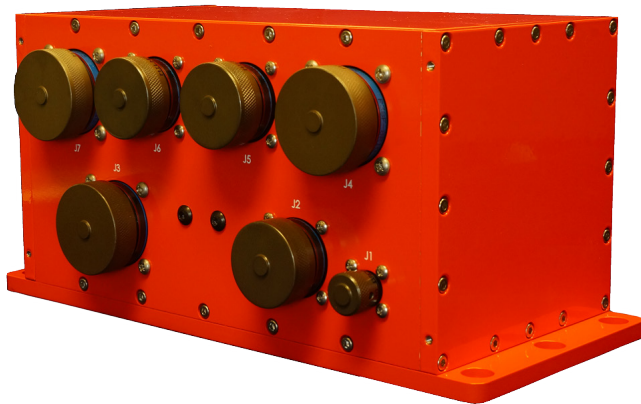


# Avionics Network Data Aggregator

## Rugged Avionics Network Data Logger & Aggregator



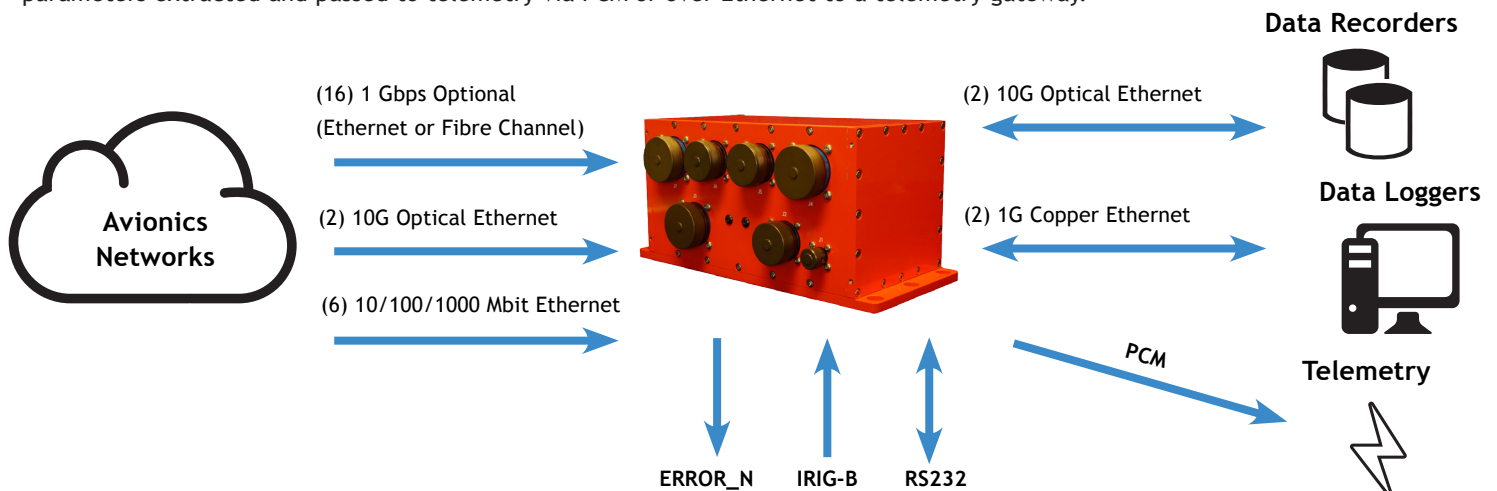
AIT Network Data Aggregator

### KEY FEATURES

- 16 Optical 1 Gbps Inputs independently configurable as Ethernet or Fibre Channel
- 6 Copper 10/100/1000 Mbps Ethernet inputs
- 2 Optical 10Gbps Ethernet inputs
- (2) 1 Gbps and (2) 10 Gbps Ethernet outputs to data recorders
- Supports time synchronization to IRIG-B DC or IEEE 1588 master clocks
- 1 PCM Telemetry Output (up to 20 Mbps)
- Telemetry outputs to Network Gateways using TmNS (Telemetry Network System) protocol
- Small, lightweight enclosure tested to meet operation in military airborne environments
- Operating Temperature range: -45 C to 85 C
- Compliant with MIL-STD-461E EMI Requirements and MIL-STD-810 Shock & Vibration Requirements
- MIL-STD-704A 28 V DC Power Compliant
- Supported by Ground Support Software suite via Ethernet LAN
- Built-in-test with continuous status provided

### GENERAL OVERVIEW

AIT's Avionics Network Data Aggregator (ANDA) is a high-performance, ruggedized, flight-certified network data aggregator system capable of supporting data logging and flight test data acquisition applications. The ANDA supports monitoring, selecting, and aggregating Fibre Channel and Ethernet data from multiple input streams for forwarding to data recorders and telemetry interfaces. The ANDA provides (16) 1 Gbp optical monitoring inputs, which can be independently configured to capture Fibre Channel or Ethernet data. The ANDA also provides (6) 10/100/1000 Mbps (BASE-T) Ethernet monitor inputs and (2) 10 Gbps optical Ethernet monitor inputs. All captured data is timestamped with 1nS resolution and the ANDA can be synchronized to an IEEE 1588 or IRIG-B master clock. Captured network data can either be filtered or passed through in bulk to external data recorders via either a 1 Gbps (copper) or 10 Gbps (optical) Ethernet. Captured network data can also be selectively filtered and data parameters extracted and passed to telemetry via PCM or over Ethernet to a telemetry gateway.



