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INTERFACE
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A Teradyne Company

MIL-STD-1553 Data Acquisition Unit

Rugged, Flight Ready MIL-STD-1553 DAU

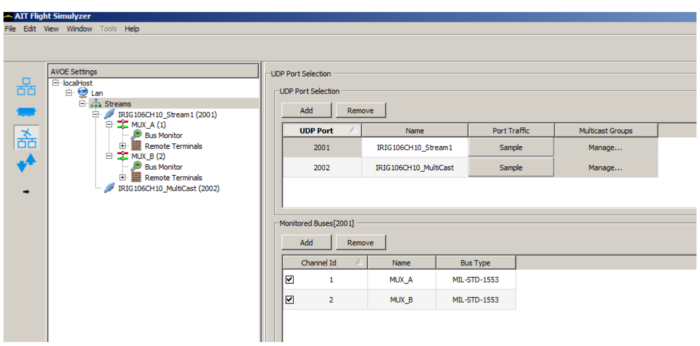
The AIT rugged eDAQ-1553-FQ is a small, rugged (MIL-STD-810G), flight ready MIL-STD-1553 DAU that is capable of streaming captured MIL-STD-1553 bus data to flight test recorders, telemetry gateway systems, and over PCM. For data recordings, the eDAQ-1553-FQ timestamps all captured data and provides an output IRIG 106 Chapter 10 data stream which includes detected bus errors. The onboard timestamp clock can be synchronized to either an IRIG-B or IEEE 1588 clock master signal. The eDAQ-1553-FQ can also be configured to stream, over Ethernet, selected MIL-STD- 1553 bus data, to a telemetry gateway or out from one it's available PCM output interfaces. The telemetry gateway data streams can be configured to encode data into the Telemetry Network System (TmNS) Data Message format within a UDP stream.

AIT's Rugged eDAQ-1553-FQ

Small, Rugged, Simple

The eDAQ-1553-FQ is an extremely compact (6in X 1.9in X 1.5in), ruggedized (MIL-STD-810G), and easy to use network appliance. The module is ready to use right out of the box. Simply power up and the eDAQ-1553-FQ will immediately stream all captured MIL-STD-1553 data to Ethernet in IRIG 106 Chapter 10 format.

For more sophisticated operations, the unit can be configured using AIT's eDAQ System Setup utility software. The eDAQ-1553-FQ can be configured to send IRIG 106 streams to different IP addresses and UDP ports. Additionally, it can be configured to also output a stream of UDP data to a telemetry gateway which is formatted into the PCM framing structure required for transmission to ground stations.



eDAQ-1553-FQ System Setup Utility Application

Key Features

- Two Redundant MIL-STD-1553 bus interfaces
- Two 10/100/1000 Mbit/sec Ethernet LAN Interfaces (Supports POE & IEEE-1588 time synchronization
- One RS-232 Serial Interface
- (5) GPIO Discretes
- (2) PCM Outputs (up to 20 Mbps)
- Supports MIL-STD-1553 Data streaming over Ethernet to Data Recorders and Telemetry Gateways
- Transformer MIL-STD-1553 bus Coupling
- MIL-STD-1553 Data Streamed to Ethernet in IRIG 106 Chapter 10 Format for Data Recorders
- Selected MIL-STD-1553 Bus Data Parameters Streamed to Telemetry Gateways in TmNS format or out over PCM
- All MIL-STD-1553 Capture Data is Timestamped
- Timestamp synchronization to IEEE 1588 and IRIG-B
- Full MIL-STD-1553 Bus Error Detection
- Also capable of full Bus Controller and (multi) Remote Terminal operations (embedded processor included to host user applications)

Fully Functional Bus Controller & Remote Terminal(s)

In addition to functioning as a DAU, the eDAQ-1553-FQ is also capable of operating as a fully functioning MIL-STD-1553 BC and concurrently as multiple (up to 31) RTs. The onboard embedded processors can be utilized to host embedded applications software with access to the MIL-STD-1553 bus interfaces and both LAN network stacks available for use by the user application.

Compatible With Industry Standards

The eDAQ-1553-FQ streams captured MIL-STD-1553 bus data encoded in the standard IRIG 106 Chapter 10 Data format and includes timestamps and detected error information for the bus data. 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-FQ module supports the input of IRIG-B and IEEE 1588 master clock signals allowing the timestamping clock of the unit to be synchronized to an external time reference. The eDAQ-1553-FQ also provides control and status operations over the LAN interfaces via Simple Network Management Protocol (SNMP) and the eDAQ-1553-FQ Agent in compliant with the Integrated Network Enhanced Telemetry (iNET) System Management standard.

Highly Configurable

The eDAQ-1553-FQ integrates AIT's MIL-STD-1553 BC &RT protocol engine with (2) Ethernet LANs, (5) GPIO lines, and (2) PCM output interfaces. All interfaces can be accessed from an embedded processor allowing the eDAQ-1553-FQ to be customized to meet a wide range of applications requirements in addition to the out-of-the-box IRIG 106 Ch.10 streaming and telemetry framing functions.

