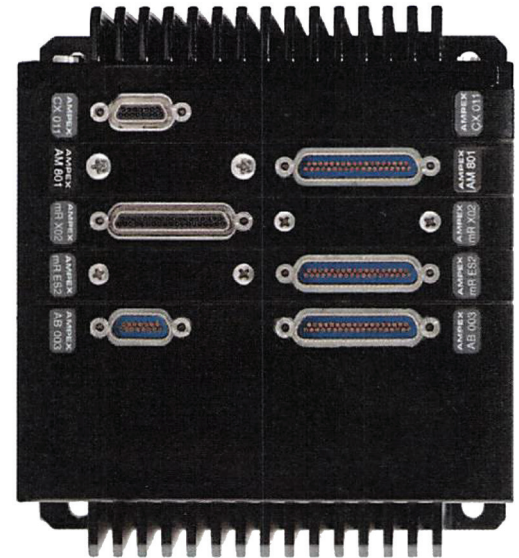


AMux™ 700 Data Acquisition Unit



Features

- Ethernet Data Acquisition Unit (DAU)
- IRIG 106 Chapter 10 Packet Format
- Modular, Expandable and Flexible I/O Options
- Gigabit Ethernet Output Interface
- Fast Ethernet Control Interface
- Built-in Gigabit Ethernet Switch
- Compatible with miniR® 700 and AMux™ I/O Modules
- Supports TCP, UDP and Multicast UDP Output Modes
- Conduction-cooled Flight-rated Proven Enclosure



Standards-Based Network Multiplexer

The Ampex AMux™ 700 Data Acquisition Unit (DAU) is a network multiplexer using the IRIG 106 Chapter 10 packet and stream format. Based on the successful miniR® 700 recorder system, the AMux 700 DAU timestamps data received over any supported interface and creates a single network output channel over Ethernet, using either a dependable TCP/IP connection or a versatile UDP/IP packet stream. When UDP is used, the AMux can use multicast addressing for even greater versatility.

Data Interfaces/Format

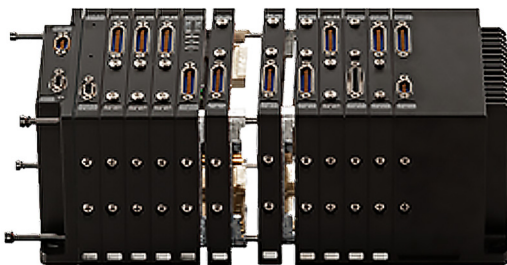
- IRIG-106 Chapter 10 packet format
- Network acquisition as well as output interfaces
- SD Video, MPEG2 and MPEG4
- HD Video, both H.264/AVC and Motion JPEG2000
- IntelliBus® interface
- Variety of AMux I/O Modules: PCM, UART, Analog, and Avionics buses

Configurable and Reconfigurable

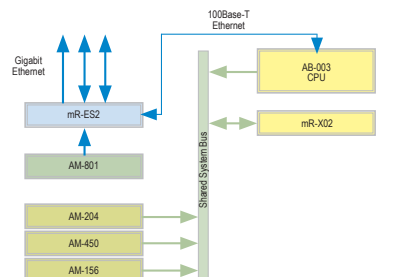
Building on the modularity of the miniR recorder, the AMux 700 DAU base system includes the AB-003 control unit, the mR-X02 multiplex module with a dedicated timecode input, the mR-ES2 Gigabit Ethernet switch with three available ports, and an AM-801 Gigabit Ethernet output module. Additional input modules may be added -- with a limit of seven to nine input modules, depending on the power and performance required of each. Time can be supplied using IRIG-B or HAVE QUICK time into the mR-X02 module, or over the network using NTP or IEEE1588 PTP. Power filter and hold-up modules are also available to meet the needs of a wide range of environments.

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While achievable throughput of the system will vary depending on the number and characteristics of the inputs, the system is rated to provide a usable payload throughput of 60MBytes/sec (480Mbits/sec), limited by the capability of AM-801 output module to accurately deliver data with no loss of packets.



