### AMC 16 Channel Isolated Input Module

## **AMC090**





#### **KEY FEATURES**

- · Eight TTL/CMOS input channels
- · Eight 0 to 10 volt input channels
- Single-width, half-height\* (mid-height and full-height available)
  - \*Patent-pending design allows standard front panel I/O connectivity in a half-height AMC compliant form factor
- Programmable debounce times are software controlled on a channel-by-channel basis
- Change-Of-State (COS) selections:
  - Disabled
  - Rising edge, low-to-high transition
  - Falling edge, high-to-low transition
  - Level sensitive
- Input voltage from 10V to 38V with 45V surge @ 500ms
- AMC.1 compliant
- · IPMI 2.0 compliant
- RoHS compliant
- OS support for:
  - Linux
  - Windows
  - Solaris
  - VxWorks

Designed to solve the real world I/O problems of Military, Industrial and Telcom applications. The AMCO90 is a 16-Channel Optically Isolated Input AdvancedMC<sup>TM</sup> (AMC) module. Eight channels are factory configured for TTL/CMOS inputs and the other eight channels are configured for 0-10V source inputs (other voltage ranges are available, contact Sales for more information).

Designed for maximum flexibility in mind, the AMC090 features an FPGA that provides a number of software programmable functions which include: programmable debounce on a channel-by-channel basis (increment of 1ms resolution), programmable Change-of-State (COS) interrupts (rising edge, falling edge or level sensitive), and multi-channel sensitive input masked interrupts.