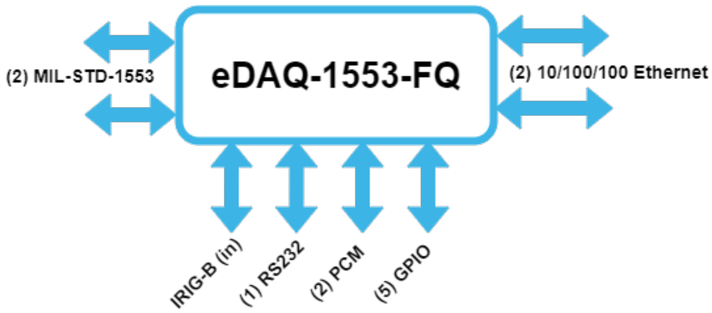
ORDERING INFORMATION

eDAQ-1553-FQ-1

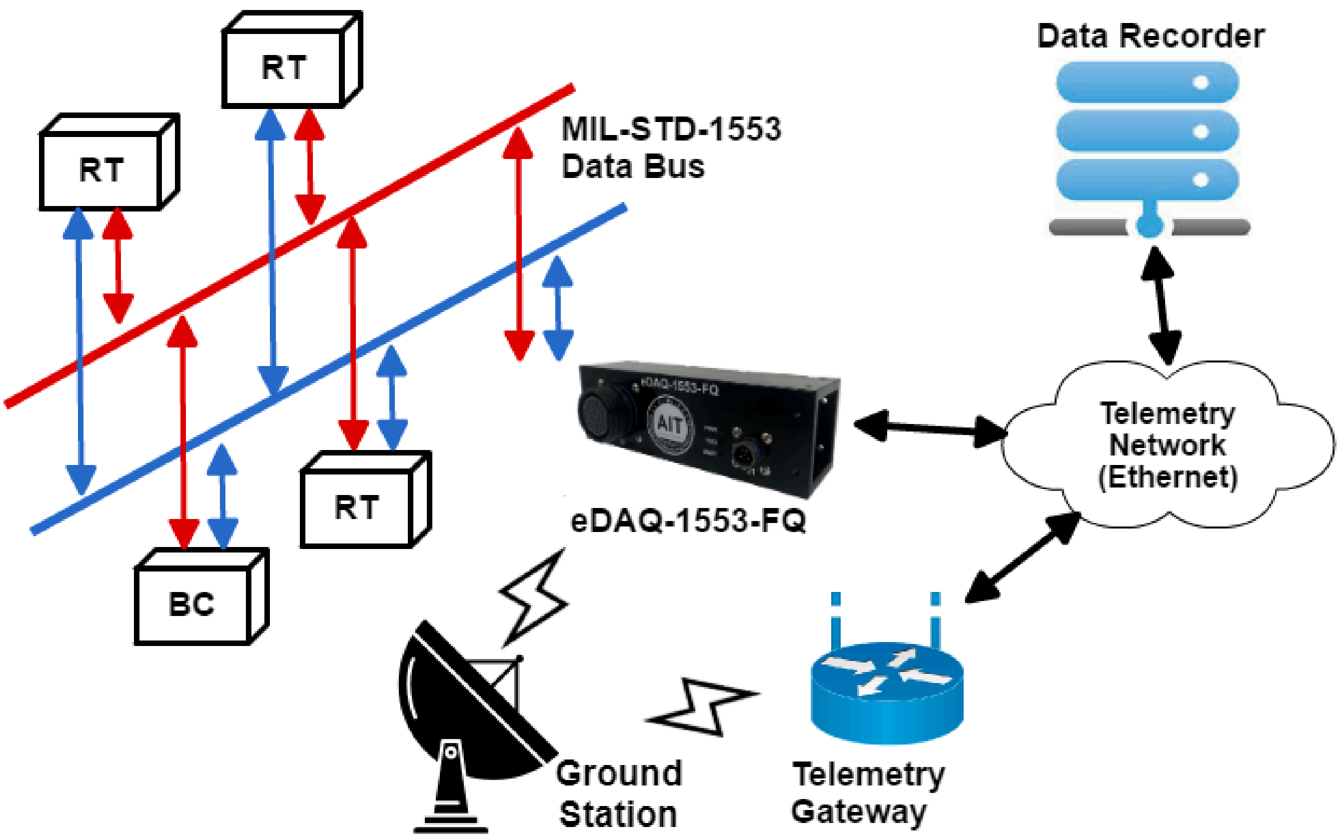
Single Channel MIL-STD-1553 Ethernet Data Acquisition Unit with (2) Ethernet LANs, IRIG-B, RS-232 (5) GPIO, and (2) PCM Outputs Includes System Setup Utility software.

eDAQ-1553-FQ-2

Two Channel MIL-STD-1553 Ethernet Data Acquisition Unit with (2) Ethernet LANs, IRIG-B, RS-232, (5) GPIO and (2) PCM Outputs. Includes System Setup Utility software.



eDAQ-1553-FQ I/O



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