



eDAQ-1553

MIL-STD-1553 Ethernet Data Acquisition Unit

The eDAQ-1553 module is a compact, simple to use solution for streaming MIL-STD-1553 bus data over a Ethernet local area networks (LANs). No external software or setup is required. At power-on the unit simply streams all MIL-STD-1553 bus data to a UDP stream on the Ethernet LAN interface of the module. The LAN data stream can be configured to unicast to a single LAN host or to multicast allowing the bus data to be accessed from any host system on the LAN. MIL-STD-1553 bus data is streamed over the LAN in standard IRIG 106 Chapter 10 format for use by a wide variety of 3rd party telemetry and data recording instruments or for capture and display using AIT's MIL-STD-1553 Flight Simulyzer Analyzer software.



eDAQ-1553 APPLICATIONS

System Integration Labs

A single eDAQ-1553 connected to a MIL-STD-1553 bus network can make all bus data available to any system on the LAN for capture and analysis

Flight Test Data Acquisition

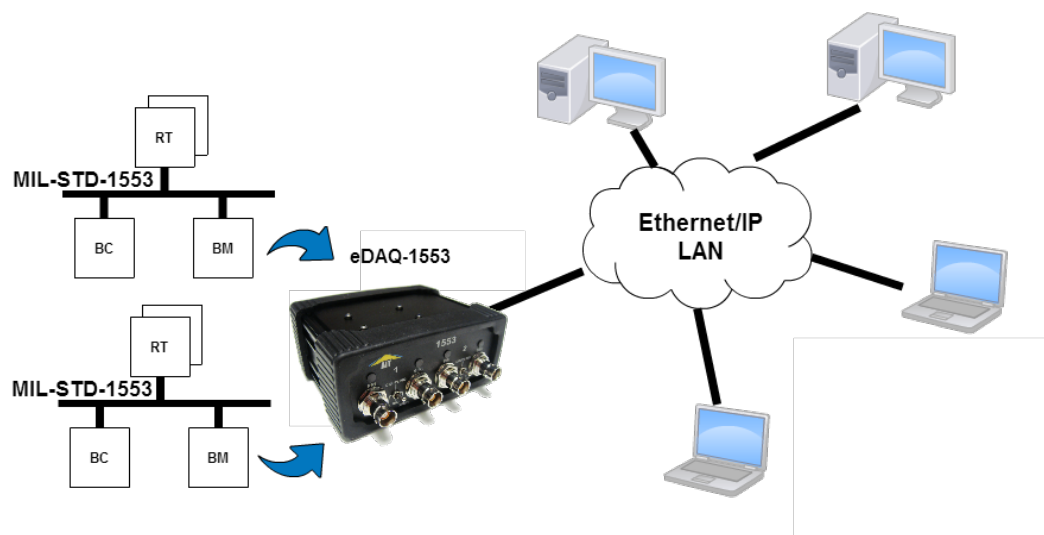
Ruggedized eDAQ-1553 modules can act as MIL-STD-1553 Data Acquisition Units (DAU) to stream IRIG 106 Chapter 10 data to recorders or other telemetry systems on an In-vehicle network

Avionics Gateways

The eDAQ-1553 can be used to make legacy bus data available to more invehicle systems by bridging MIL-STD-1553 data into an onboard Ethernet network

Key Features

- One or two dual redundant MIL-STD-1553 bus interfaces
- Transformer and Direct bus coupling supported
- Two 10/100/1000 Mbit/s Ethernet LAN Interfaces
- All Ethernet data streamed in standard IRIG 106 Chapter 10 data format
- All MIL-STD-1553 bus data provided with timestamps
- Full error detection information provided for each bus word
- Onboard time-tag clock synchronization to external IRIG-B time signal
- Works with AIT's Flight Simulyzer™ GUI Analyzer software
- IRIG 106 Chapter 10 output stream compatible with 3rd party recorders and telemetry tools



REMOTE & SHARED ACCESS TO BUS DATA

The eDAQ-1553 module captures, timestamps, and streams all detected MIL-STD-1553 bus data to its Ethernet LAN network interfaces. The bus data stream requires no programming or applications software. Once the eDAQ-1553 is powered it will immediately begin the capture and streaming of the bus data.

All bus data can be streamed to the LAN interfaces of the modules, or the module can alternatively be configured to filter the bus data on Remote Terminal Address and/or Subaddress.

The module can also be configured to stream the bus data to a single unicast Internet Protocol (IP) address or to stream to an IP multicast address so that the bus data can be accessed by multiple hosts on the connected LAN.

MIL-STD-1553 ANALYZER

The eDAQ-1553 comes standard with a MIL-STD-1553 Analyzer (AIT's Flight Simulyzer) software license. The Flight Simulyzer analyzer software can be used anywhere on the connected LAN to capture, view, record, and analyze the streamed MIL-STD-1553 bus data. Multiple users can concurrently and independently use the analyzer software to view and analyze the bus data.

COMPATIBLE WITH INDUSTRY STANDARDS

The MIL-STD-1553 Ethernet data streams are encoded using the standard IRIG 106 Chapter 10 Data format and include timesamps and detected error information for the MIL-STD-1553 data bus. Use of the IRIG 106 Ch.10 data format allows the output data streams to be captured and recorded with 3rd party instruments and equipment compatible with the Chapter 10 format. Additionally, the eDAQ-1553 module also provides an IRIG-B input which allows the module to accept an external IRIG-B time signal as input for synchronization of its onboard time stamp clock to an external time reference. The module also provides an IRIG-B output so that multiple eDAQ-1553 modules can be time synchronized (one eDAQ-1553 can be configured as the time master and the others slaves).

ORDERING INFORMATION

eDAQ-1553-1

Single Channel MIL-STD-1553 Ethernet Data Acquisition module. Includes Flight Simulyzer MIL-STD-1553 Analyzer Software.

eDAQ-1553-2

Dual Channel MIL-STD-1553 Ethernet Data Acquisition module. Includes Flight Simulyzer MIL-STD-1553 Analyzer Software.

Technical Data

Dimensions:	115mm X 51mm X 105mm
Weight	1.1 lbs
Weight: 1.1 lbs MIL-STD-1553 I/F	(2) Dual Redundant MIL-STD-1553
1553 Connectors	(4) Coaxial Tri-axial BNS (Twin-ax configuration)
Ethernet Connectors	RJ-45
Serial Connector	DB9 (female)
IRIG-B Connector	DB15 (female)
DC Connector	0.080" / 2 mm center pin (positive), 0.215" / 5.5 mm sleeve (negative)
DC Supply Voltage	Normal 8 to 20 Volts
DC Supply Power (Max)	5 Watts
Power Consumption	Operating: 3.5 Watts (Typical) Idle: 2.5 Watts
Operating Temp.Range	-40° C...+85° C ambient
Storage Temp. Range	-40° C to +85° C
Humidity	0 to 95% non-condensing

