Advanced Signal Data Computer

L3 communications
Electrodynamics, Inc.

Military Data Recorders

FEATURES

- Acquires data on up to 60 channels simultaneously
- Edits and saves selected data and events in internal memory (8MB) or optional external crash-survivable memory unit
- 32 bit microprocessor with integrated co-processor
- Remote Terminal interface for device control data acquisition and data download
- Analog, discrete, synchro, tachometer, vibration, MIL-STD-1553B interfaces
- Error-checking on all storage operations
- Uploadable program memory
- Extraction over RS-422 bus or 1553
- All records independent and self-documenting
- BIT: Power-on, commanded, periodic
- Validated per RT validation test plan
- EIA-RS-422 GSE interface
- Configurable for new applications
- Convection cooling
- Fluorescent International Orange Color
- 100% ESS on all units
- GSE available for test and download

The L-3 Communications, Electrodynamics (L-3 EDI) Advanced Signal Data Computer (ASDC) receives key vehicle, subsystem, and environmental parameters from up to sixty analog or digital channels at up to 128 Hz, and stores formatted records in an internal crash protected memory module or L-3 EDI's external Crash Survivable memory unit (CSMU). The ASDC formats records for structural and engine integrity programs as well as incident and mishap investigation. The ASDC was developed for the T-45A/C trainers but can be easily adapted to other vehicles.

Recent updates allow improvements to engine and structural life tracking that will lead to long term Operations and Support improvements and cost savings.

The ASDC is suitable for mounting in an avionics rack. It contains a 32-bit microprocessor with integrated co-processor, dual-redundant Remote Terminal interface, analog, discrete, synchro, tachometer and vibration interfaces, memory and a power supply. This highly reliable unit has no moving parts or adjustments.

The recording function receives and compresses signals on all channels simultaneously, saving user-specified information in compressed form while also detecting complex exceedance events and processing engine algorithms for engine wear data.

Unit built-in test is performed on power-up, on command, and continuously. Downloading of flight data can be performed at any time over the MIL-STD-1553B bus or a dedicated RS-422 channel. The modular, configurable design of the ASDC permits adaptation of new requirements and fast, easy fault detection, isolation and repair in the field. Cooling is by convection.

L-3 EDI, a leader in solid-state recorder technology, has also produced recorders for the B-1, B-2, F-4, F/A-22 and JAS-39 aircraft.

See over for Design and Specifications information ➧

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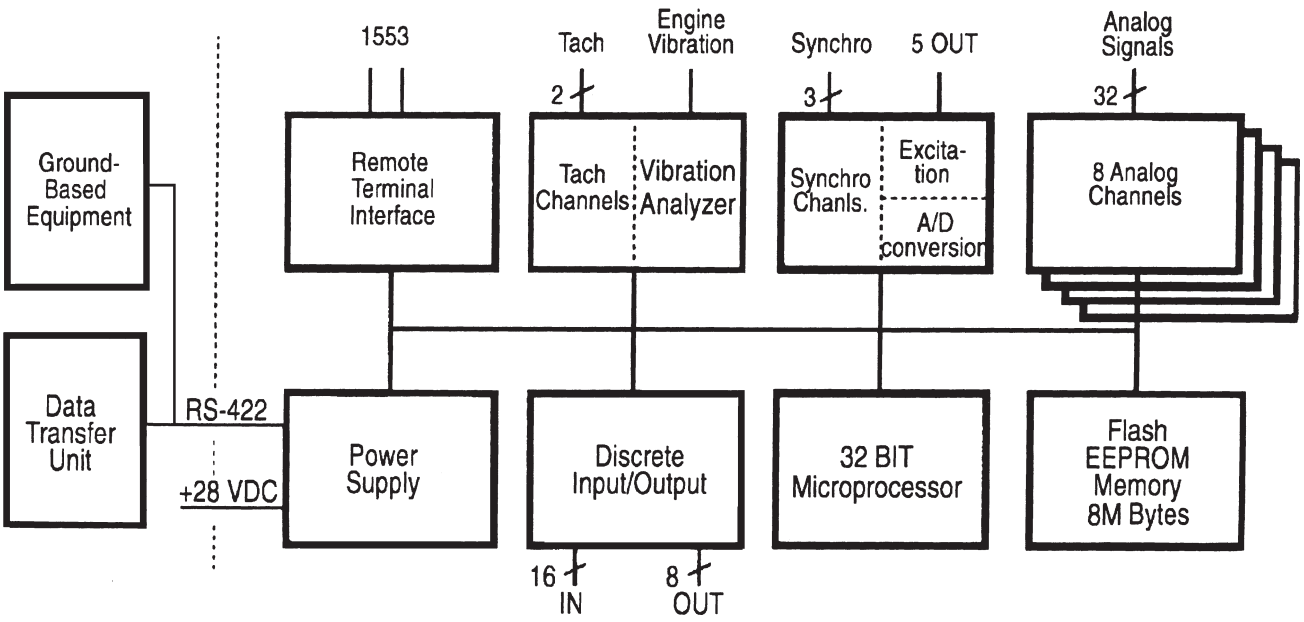
DESIGN

MIL-E-5400—general
MIL-STD-454—general
MIL-STD-704—aircraft power
MIL-STD-810—environmental test
MIL-STD-461/462—EMC
MIL-STD-1553B—multiplex bus

SPECIFICATIONS

Size: 7.0” H x 6.2” W x 10” D
Weight: 16.2 lbs.
Power: +28 VDC @ 60 watts
MTBF: 6,700 hours (MIL-HDBK-217E)
MTTR: 1.0 hour
MMH/FH: .0007
Life: 15,000 hours operating, 20 years useful



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