vadatech inc
™ THE POWER OF VISION

KEY FEATURES

- Single-width, half-height (mid-height or full-height)
- Accepts GPS 1PPS reference signal via front panel SMB connector
- Provides 1PPS output to the front panel via SMB connector and to the rear
- Provides precisely disciplined 30.72 MHz or 10 MHz (other frequencies are available upon request)
- Provides the disciplined clock to the front panel via SMB connector and to the rear
- Provides re-generated 1PPS signal even during holdover
- Flexible clock input/output routing
- Stratum 3 oscillator w/ automatic holdover
- LED indication for Reference OK, Frequency lock, Phase lock, and holdover
- IPMI 2.0 compliant
- HPM.1
- RoHS compliant

The AMC003 provides an accurate local clock frequency to a μTCA/ATCA system which is derived from a GPS 1PPS signal. The local oscillator is disciplined to provide the desired clock frequency and is constantly monitored and adjusted to account for oscillator drift and aging. An internal 1PPS generated signal is also provided which is phase aligned to the reference 1PPS signal. The re-generated 1PPS signal remains present even during holdover when the 1PPS would otherwise be unavailable from the GPS receiver. A Stratum 3 VCTCXO is used to provide excellent holdover stability.

Front panel indicators clearly show the status of the system including the presence and validity of the reference 1PPS, the frequency lock status, and the phase lock status.

The module has a serial port in the front that enables advanced configuration and monitoring support. Locking/holdover status is also available via IPMI sensors.

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

AdvancedMC™

SPECIFICATIONS

Architecture		
Physical	**Dimensions**	Single-width, half-height, option for mid or full-height
		Width: 2.89 in. (73.5 mm)
		Depth: 7.11 in. (180.6 mm)
Product Type	**AMC Clock**	GPS Clock
Standards		
AMC	**Type**	AMC.0
Module Management	**IPMI**	IPMI Version 2.0
Configuration		
Power	**AMC003**	1.5W
Environmental	**Temperature**	Operating Temperature: -20° to 75° C
		Storage Temperature: -40° to +95° C
	Vibration	1G, 5-500Hz each axis
	Shock	30G each axis
	Relative Humidity	5 to 95 percent, non-condensing
Front Panel	**LEDs**	IPMI Management Control
		Clock status
	Connectors	Three SMB
		RS-232 port via Micro-DB9
	Mechanical	Hot-swap ejector handle
Other		
MTBF	MIL Hand Book 217-F > TBDHrs.	
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	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.	
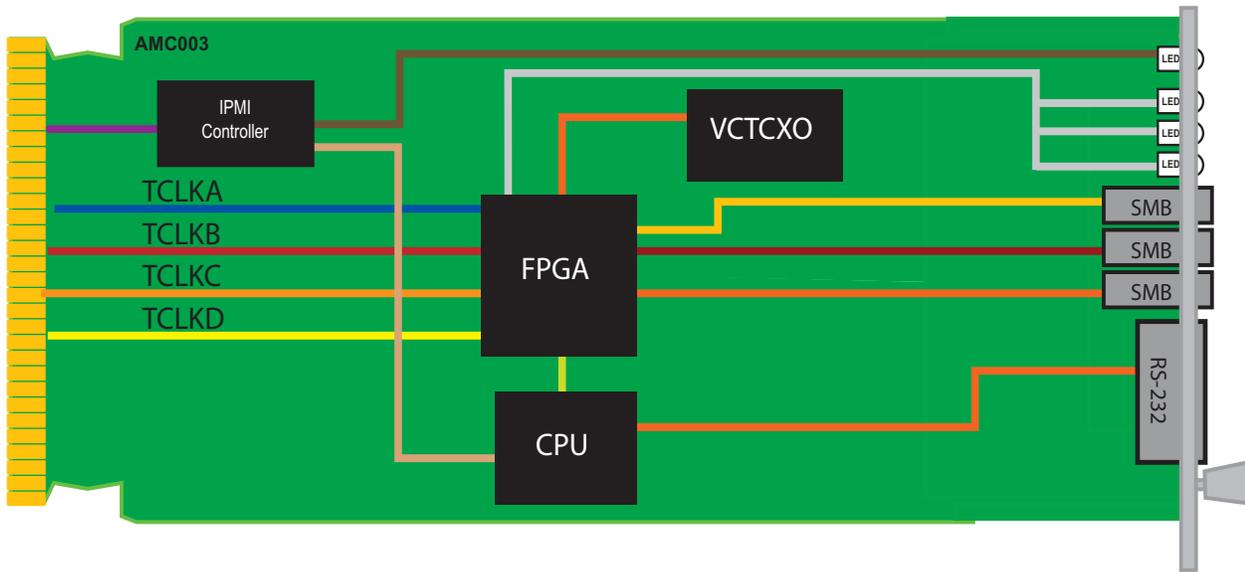
FIGURE 1. AMC003 Functional Block Diagram

FIGURE 2. AMC003 Front Panel

ORDERING OPTIONS

AMC003 - A0C - 000 - 00J

A = GPS Clock

1 = VCTCXO** 30.72MHz†
2 = VCTCXO** 10.00MHz†
3 = VCTCXO** 50.00MHz†
4 = Reserved

C = Front Panel Height

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

J = Conformal Coating

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

**The Crystal Oscillator is Stratum-3; for lower cost solution contact VadaTech Sales.

†Frequencies from 8MHz to 52MHz are available.