Modular, Configurable, Expandable



System Block Diagram



Typical Input Module
(AM-204: MIL-STD-1553)

AMPEX AMux™ 700 Data Acquisition Unit

Specifications¹

Environmental Specifications*†

Altitude		70,000 ft
Temperature	Operating	-40 C to +71C
	Non-operating	-56°C to +80°C
Humidity (Relative)		0% to 100%
Random Vibration		14 grms.
Shock†		20 g (11ms)
EMI		To MIL-STD-461D†
Power		To MIL-STD-704A†

Operational Specifications*

Sustained I/O data rate	60 Mbytes/sec
	480 Mbits/sec

Software Configuration

Web-browser service running on base Ethernet port

† Complete MIL-STD-461D, MIL-STD-704A, MIL-STD-810D, test report results available on request; tested for rotary wing, multi-engine turboprops, and supersonic jet aircraft.

Dimensions

	W x H x L
Base system	4.25" x 3.12" x 4.25" 108mm x 80mm x 108mm
I/O modules	4.25" x 3.12" x 0.454" 108mm x 80mm x 11.5mm

Weight

Base system	39 oz. TBR 1100g
I/O modules	5.3 oz. (typical) 150g

Power Consumption

Base system	22W @28VDC (Nominal)
I/O modules	Up to 10W (Module dependent)

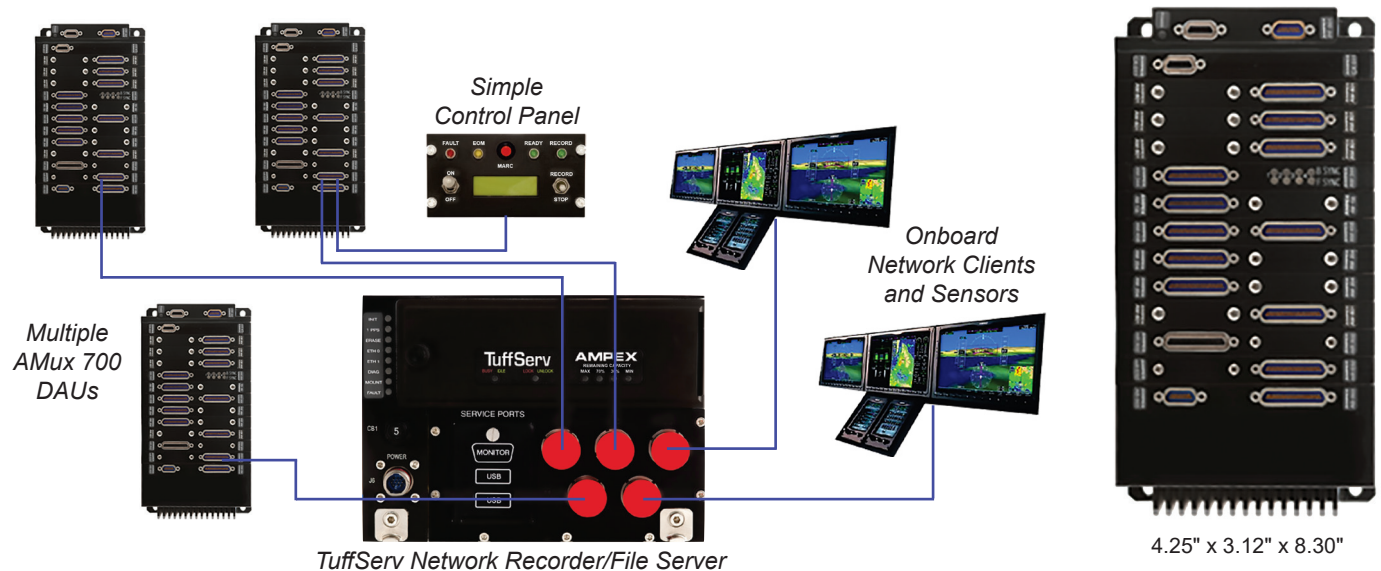
† (Some I/O modules are double or triple thick.)

Built-in Interfaces ††

AB-300	Base Unit	10/100 Base-T Ethernet, RS232/422, 28VDC Power
mR-X02	Mux Adapter	IRIG-B, discrete control/indicator, HAVE QUICK
mR-ES2	Ethernet Switch	1 x 100 Base-T Ethernet, 4 x 1000Base-T Gigabit Ethernet
AM-801	Gigabit Ethernet	1000Base-T Gigabit Ethernet output
CX-011	capacitor Module	28VDC Power

†† See "Available Interface Modules for Ampex miniR and AMux" for a complete listing of additional data interfaces available.

Note: There are two input module carrier frames used for modules within the miniR recorder family; the AMux 700 DAU supports the slightly larger flat-sided variant, as shown.



Multiple AMux 700 DAU application using TeffServ 480GE Recorder

¹ Specifications subject to change without notice.

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