

# DIGITAL FLIGHT DATA ACQUISITION UNIT DFDAU 2233000-846 for P3 AHMS



A leading provider of end-to-end aircraft data management solutions, Teledyne Controls has been providing civil and military operators with sophisticated data acquisition equipment for over 40 years. The Teledyne latest generation DFDAU (Digital Flight Data Acquisition Unit) product line, which was first introduced to the market in the late 90s, has been adopted by operators across the globe and counts approximately 2,500 installed units.

The P3 Aircraft Health Monitoring System (AHMS) DFDAU is a configured version of Teledyne's standard DFDAU. Specifically adapted to meet the data monitoring requirements of the P3 aircraft, this sophisticated system provides a comprehensive hardware and software solution to collect and analyze flight data. Its AHMS software, which offers extensive flexibility, enables users to specify the parameters they need for data monitoring, maintenance, and operational efficiency, without the artificial constraints usually imposed by other systems. The P3 AHMS DFDAU allows operators to proactively monitor the health of the aircraft, therefore facilitating preventive maintenance and enhanced operation.

## AHMS FUNCTIONAL CAPABILITIES

Fully configurable AHMS software system via Teledyne's MS Windows based Application Generation Software (AGS)

### MCDU Interface

- Reconfigurable display menus including real-time reconfigurable report
- ARINC 429 Label call up display
- Mnemonic call up display
- Stored reports directory including last flight
- QAR and PCMCIA Start/Stop Control
- Password protection
- Report distribution changes
- Constant modification
- ADL/PDL Upload/Download Menu

### QAR Interface

- 64, 128, 256, 512, 1024 and 2048 output rates selectable

### Printer Interface

- 40, 53, 64, and 80 column print formats
- ARINC 597/740/744/744A
- Reconfigurable report formats

### Other Peripherals

- Interfaces for 615 ADL and PDL
- Automatic or manual message generation for down linking

## P3 DFDAU KEY FEATURES

- Combines mandatory, AHMS and recording capabilities in one single unit
- Updated to be compliant with US Navy P-3 aircraft requirements
- Used by the US Navy (NAVAIR) both as a structure data acquisition system and a flight test system
- Easily configurable dual processor that supplies data to the mandatory Digital Flight Data Recorder (DFDR)
- Front panel display for easier access and readability of the DFDAU operation
- Increased I/O capability to support the expanded interface requirements of multiple aircraft types
- Interchangeable across multiple aircraft types (up to 18 independent uploadable DFDR data frames)
- Up 512 WPS, which meets and exceeds the new regulatory agency requirements
- Dual processor design ensures isolation and allows full AHMS user re-configuration without re-certification
- Reduced card count results in higher reliability, reduced weight and lower power
- Expandable for future requirements
- Can be used on legacy aircraft as well as new digital aircraft
- Interfaces with Teledyne's Wireless GroundLink® system\* for automated data download
- Simplified ground data processing using Teledyne's flight data analysis software AirFASE® \*
- Supports Installation on all configurations of P3 aircraft

*\* Please consult our Wireless GroundLink® and AirFASE® brochures for additional information*

**Integrated Recording Module (PC Card)**

- Recorder included within unit
- Supports recording of raw and message (report) data
- Eliminates need for separate recorder wiring on aircraft
- Supports PCMCIA ATA Type II or Type III
- Supports uploading ACMS from this module

