



BES Systems Ltd.

Mission Computer - AMC-300

A family of miniature Airborne mission PC computers running Embedded Windows NT or Windows CE.

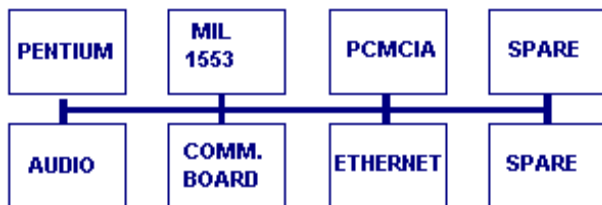
AMC-300 computers are built and qualified for F-15, F-4, A-4, F-5 Tornado and F-16 "Wing Tips".

The AMC-300 has many options, including various input output cards, PCMCIA recording and external or internal power supply.

AMC-300 PC features 300MHz, 256MB Pentium CPU, SoundBlaster, Ethernet, MIL-1553, SDLC, RS-422/RS-232, Discrete signals, and GPS 1PPS processing. The major hardware components of the AMC-300 are:

The major components of the AMC-300 are:

- ◆ 300MHz Pentium CPU, 128-256MB RAM
- ◆ 48-144MB Disk On Chip
- ◆ 10Base2 Ethernet
- ◆ 4xRS-422 or RS-232 by software selection
- ◆ PCMCIA Drive up to 256MB
- ◆ SoundBlaster, 8ohm or 50Kohm impedance
- ◆ MIL-STD-1553 Bus controller/Remote-terminal/Bus-monitor
- ◆ Power Supply.
- ◆ Free extension slots.



Size: L=253 W=100 H=85 [mm]



CPU Card General Description

- ◆ 300 MHz Pentium MMX™ Processor
- ◆ 128-256MB Synchronous DRAM
- ◆ Nonvolatile Configuration & Flash BIOS
- ◆ Software selectable RS-232/422/485 ports
- ◆ Enhanced Phoenix PICO BIOS
- ◆ 16KB internal cache
- ◆ DiskOnChip (up to 144MB)
- ◆ Real time clock
- ◆ Watchdog timer
- ◆ 7 DMA channels
- ◆ 15 interrupt channels
- ◆ 3 timer/counter channels
- ◆ ECP/EPP parallel port

Power Supply requirements

5VDC 4A, +12VDC .3A, -12VDC 0.1A or 28VDC 0.7A.

BES Systems Ltd.
6B Tfuzot Israel St.
Givataim Israel 53583

Tel: 972-3-571-4998 Fax: 972-3-571-5085 Email: asherlav@bes.co.il





BES Systems Ltd.

Thermal Design

The cooling of the components on the AMC-300 is accomplished by heat natural convection from its surface.

Environmental Conditions

Temperature:

The AMC-300 will not be damaged or affected by the effects of ambient air temperature as follows:

Operating: The AMC-300 shall meet performance requirements specified herein after exposure to temperatures from -54° to +71°C

Non-operating: (Storage/transportation) from -54° to 95°C.

Relative humidity

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

Non-operating: 95% RH.

Vibration

According to MIL-STD-810E for airborne environment.

Shock

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

Electromagnetic Interference

The AMC-300 as specified complies to the requirements of MIL-STD-461C.

Fungus

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

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 the requirements of MIL-STD-810E.

Salt Fog:

The AMC-300 is resistant to the corrosive effects of salt fog environment according to MIL-STD-810E.

RELIABILITY:

The AMC-300 -PC has an MTBF of 10,000 hours at 25°C . Mean Time To Repair (MTTR) does not exceed 30 minutes.

SOUND BLASTER MODULE GENERAL DESCRIPTION

SoundBlaster, SoundBlaster Pro software compatible
Audio for pilot audio line – Level up to 40VPP into a load >20KOHM, 1KHz nominal.

16-bit and 8-bit stereo recording and playback.

5KHz to 44.1KHz sample rates

On-board ADPCM compression/decompression

Yamaha OPL3 compatible FM music synthesis

Built-in stereo audio power amplifier

Manual and/or software controlled speaker volume

1553 CARD GENERAL DESCRIPTION

The card is in single channel version dual redundant (dual channel is optional). The dual redundant channel may be programmed to operate as a Bus Controller or Remote Terminal or Monitor or Remote Terminal Concurrent Monitor. The card is supplied with C drivers, including source code, and menu driven software.

SALIENT FEATURES

Supports MIL-STD- 1553A, B

Operates as BC, RT, & RT .

32K x 16 per channel Dual Port RAM

Polling or Interrupt Driven Bus Controller

Major & Minor Frames

Programmable Intermessage Gap Bus Monitor

Monitor All or Selected Messages

16 Bit Time Tag

ETHERNET FUNCTION DESCRIPTION

SMC 91C94 (SMC 9000 series)

Ethernet bus, using CSMA/CD

10Base-2 (thin coax)

10M bits/second

4608 byte onboard RAM, accessed via I/O ports

300h, 320h, 340h, or 360h

IRQ2, IRQ3, IRQ4, IRQ5, IRQ10, IRQ11

External cabling: RG-58A/U, 50 ohm

March 2002

BES Systems Ltd.
6B Tfuzot Israel St.
Givataim Israel 53583

Tel: 972-3-571-4998 Fax: 972-3-571-5085 Email: asherlav@bes.co.il

