# AMC Wireless Access Point (WAP) WiFi

# AMC228

vadatech inc

™ THE POWER OF VISION

## 228KEY FEATURES

- AMC.2 compliant
- Provides seamless WiFi capability to the system
- Wireless Standards IEEE 802.11b; 802.11g
- WPA2/802.11i enterprise-grade security and authentication protocols
- Includes full TCP/IP stack, CGI
- 32-bit MIPS Processor
- Data Rates with Automatic Fallback: 54Mbps-1Mbps
- Range: Up to 328 feet indoors (100m)
- Managed Layer two switch
- IPMI 2.0 compliant
- OS support for:
  - — OS independent

The AMC228 is a single-width, mid-height (full-height option available) AdvancedMC$^{TM}$ (AMC) based on the AMC.2 specification. The AMC228 provides seamless WiFI capability to the system.

The AMC228 has an on board 32-bit MIPS processor that manages wireless connectivity, web services and managed layer two switch.

With bulletproof security, AMC228 goes far beyond compliance of the 802.11i, WPOA and WPA2 wireless security specifications. It ensures data integrity and privacy for highly sensitive requirements.

The AMC228 comes with complete suite of 802.1x Enterprise Authentication Protocols (EAP) including EAP-TLs, EAP-TTLS, PEAP and LEAP. End-to-end SSL TLS and SSH tunnelling as well as end-to-end AES 128-bit encrypted tunneling.

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

AdvancedMC™

## SPECIFICATIONS

| Architecture | | |
|---|---|---|
| Physical | Dimensions | Mid-Height Front Panel (option for full-height) |
| | | Width: 2.89 in. (73.5 mm) |
| | | Depth: 7.11 in. (180.6 mm) |
| Type | AMC WiFi | IEEE 802.11b; 802.11g |
| **Standards** | | |
| AMC | Type | AMC.2 |
| Module Management | IPMI | IPMI Version 2.0 |
| GbE | 1000Base-BX | Up to four ports to the rear |
| **Configuration** | | |
| Power | AMC228 | 5W |
| 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 socket |
| | | SMA for Antenna interface |
| | | Two RS-232 via USB style connector |
| | LEDs | IPMI Management Control |
| | | Activity/Link |
| | 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™ and the AdvancedTCA™ logo are trademarks of the PCI Industrial Computers Manufacturers Group. All rights reserved. Specification subject to change without notice. |

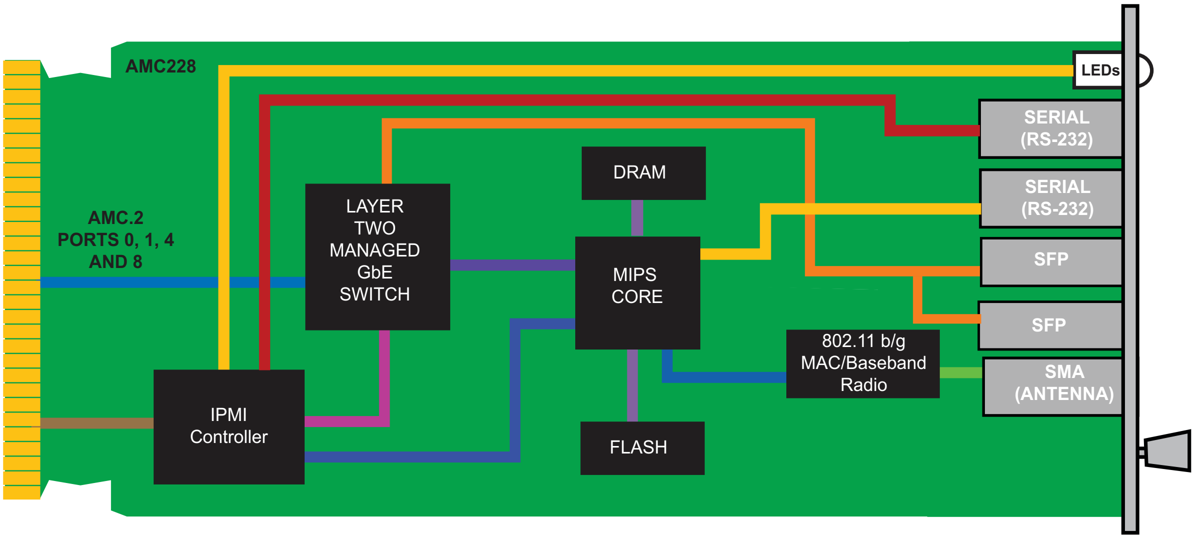
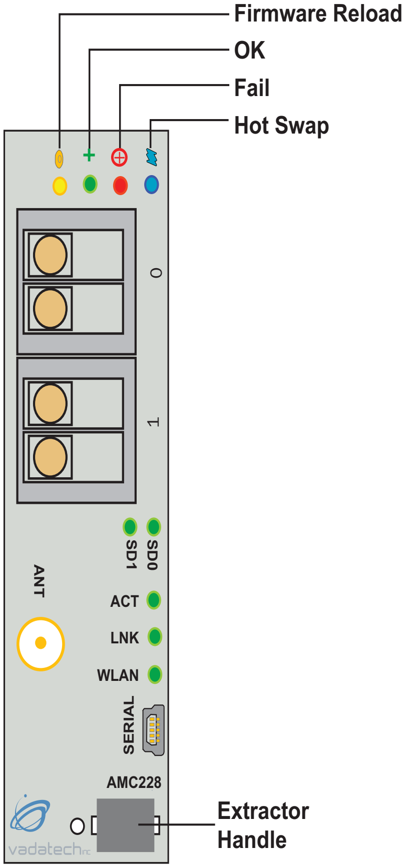