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



# AMC 16 Channel Isolated Input Module

#### **SPECIFICATIONS**

Physical Dimensions   Single-Width, Half-Height (with Mid or Full-Height options)   Width: 2.89 in. (73.5 mm)   Depth: 7.11 in. (180.6 mm)   Type				
Physical   Dimensions   Width: 2.89 in. (73.5 mm)   Depth: 7.11 in. (180.6 mm)	Architecture			
Depth: 7.11 in. (180.6 mm)  16 total inputs  Eight TIL/CMOS channels  Standards  AMC  Type  AMC.1  IPMI IPMI Version 2.0  Lanes  x4  Configuration  Power  AMC090  AMC090  3.5W IPMI Controller < 30 mA @3.3V  IPMI Controller < 30 mA @3.3V  Temperature  Operating Temperature: 0° to 65° C (Air flow requirement is to be greater than 200 LFN Storage Temperature: 40° to +90° C  Environmental  Vibration  Shock 30Gs each axis Relative Humidity 5 to 95 percent, non-condensing Interface Connectors 51-Pin Micro DIN style  LEDs IPMI Management Control  Activity and Link Mechanical Hot Swap Ejector Handle  Software Support Operating Systems Linux, Windows, Solaris and VxWorks  Other  MTBF  MIL Spec 217-F > 238,000 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. The VadaTech logo is a registered trademark of VadaTech, Inc. Other registered trademarks are the property of their respective owners. AdvancedMcTM and the AdvancedTcATM logo are trademarks of the PCI Industrial Computers	Physical	Dimensions	Single-Width, Half-Height (with Mid or Full-Height options)	
Type AMC Input Eight TTL/CMOS channels Eight TTL/CMOS channels Eight TTL/CMOS channels Eight TTL/CMOS channels Eight Ot o 10 volt channels  Standards  AMC Type AMC.1 Module Management IPMI IPMI Version 2.0 PCIe Lanes x4  Confliguration Power AMC090 3.5W IPMI Controller < 30 mA @3.3V  Temperature Operating Temperature: 0° to 65° C (Air flow requirement is to be greater than 200 LFM Storage Temperature: -40° to +90° C  Environmental Vibration 1G, 5-500Hz each axis Shock 30Gs each axis Relative Humidity 5 to 95 percent, non-condensing Interface Connectors 51-Pin Micro DIN style  EEDS IPMI Management Control Activity and Link Mechanical Hot Swap Ejector Handle Software Support Operating Systems Linux, Windows, Solaris and VxWorks  Other  MTBF MIL Spec 217-F > 238,000 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  Compiliance RoHS and NEBS  Warranty Two (2) years.  The VadaTech logo is a registered trademark of VadaTech, Inc. Other registered trademarks are the property of their respective owners. AdvancedMcTM and the AdvancedTcATM logo are trademarks of the PCI Industrial Computers			Width: 2.89 in. (73.5 mm)	
Type AMC Input Eight TTL/CMOS channels  Eight 0 to 10 volt channels  Standards  AMC Type AMC.1  Module Management IPMI IPMI IPMI Version 2.0  PCie Lanes x4  Configuration  Power AMC090 3.5W IPMI Controller < 30 mA @3.3V  Femperature Operating Temperature: 0° to 65° C (Air flow requirement is to be greater than 200 LFM Storage Temperature: 40° to +90° C  Environmental Vibration 1.6,5-500Hz each axis  Shock 30Gs each axis  Relative Humidity 5 to 95 percent, non-condensing  Interface Connectors 51-Pin Micro Diln style  Front Panel LEDs IPMI Management Control  Activity and Link  Mechanical Hot Swap Ejector Handle  Software Support Operating Systems Linux, Windows, Solaris and VxWorks  Other  MIL Spec 217-F > 238,000 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  Compiliance Warranty Two (2) years.  The VadaTech logo is a registered trademark of VadaTech, Inc. Other registered trademarks are the property of their respective owners. AdvancedMc™ and the AdvancedTcA™ logo are trademarks of the PCI Industrial Computers			Depth: 7.11 in. (180.6 mm)	
Eight 0 to 10 volt channels	Туре	AMC Input	16 total inputs	
Standards			Eight TTL/CMOS channels	
AMC Type AMC.1  Module Management IPMI IPMI Version 2.0  PCIe Lanes x4  Configuration  Power AMC090 3.5W  IPMI Controller < 30 mA @3.3V  IPMI Controller < 30 mA @3.3V  Temperature Operating Temperature: .0° to 65° C (Air flow requirement is to be greater than 200 LFM Storage Temperature: .40° to +90° C  Environmental Vibration 1G, 5-500Hz each axis  Shock 30Gs each axis  Relative Humidity 5 to 95 percent, non-condensing  Interface Connectors 51-Pin Micro DIN style  Front Panel LEDs IPMI Management Control Activity and Link  Mechanical Hot Swap Ejector Handle  Software Support Operating Systems Linux, Windows, Solaris and VxWorks  Other  MTBF MIL Spec 217-F > 238,000 Hrs.  Certifications Designed to meet FCC, CE and UL certifications where applicable  Standards VadaTech is certified to both the IS09001:2000 and AS91008:2004 standards  Compliance RoHS and NEBS  Warranty Two (2) years.  The VadaTech logo is a registered trademark of VadaTech, Inc. Other registered trademarks are the property of their respective owners. AdvancedMCTM and the AdvancedTCATM logo are trademarks of the PCI Industrial Computers			Eight 0 to 10 volt channels	
Module Management   IPMI   IPMI   IPMI   Version 2.0	Standards			
PCIe   Lanes   x4	AMC	Туре	AMC.1	
Configuration	Module Management	IPMI	IPMI Version 2.0	
Power AMC090    Some and and a composition of the property of their property of their composition of the property of their propert	PCle	Lanes	x4	
IPMI Controller < 30 mA @3.3V	Configuration			