# Fibre Channel & Ethernet Data Aggregator

## CONFIGURATION SOFTWARE

The ANDA is supported by an intuitive, easy-to-use System Setup and Configuration (SSC) software utility. The SSC application allows the user to define the Ethernet and Fibre Channel data selection and filtering, as well as the connections to external data loggers and recorders. Additionally, the SSC provides a Telemetry frame builder to allow the user to define the framing data format for the ANDA telemetry (PCM or TmNS Gateway) outputs. The configurations defined using the SSC are stored in XML format and can be edited directly using an XML editor. The SSC also provides TMATS outputs, which can be deployed to ground stations for Telemetry data interpretations. Once a full ANDA setup is defined it can be compiled into a loadable configuration, which can be transferred to the ANDA (and stored in NOVRAM) using the AIT provided System Status & Health (SSH) software application.

## TECHNICAL DATA

<b>Memory:</b>	2 GB to 16 GB depending upon the configuration
<b>Time Tagging:</b>	1 ns resolution
<b>Fibre Channel Inputs:</b>	1.0625 Gbps bps
<b>GigEthernet Inputs:</b>	1 Gbps 802.3 Ethernet
<b>IEEE 1588 Input:</b>	IEEE 1588-2008 over 802.3 Ethernet
<b>10 GigEthernet Output:</b>	10 Gbps 802.3 Ethernet
<b>GigEthernet Outputs:</b>	1 Gbps 802.3 Ethernet
<b>PCM Output:</b>	up to 20 Mbps PCM
<b>Connectors:</b>	DS03Z8-35XN-102 (MILNEC) TX00Z19-35YN-106 (MILNEC) TX00Z23-35YN-106 (MILNEC) P13F-4S1H-FZ-L085 (Protokraft) P38F-8R1D-HZ-L138 (Protokraft) P38F-8R1D-HZA-L138 (Protokraft) P13F-4S1H-FZA-L085 (Protokraft)
<b>Dimensions:</b>	11.26" w x 5.35" h x 5.04" d
<b>Weight:</b>	9.6 lbs
<b>Power Consumption:</b>	Estimated 25 Watts (active)
<b>Operation Temp:</b>	-45° C to +85° C ambient

## GROUND SUPPORT SOFTWARE

The ANDA is also supported by AIT's System Status & Health (SSH) software application. The SSH can be hosted on any Windows (7/10) based system with a LAN interface. The SSH communicates with the ANDA via the Ethernet LAN and provides functions to:

- Load Configurations to ANDA NOVRAM
- View Real Time Capture Statistics & Counters
- View Real Time Telemetry Output Statistics & Counters
- View Real Time Recorder Output Statistics & Counters
- Select, Log, and View captured parameters in Engineering Units (EU's)
- Display of EU's in user-defined screens with graphical instruments

## ORDERING INFORMATION

### ANDA-FC16 (FCIU-FC16)

ANDA with (16) Fibre Channel Inputs, (2) 1 Gbps Ethernet Outputs & PCM

### ANDA-FC6-10EO-TGR

ANDA with (6) Fibre Channel Inputs, (10) Optical Ethernet (1 Gbps) inputs, (2) 1Gbps Ethernet Outputs, (2) 10 Gbps Ethernet Outputs, & PCM

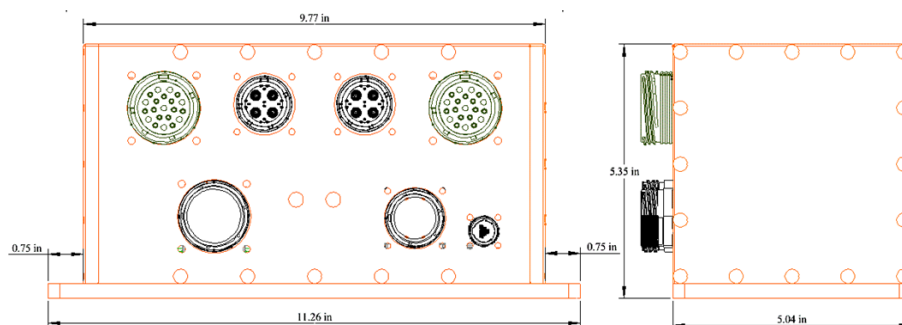
### ANDA-2E-14EO-TGR

ANDA with (2) 10/100/1000Mbps Ethernet Inputs, (14) 1 Gbps Optical Ethernet Inputs, (2) 1Gbps Ethernet Outputs, (2) 10 Gbps Ethernet Outputs, & PCM

### ANDA-5E-3EO-2TGO-2TG-TGR

ANDA with (5) 10/100/1000Mbps Ethernet Inputs, (3) 1 Gbps Optical Ethernet Inputs, (2) 10 Gbps Ethernet Inputs, (2) 1Gbps Ethernet Outputs, (2) 10 Gbps Ethernet Outputs, & PCM

*(Contact AIT for customized channel configurations.)*



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