AMC228
AMC.2
PORTS 0, 1, 4
AND 8
LAYER
TWO
MANAGED
GbE
SWITCH
DRAM
MIPS
CORE
IPMI
Controller
FLASH
802.11 b/g
MAC/Baseband
Radio
LEDs
SERIAL
(RS-232)
SERIAL
(RS-232)
SFP
SFP
SMA
(ANTENNA)

FIGURE 1. AMC228 Functional Block Diagram

FIGURE 2. AMC228 Front Panel


Firmware Reload
OK
Fail
Hot Swap
0
1
SD1
SD0
ANT
ACT
LNK
WLAN
SERIAL
AMC228
vadatech
Extractor
Handle

# Wireless Key Features

## Specifications

- Wireless Standards: IEEE 802.11b; 802.11g
- Channel Frequency Range: 2.412 – 2.484 GHz
- Output Power: 14dBm +2.0dBM/-1.5dBm (does not include antenna gain)
- Maximum Receive Sensitivity: -91dBm @ 1Mbps
- Data Rates With Automatic Fallback: 54Mbps – 1Mbps
- Range: Up to 328 feet indoors (100m)
- Modulation Techniques: OFDM,DSSS, CCK, DQPSK, DBPSK, 64 QAM, 16 QAM

## Network Interface

- Wireless 802.11b and 802.11g, Ethernet
- Protocols Supported: ARP, UDP, TCP, Telnet, ICMP, IGMP, HDCP, PPPoE, BOOTP, HTTP, SMTP, TFTP

## Management and Configuration

- Serial Login
- Telnet Login
- CLI
- Firmware: Upgradeable via Web

## Wireless Security

- IEEE 802.11i Encryption: AES-CCMP and TKIP Encryption
- WPA2- Enterprise (EAP,PEAP, LEAP),WPA2-PSK,WPA - PSK 64/128-bit WEP

## Managed Layer Two GbE

The GbE layer two managed switch fabric routes two GbE to front panel via SFP socket, four to the rear (ports 0, 1, 4 and 8 of the AMC) and single port to the wireless.

*Key features:*

- Configuration
  - Ethernet/IEEE 802.3 Packet size (64 bytes to 1522 bytes)
  - Jumbo packets up to 9216 bytes
- L2 Switching
  - Supports up to 8K MAC address
  - Line rate switching for all packet sizes
  - Independent VLAN learning
  - VLAN flooding for broadcast and DLF packets
  - Hardware-based address learning
  - Six CPU-managed learning (CML) modes per port
  - Hardware-and-software-based aging
  - Software insertion/deletion/lookups of the L2 table
  - Same port bridging supported
  - Station movement control
- L2 Multicast
  - 4K VLANs
  - Protocol-based VLANs
  - IEEE 802.1p
  - IEEE 802.1Q
  - Independent VLAN learning (IVL)
  - Ingress filtering for IEEE 802.1Q VLAN security
  - VLAN-based packet filtering
  - MAC-based VLAN
- Source Port Filtering
  - Egress port block masks
  - Trunk group blocking masks
- Storm Control Per-Port:
  - Unknown unicast packet rate control
  - Broadcast packet rate control
  - Multicast packet rate control
- Spanning Tree:
  - IEEE 802.1D spanning tree protocol (single spanning tree per port)
  - IEEE 802.1s for multi spanning trees
  - IEEE 802.1w rapid spanning tree protocol-delete and/or replace per:
    - Port
    - VLAN
    - Port, per VLAN
  - Spanning tree protocol packets detected and sent to the CPU
- Double-Tagging:
  - Unqualified learning/forwarding
  - IEEE 802.1 Q-in-Q
- Mirroring
  - Ingress/egress mirroring support
  - Mirror-to-port receives the unmodified packet for ingress mirroring
  - Mirror-to-port receives the modified packet for egress mirroring
- Content Aware Filter Processing
  - Intelligent Protocol Aware processor with backward-compatible, byte-based classification option
  - Parses up to 128 bytes per packet
  - -512 ACL rules support
  - Multiple matches and actions per packet
  - ACL-based policing
  - Ingress/egress port based filtering
  - MAC destination address remarking
  - Traffic class definition based on the filter
  - Programmable meters allows policing of flows
  - Metering granularity from 64 Kbps to 1Gbps
  - Multiple look-ups per packet
  - Metering support on ingress ports and CPU queues
- QoS Features
  - Four CoS queues per port
  - Per-port, per CoS drop profiles
  - Port level shaping
  - Traffic shaping available on CPU queues
  - Programmable priority to CoS queue mapping
  - Provides two levels of drop precedence per queue
  - Strict Priority (SP), Weighted Round Robin (WRR), and Deficit round Robin (DRR) mechanisms for shaped queue selection
- DSCP
  - DSCP-based prioritization
  - Back pressure metering
  - DSCP to IEEE 802.1p mapping
- Port Security
  - Per port blocking
  - Supports IEEE 802.1x
  - MAC address blocking
- DoS Prevention
  - Denial of Service detection/prevention
- Management Information Base
  - SMON MIB, IETF RFC 2613
  - RMON statistics group, IETF RFC 2819
  - SNMP interface group, IETF RFC 1213, 2836
  - Ethernet-like MIB, IETF RFC 1643
  - Ethernet MIB, IEEE 802.3u
  - Bridge MIB, IETF RFC 1493

## ORDERING OPTIONS

### AMC228 - ABC - 000 - 0HJ

A = GbE Ports Routed to the Rear
- 1 = AMC Ports 0 and 1
- 2 = AMC Ports 0, 1, 4 and 8

B = SFP Transceivers
- 0 = None
- 1 = Copper (10/100/1000)
- 2 = Fiber SX
- 3 = Fiber LX

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

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