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Find the *Teradyne eDAQ-1553-1* at our website: ***Click HERE***

AVIONICS INTERFACE TECHNOLOGIES
A Teradyne Company

eDAQ-1553

Single or Dual Stream MIL-STD-1553 A/B Test & Simulation Ethernet Module

Overview

The eDAQ-1553 module is part of AIT's family of instruments and modules offering full function test, simulation, monitoring and databus analyzer functions for MIL-STD-1553 A/B applications. The eDAQ-1553 provides connectivity to the host computer over the Ethernet LAN and can be accessed remotely from any device on the LAN.

AIT's eDAQ-1553 is ideal for protocol testing and simulation of MIL-STD-1553 A/B Bus Controller (BC), multiple Remote Terminals (RTs) and chronological Bus Monitoring (BM) at full bus load. All operations are performed concurrently with no degradation of performance in an operating mode. The eDAQ-1553 devices supports full protocol error injection and detection features.

In addition to operating as a full featured MIL-STD-1553 test & simulation module, the eDAQ-1553 can also be configured for operation as a standalone autonomous data acquisition device which captures, time-stamps, and streams MIL-STD-1553 bus data in IRIG 106 Chapter 10 format.



Applications

System Integration & Testing

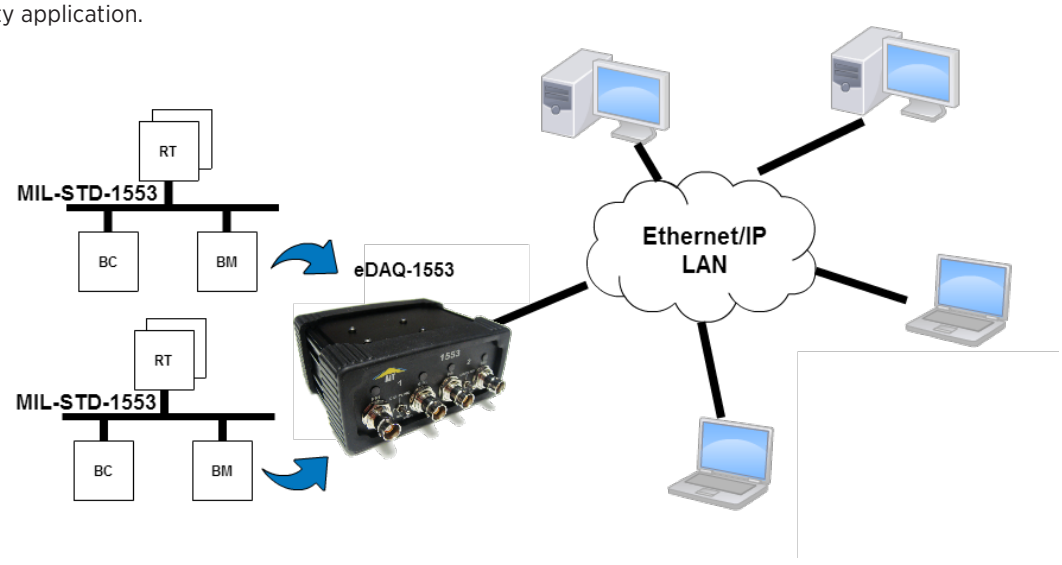
A single eDAQ-1553 can be accessed by any host on the attached LAN. Users can control the eDAQ-1553 using AIT's Flight Simulyzer application, or their own application created using the available C, C++, C#, or LabVIEW APIs.

Data Acquisition

The eDAQ-1553 can act as MIL-STD-1553 Data Acquisition Unit (DAU) to stream IRIG 106 Chapter 10 data that can be captured and viewed by AIT's Flight Simulyzer or any Chapter 10 compatible 3rd party application.

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
- Concurrent BC, Multi-RTs, and BM operations
- Streams MIL-STD-1553 bus data in standard IRIG 106 Chapter 10 data format. Compatible with 3rd party recorders and telemetry tools
- All captured MIL-STD-1553 bus data provided with timestamps
- Full error injection & detection capabilities
- Works with AIT's Flight Simulyzer™ GUI Analyzer/Simulator software application
- Works with AIT's MIL-STD-1553 Software Development Kit (C, C++, C#, and LabVIEW VI APIs provided)



BUS CONTROLLER

The eDAQ-1553 provides real-time bus controller functions on one or two dual-redundant MIL-STD-1553A/B buses concurrently with multiple RT and chronological monitor operation.

- Autonomous operation including sequencing of minor/major frames
- Programmable BC Retry without host interaction
- Full error injection down to word and bit level (AS4112 compliant)
- Multi-buffering with real-time data buffer updates
- Synchronization of BC operation to trigger inputs
- Intermessage gaps programmable down to 4 -sec

REMOTE TERMINALS

The user can simulate up to 31 RTs at once, including all subaddresses, on one or two MIL-STD-1553A/B bus systems concurrently with BC and BM operation. Alternately, each of the 31 RTs can operate in a message oriented 'Mailbox Monitor Mode' to monitor non-simulated RTs.

- Programmable response time for each RT with fast RT response at 4 -secs
- Programmable and intelligent response to mode codes
- Full error injection down to word and bit level (AS4112 compliant)
- Multi-buffering with real-time data buffer updates

CHRONOLOGICAL BUS MONITOR

The eDAQ-1553 offers single or dual stream bus monitoring and analysis with programmable trigger and capture features. The Chronological Bus Monitor (BM) provides accurate time tagging of all bus traffic to 1 msec resolution including response time and gap time measurements down to 250 nsec resolution.

- Autonomous message synchronization and full error detection
- Two static/dynamic complex triggers with sequencing
- Message filter and selective capture
- Bus activity recording independent from trigger and capture mode
- External trigger inputs and outputs
- Programmable response time-out

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.

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	(2) 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	-40º C...+85º C ambient
Storage Temp. Range	-40º C to +85º C
Humidity	0 to 95% non-condensing

ORDERING INFORMATION

eDAQ-1553-1
Single Channel MIL-STD-1553 Ethernet Test & Simulation module. eDAQ-1553. Concurrent BC, up to 31 RTs, and BM functions. Provides (2) 10/100/1000 Ethernet LAN interfaces. IRIG 106 Chapter 10 streaming supported.

eDAQ-1553-2
Dual Channel MIL-STD-1553 Ethernet Test & Simulation module. eDAQ-1553. Concurrent BC, up to 31 RTs, and BM functions. Provides (2) 10/100/1000 Ethernet LAN interfaces. IRIG 106 Chapter 10 streaming supported.

eDAQ-1553M-1
Single Channel MIL-STD-1553 Ethernet Monitor Only module. Streams MIL-STD-1553 Bus Data in IRIG 106 Chapter 10 format. Proves (2) 10/100/1000 Ethernet LAN interfaces.

eDAQ-1553M-2
Dual Channel MIL-STD-1553 Ethernet Monitor Only module. Streams MIL-STD-1553 Bus Data in IRIG 106 Chapter 10 format. Proves (2) 10/100/1000 Ethernet LAN interfaces.

Get More Information at:

Aviftech.com/MIL-STD-1553

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