The FMC-AV15 Fanless Military Computer is designed to meet the needs of Mission Critical Applications, providing configurations that are truly Fit-for-Use in a variety of operating environments and with a wide range of options to serve the most demanding requirements.

**Features**
- Operating temperature of –40 to +75°C
- Extruded aluminum body for strength
- Compact light weight design
- 1.5GHz low power VIA C7 w/ Dynamic Scaling
- 2GB DDR2 & 4GB Compact Flash
- PC/104 and Mini PCI expansion
- On-board graphics to 1920 x 1440
- Five USB 2.0 ports
- Four RS232/422-485 serial ports
- Two Ethernet connectors
- Fanless—Sealed to IP65 moisture/dustproof
- Designed for ultra-harsh environments
- Shock of 30g, Vibration of 5g

**Support**
- Superior Pre- and Post-sales Technical Support
- All Products Carry a One Year Limited Warranty

**Customization**
- OEM Custom Branding (paint and logo)
- Custom I/O, processors, mounting
The FMC-AV15 is a rugged mobile server designed for applications where severe environments and high performance meet. It tightly integrates the electrical, thermal and mechanical components into a complete system with no compromise to any one segment.

The FMC-AV15 can be used as a central server, a stand-alone CPU, or a remote terminal. A full complement of I/O and expansion is provided. The back panel contains three TNC pass-through connectors for GPS and wireless communications options. The FMC-AV15’s modularity enables custom functionality with COTS convenience without large up front costs.

The FMC-AV15 excels in applications for bulkhead mounting on military, heavy equipment and machinery. The careful circuit design, component selection, testing and superior heat dissipation maximize reliability and minimize costly downtime whether in a Humvee, Bradley, tank, on a haul truck, dozer, or mining drill. The high shock and vibration ratings make it ideal for use in military, battlefield, mining, and transportation environments.

The defining characteristic of this system is the –40 to + 75°C operating temperature at 5 to 95% R.H. Robust construction supports 30G shock and 5G RMS vibration.

The construction starts with a finned extruded aluminum housing. This robust design allows fanless operation and provides high structural strength. The marine grade extrusion is environmentally sealed IP65 to protect against dust and moisture.

The VIA C7 processor with Dynamic Frequency Scaling, running at 1.5GHz, provides good performance for the intended environment. The VIA C7 is an ultra-low power offering with 2GB of DDR2 RAM provided. The unit is provided with an industrial grade error correcting 4GB Compact Flash. Options support up to 128GB Flash Drive with a SATA interface.

System I/O is very robust offering VGA graphics, an audio port, two Ethernet ports, five USB 2.0, four RS232/422/485 ports, CAN Bus, four digital output lines and eight digital (3-42V) input lines.

Input power is 8 VDC to 42VDC (10-36VDC continuous). Power supply failure has been eliminated by the best-in-class power supply. It rejects load dumps, repeated transients and over voltage and meets MIL-1275B

The FMC-AV15 supports a wide range of real-time (QNX, VxWorks, WinCE) and non-real time (Windows XP Embedded and Linux) operating systems.

FMC-AV15

Dimensions
4.8 x 6.7 x 12.5-inches (H x W x D) (not incl connectors)

Construction
Aluminum alloy extruded chassis with aluminum end caps

Weight
9.0lbs (typical system)

Processor
VIA C7, 1.5GHz w/Dynamic Frequency Scaling

Memory
2GB DDR2

Disk Storage
4GB Compact Flash
Optional Flash Drive: 32-128GB

Video Graphics
1920x1440

Ethernet
10/100 Base-T Ethernet RJ45 x2
RS232/422/485 x4

Audio
AC97: Line-in & out, Mic-in, speaker

Serial I/O
PC/104 & Mini PCI expansion

USB
USB 2.0 x5

Cooling Fans
None—fanless operation

Input Power
8-42VDC (10-36VDC cont.)
Meets MIL-1275B, SAEJ1113-11

Environmental Operating Temperature
-40 to + 75 Deg C

Vibration
5G, 3 axis per MIL-STD 202G

Shock
30G, 3 axis per MIL-STD 214AG

Agency Approvals
CE, FCC Class A
(Others optionally available)

IP65 dust / moisture rating

Systems Engineered to Perform®
LOW-POWER PROCESSOR
- VIA C7-M, 1.5 GHz
- Front-side Bus speed: 400 MHz
- Watchdog timer

RAM MEMORY
- 2 GB DDR2
- COMPACT FLASH
- 4 GB, industrial grade, error-correcting

Serial
- Four RS-232/422/485 serial ports
- Five USB 2.0 ports
- CAN Bus

Digital I/O
- Four output lines with ground
- Eight input lines, 3V to 42V

Ethernet
- Two 10/100 Base-T ports

Audio
- AC 97: line in, line out, microphone and speaker

Video
- CRTs up to 1920 x 1440 x 24 bpp resolution

Keyboard and Mouse
- Supported through USB ports
- Wake-on keyboard supported

Power
- 8-42VDC input voltage (10-36 VDC continuous)
- Meets SAE J1113-11, ISO-7637-2-2004 and MIL-1275B
- Load dump, reverse voltage, brown-out, and transient protection
- 2A of battery power output
- Conducted-emissions minimized by internal filter

Temperature
- –40°C to +75°C ambient air temperature
  (brief excursions outside range are well tolerated)
- CPU case and internal air temperature sensors
- Fanless operation

Shock
- 30g, 3 axis per MIL–STD 202G, Test 213B, condition J

Vibration
- 5g, 3 axis per MIL–STD 214AG, Test 214A, condition A

Physical
- Size: 340 x 170 x 122 mm (12 x 6.7 x 4.8 in.)
- Weight: 9lbs. (4.1 Kg)
- Meets FCC & CE Class A requirements
- IP65 dust / moisture rating
- Finish: Marine grade, powder coated paint
- Connectors: Military grade

Optional Modules
- UPS: internal battery-backup
- Flash Drive: 32GB – 128GB with SATA interface
- 802.11 b/g Wifi: FCC part 15.247 & CE certified with Mini PCI interface
- 16-channel GPS: -158 dBm sensitivity with PC/104–Plus interface

Ordering - Hardware
- FMC-AV15-1524
  1.5 GHz VIA C7 CPU
  2 GB industrial DDR2 DRAM
  4 GB of industrial grade CompactFlash, GPS, WiFi and UPS function

Ordering - Accessories
- FMC-AV15-SK Shock and vibration dampening mounting system
- FMC-AV15-QR Quick–release shock and vibration dampening mounting system.