

# AMC-300 Airworthy PC

## **Extended Temperature Range**

Miniature Airworthy PC computer running Windows XP Embedded on Geode LX800, 500 MHz CPU. AMC-300 is built and qualified for AIM-9L and P-4 type ACMI POD tubes, UAVs, and fighter planes such as F-16, F-4, F-5 "Wing Tips.

## **Baseline Configuration**

- ◆ 256MB RAM
- ◆ 8-64GB Flash disk, XP Embedded
- ◆ 10/100BaseT Ethernet
- ◆ 4 x RS232/RS422/RS485
- ◆ 4 x USB 2.0 host
- ◆ SoundBlaster with output impedance
- ◆ 8 ohm or 50Kohm
- ◆ SVGA
- ◆ One of two MIL-STD-1553, BC, RT, BM
- ◆ PCMCIA Drive
- ◆ Expansion slots.
- ◆ Discrete Signals

### **Input**

- 4 x TTL discrete signals
- 4 x OPTO isolated 28VDC discrete signals

### **Output**

- 8 x 28VDC discrete Signals
- ◆ A/D CONVERTER
  - 4 x A/D single ended or diff. 12 bit
- ◆ Interrupts and time, synch. to 1PPS

## **AMC-300, Construction**

The AMC-300, is designed in accordance with the general requirements of MIL-STD-454.



## **Dimensions & Weight**

100x100x255 (WXHXL) [mm],  
Weight: 5.0Lbs

## **Power Supply requirements**

A single 18-36VDC per MIL-STD-704A

## **Option: Data-Link Controller**

## **REAL TIME WINDOWS RMX**

INTIME RMX for Windows for critical I/O (real time operating system), runs in parallel with Windows XP Embedded.

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## **Environmental Conditions**

### **Temperature:**

The AMC-300 will not be damaged or affected by the effects of ambient air Operation temperature: -40° to +71°C .

Non-operating: (Storage/transportation) from -54° to 85°C.

### **Relative humidity**

Operating: 95% relative humidity (RH) with no condensation.

Non-operating: 95% RH.

### **Vibration**

According to MIL-STD-810F for Airborne or Helicopter or Vehicle environment.

### **Shock**

According to MIL-STD-810F, 40g for duration of 11msec.

### **Fungus**

The AMC-300 is non-nutrient to fungus growth according to the requirements in MIL-STD-810F.

### **Sand and Dust**

The AMC-300 shall operate as specified herein while and after being subjected to sand and dust as encountered in dry arid areas according to MIL-STD-810F.

### **Salt Fog:**

The AMC-300 is resistant to the corrosive effects of salt fog environment per the requirements of MIL-STD-810F.

### **Thermal Design**

The cooling of the components on the AMC-300 PC cards, Power Supply and the CPU is accomplished by conduction through the aluminum enclosure of the unit.

### **External Connectors**

External connectors are used for interfacing with the subassemblies or equipment and are in accordance with MIL-STD-454. Connectors mating bodies are keyed, and keyed locations are varied to prevent improper installation.

### **Electromagnetic Interference:**

AMC-300 as specified with its internal boards, complies to MIL-STD-461E.

- ◆ CE101 Conducted Emissions, Power Leads, 30Hz - 10kHz
- ◆ CE102 Conducted Emissions, Power Leads, 10kHz - 10MHz
- ◆ CS101 Conducted Susceptibility, Power Leads, 30Hz - 50kHz
- ◆ RE102 Radiated Emissions, Electric Field, 100kHz - 10GHz
  
- ◆ RS101 Radiated Susceptibility, Magnetic Field, 30Hz - 100kHz

### **Reliability:**

MTBF of 30,000 hours at 40°C  
Mean Time To Repair (MTTR) < 30 minutes.