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  Interface Connectors 51-Pin Micro DIN style  LEDs IPMI Management Control Activity and Link  Mechanical Hot Swap Ejector Handle  Software Support Operating Systems Linux, Windows, Solaris and VxWorks  Other  MTBF MIL Spec 217-F > 238,000 Hrs.  Certifications Designed to meet FCC, CE and UL certifications where applicable  Standards VadaTech is certified to both the IS09001:2000 and AS9100B:2004 standards  Compliance RoHS and NEBS  Warranty Two (2) years.  The VadaTech logo is a registered trademark of VadaTech, Inc. Other registered trademarks are the property of their respective owners. AdvancedMCTM and the AdvancedTCATM logo are trademarks of the PCI Industrial Computers	Power	AMC090	3.5W	
Storage Temperature: -40° to +90° C			IPMI Controller < 30 mA @3.3V	
Vibration   1G, 5-500Hz each axis   Shock   30Gs each axis   Shock   30Gs each axis   Relative Humidity   5 to 95 percent, non-condensing   Interface Connectors   51-Pin Micro DIN style   IPMI Management Control   Activity and Link   Mechanical   Hot Swap Ejector Handle   Hot Swap Ejector Handle   Software Support   Operating Systems   Linux, Windows, Solaris and VxWorks   Other		Temperature	Operating Temperature: 0° to 65° C (Air flow requirement is to be greater than 200 LFM)	
Shock 30Gs each axis  Relative Humidity 5 to 95 percent, non-condensing  Interface Connectors 51-Pin Micro DIN style  LEDs IPMI Management Control Activity and Link  Mechanical Hot Swap Ejector Handle  Software Support Operating Systems Linux, Windows, Solaris and VxWorks  Other  MTBF MIL Spec 217-F > 238,000 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.  The VadaTech logo is a registered trademark of VadaTech, Inc. Other registered trademarks are the property of their respective owners. AdvancedMC <sup>TM</sup> and the AdvancedTCA <sup>TM</sup> logo are trademarks of the PCI Industrial Computers	Environmental		Storage Temperature: -40° to +90° C	
Relative Humidity   5 to 95 percent, non-condensing   Interface Connectors   51-Pin Micro DIN style		Vibration	1G, 5-500Hz each axis	
Front Panel    LEDs		Shock	30Gs each axis	
Front Panel  LEDs  IPMI Management Control Activity and Link Mechanical Hot Swap Ejector Handle  Software Support Operating Systems Linux, Windows, Solaris and VxWorks  Other  MTBF MIL Spec 217-F > 238,000 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. The VadaTech logo is a registered trademark of VadaTech, Inc. Other registered trademarks are the property of their respective owners. AdvancedMC <sup>TM</sup> and the AdvancedTCA <sup>TM</sup> logo are trademarks of the PCI Industrial Computers		Relative Humidity	5 to 95 percent, non-condensing	
Activity and Link  Mechanical Hot Swap Ejector Handle  Software Support Operating Systems Linux, Windows, Solaris and VxWorks  Other  MTBF MIL Spec 217-F > 238,000 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.  The VadaTech logo is a registered trademark of VadaTech, Inc. Other registered trademarks are the property of their respective owners. AdvancedMC <sup>TM</sup> and the AdvancedTCA <sup>TM</sup> logo are trademarks of the PCI Industrial Computers		Interface Connectors	51-Pin Micro DIN style	
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Software Support  Other  MTBF  MIL Spec 217-F > 238,000 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.  The VadaTech logo is a registered trademark of VadaTech, Inc. Other registered trademarks are the property of their respective owners. AdvancedMC <sup>TM</sup> and the AdvancedTCA <sup>TM</sup> logo are trademarks of the PCI Industrial Computers			Activity and Link	
Other  MTBF MIL Spec 217-F > 238,000 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.  The VadaTech logo is a registered trademark of VadaTech, Inc. Other registered trademarks are the property of their respective owners. AdvancedMC <sup>TM</sup> and the AdvancedTCA <sup>TM</sup> logo are trademarks of the PCI Industrial Computers		Mechanical	Hot Swap Ejector Handle	
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Standards  VadaTech is certified to both the ISO9001:2000 and AS9100B:2004 standards  Compliance  RoHS and NEBS  Warranty  Two (2) years.  The VadaTech logo is a registered trademark of VadaTech, Inc. Other registered trademarks are the property of their respective owners. AdvancedMC <sup>TM</sup> and the AdvancedTCA <sup>TM</sup> logo are trademarks of the PCI Industrial Computers	MTBF	MIL Spec 217-F > 238,000 Hrs.		
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Trademarks and Logos respective owners. AdvancedMC <sup>TM</sup> and the AdvancedTCA <sup>TM</sup> logo are trademarks of the PCI Industrial Computers	Warranty	Two (2) years.		
	Trademarks and Logos			
Notes The Half-Height front panel is a patent-pending design. Contact your Sales representative for more information.	Notes	The Half-Height front pane	el is a patent-pending design. Contact your Sales representative for more information.	

Email: info@vadatech.com • www.vadatech.com

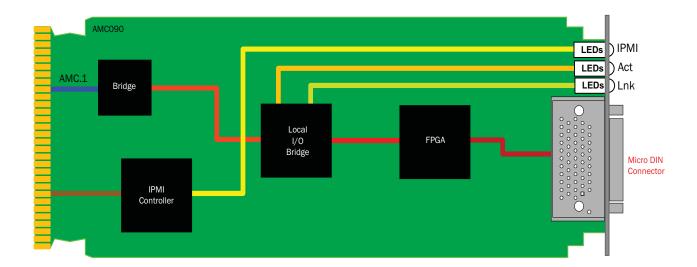


FIGURE 1. AMC090 Functional Block Diagram

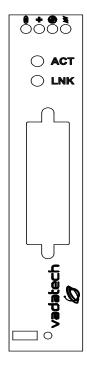


FIGURE 2. AMC090 Front Panel

### AMC 16 Channel Isolated Input Module

#### **ORDERING OPTIONS**

#### AMC090 - 00C - 000 - 0HJ

#### C = Front Panel

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

#### H = Operating Temp

- 0 = Commercial
- 1 = Industrial

#### J = Conformal Coating

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