**Front Panel 16 Character Alphanumeric Display**

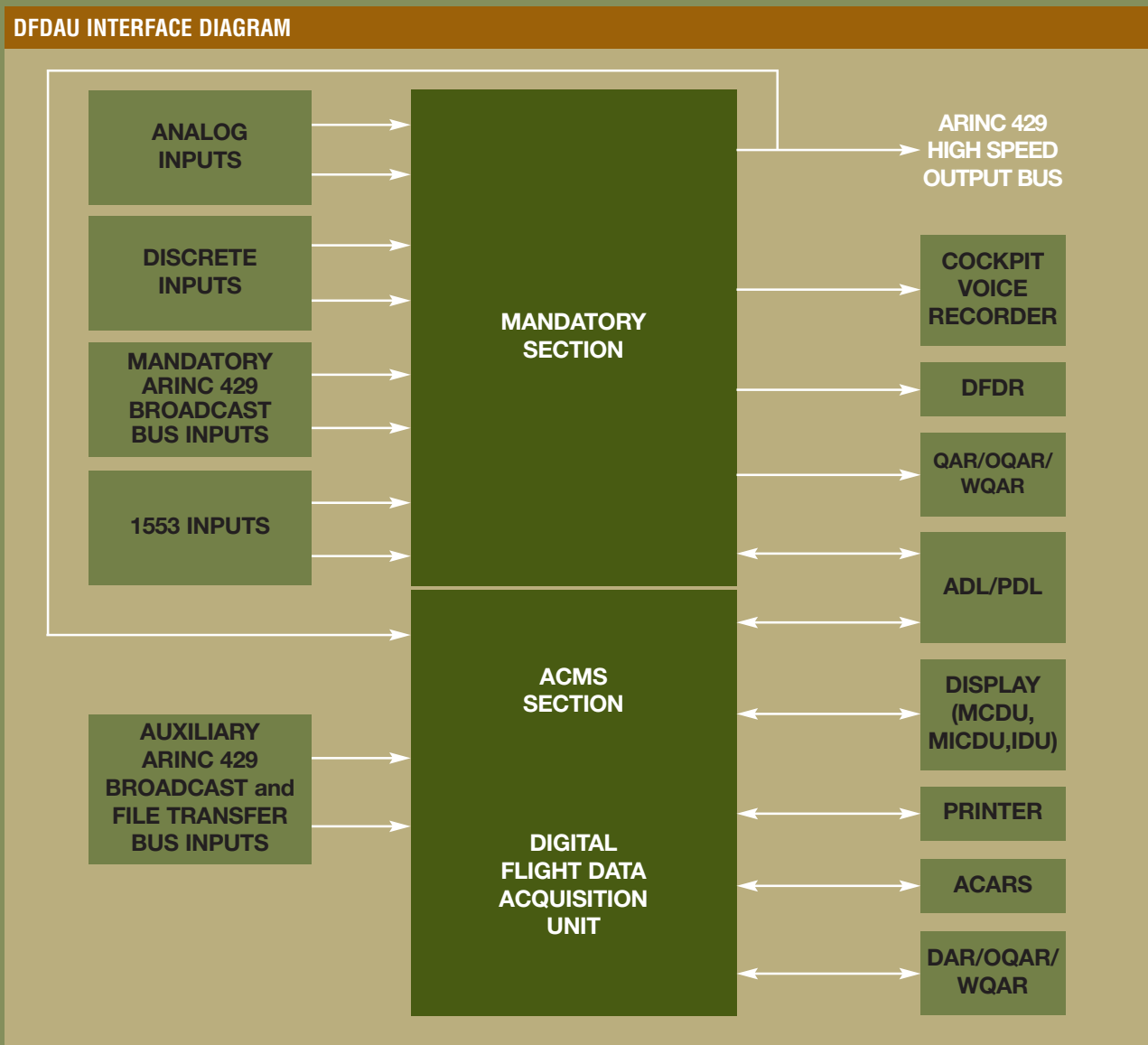
- Multiple software part numbers displayed
- Faults are displayed in user friendly text instead of codes
- Battery backup allows viewing of software versions and fault messages without external power (unit located off aircraft on desk of shelf)

**Input Capabilities**

- 46 429 input ports (expandable to 64) available to both the mandatory and ACMS processors independently
- 57 programmable analog input ports (53 3 wire, 4 4 wire)
- 2 Mil 1553 ports expandable to 4 (DFDAU can be programmed to be BUS controller)
- 180 discretes
- 1 spare slot for future functions

**General Characteristics**

- Intel 80486 based mandatory (DFDR) processor
- Motorola 68020 based ACMS processor



The DFDAU is an integral part of Teledyne's end-to-end aircraft data management solutions. Designed to assist operators with their FDM/ MFOQA (Flight Data Monitoring / Military Flight Operations Quality Assurance) initiatives, these offerings include innovative airborne data acquisition products, air-to-ground wireless data transfer systems and ground-based applications and services that fit together to deliver greater benefits to the operators and provide the total solution they need for a successful flight safety program.