 Polyurethane 5 = Industrial (–20° to +70°C), Humiseal 1B31 Acrylic

## Related Products

VT950



- MicroTCA rugged 1U 19" rackmount chassis platform
- Meets MIL-STD-810F, MIL-STD-901D for shock/vibration
- Meets MIL-STD-461E for EMI

AMC626



- Host Bus Adapter (HBA) for external SATA III (6.0 Gbps) or SAS-3 (12 Gbps) drives
- AMC.1 compliant, PCIe Gen3 x8 or x4
- Support for 8 SAS/SATA ports

AMC629



- Host Bus Adapter (HBA) for external SATA III (6.0 Gbps) or SAS-3 (12 Gbps) drives
- Conduction cooled version available
- Integrated RAID 0, 1, 1E, and 10

# Contact

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