TELEDYNE CONTROLS
A Teledyne Technologies Company

# C-5 RERP AUXILIARY MAINTENANCE COMPUTER (AMC)

The Auxiliary Maintenance Computer (AMC), developed by Demo Systems for the C-5 aircraft, is a ruggedized high performance airborne server supporting Mil-Std-1553B avionic busses and an Ethernet network.

- The AMC is designed for harsh environments and features solid-state flash drives to ensure high reliability and enhanced functionality at higher altitudes. It runs with a Windows 2000 Server operating system on an Intel 1.2 GHz PIII processor. The AMC supports six (6) dual redundant 1553B serial interfaces, and ten channels of switched 10 BaseT/100 BaseTX Ethernet.
- The AMC is based on Demo Systems' Network Server Units (NSU), which is designed for commercial aircraft in accordance with ARINC Characteristic 763 (Network Server System). The NSU and AMC meet ARINC 600 6-MCU size, power and cooling requirements for airborne equipment. Three generations of NSUs have been developed and flight certified in partnership with Honeywell for Global Express and Citation aircraft.
- Network servers support the following functions: collect flight data and fault information, link to high-speed air-ground data link to provide e-mail and web server access, provide graphical weather reports, navigation charts, store loadable OFP software for all airborne systems, and perform dataloading via MIL-STD 1553 and ARINC 615/615A.

## *System Overview*

- Combination of COTS and Custom Assets and Assemblies
- Windows 2000 Server Operating System
- Six MIL-STD 1553B Dual Redundant Avionic Interfaces expandable to eight (8).
- Ten Port Layer 2 Managed Ethernet Switching Capabilities expandable to 16 Ports
- AC and DC Power Input with Battery Backup UPS
- Internal Fan Cooling – requires no external cooling air
- Environmentally Sealed with EMI Containment Electronics Compartment
- Industry Standard Compact PCI Technology
- Expansion slot designed to support ISDN Interface high speed (128KBS) for satellite communications
- Expansion supported to add ARINC 429 Interface for GATM dataloading

Teledyne Controls, 501 Continental Boulevard, El Segundo, CA 90245-5036
Tel: 310-765-3600; Fax: +1-310-765-3605; www.teledynecontrols.com

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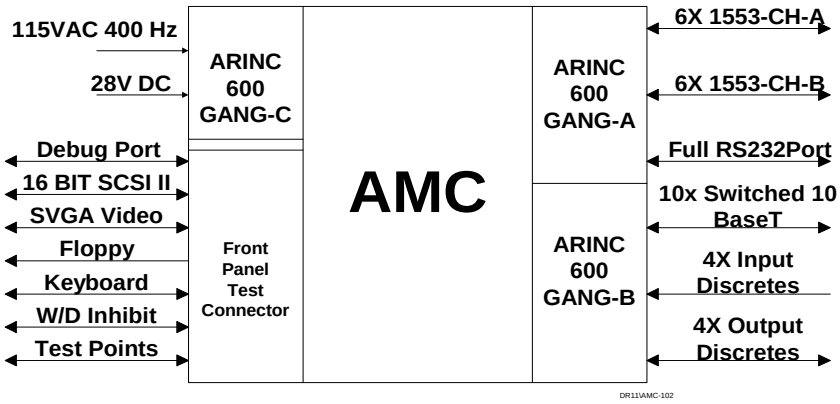


## Specification for Military (C-5 RERP) AMC

| Feature | Military AMC (Preliminary) |
|---|---|
| ***Performance*** | |
| Main Processor & Speed | Pentium-III, 1.2 GHz |
| RAM | 512MB ECC DRAM |
| Storage | 6 GB Flash Drive |
| I/O Processors | Mil-Std-1553B controlled by a subsystem processor |
| Ethernet Switch | SNMP Managed switch, with VLAN and separate management processor |
| ***ARINC 600 Connector Interfaces*** | |
| Mil-Std-1553B | 6 Dual Redundant Manchester interfaces capable of independent Bus Controller, Remote Terminal or Bus Monitor modes of operation |
| Ethernet | 10 ports, 10 BaseT / 100 BaseTX auto sensing, auto negotiating<br>Supports SNMP & VLAN |
| RS-232 | 1 channel |
| Aircraft Discretes | 4 Inputs & 4 Outputs |
| ***Front Panel Utility Connector Interfaces*** | |
| Interfaces | Display, keyboard, mouse, floppy drive, USB, Ethernet, Test points |
| ***Power*** | |
| Primary | 115VAC, 400Hz and/or 28VDC<br>Nominal Power - 96 watts<br>Maximum power – 150 watts |
| Secondary | 28VDC backup when operating on 115VAC, 400Hz |
| Battery | Field Replaceable 12 Volt DC – Provides backup power for orderly shutdown |
| ***Mechanical*** | |
| Dimensions | 7.8”H x 7.58”W x 14.52”D (ARINC 600, 6MCU) |
| Weight | 25 lbs |
| Interface Connector | ARINC 600, Type 2 connector |
| Front Panel | Utility port connector, Battery access panel on front top, LEDs - power, fail, temperature |
| ***Environmental & EMI*** | |
| DO-160D Environmental | A1, C, A, B (Sustained Acceleration), X, E, W, X, D, F, S |
| DO-160D EMI | X, A (Normal and Abnormal DC Power), A, A, A, R, M, xxC3, X, X, X |
| MIL-STD-704C | Normal and Abnormal AC Power |
| MIL-STD-810C | Operational Shock Method 516.2, Procedure I, Figure 516.2-2<br>Impulse Crash Safety Method 516.2, Procedure III, Figure 516.2-2 |
| MIL-STD-810E | Acceleration Method 513.4 Procedure I & II<br>Vibration Method 514.4 Category 5 |
| MIL-STD-464 | Bonding Section 5.10 |
| Altitude | 25,000 feet |
| Temperature | Operating –40°C to +55°C |

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