TELEDYNE CONTROLS
A Teledyne Technologies Company

DATA MANAGEMENT UNIT (DMU)

FOR AIRCRAFT CONDITION MONITORING SYSTEMS (ACMS)

Designed to meet the data monitoring requirements of the B747-400, B767, B757, B737, MD-11 and A310 aircraft, the Teledyne Data Management Unit (DMU) is a powerful data processor system that allows airlines to customize their own ACMS programs.

The Teledyne DMU accepts data from a variety of aircraft systems and airborne computers, such as the Flight/Central Management Computers (FMC/CMC), Air Data Computers (ADC), etc., to perform aircraft/engine and flight performance monitoring and analysis. The DMU is also programmed to monitor critical data and compare those data values to pre-defined normal operating limits. In the event that an engine or an aircraft parameter is out of those defined limits, an exceedance arises and a report is triggered. The report will capture all the relevant aircraft and engine information associated with the exceedance, as pre-defined by the airframe and engine manufacturers, and the operator.

The DMU works as a central hub, providing data output to various systems. It is capable of channeling reports to the Multifunction Control Display Unit (MCDU) and/or the cockpit printer, as well as to the Airborne Data Loader (ADL), the Optical/Wireless Quick Access Recorder (OQAR/WQAR), or the ACARS Data-Link system for transmission to the airline's ground based maintenance center.

ACMS REPORTS

The Teledyne DMU is delivered with a base-line set of reports designed to meet the requirements of most ACMS programs:

Standard reports include:

- Engine Start
- Stable Cruise
- Turbulence
- Engine Aborted Start
- APU Start
- Flight Summary
- Landing
- In-flight Engine Fail
- Engine Performance
- Weather/Position
- Take-off
- Limit Exceedance
- ADEPT, SAGE or EHM Take-off and Stable Cruise

Additional reporting capabilities can be defined and programmed by Teledyne or the aircraft operator. A few examples of advanced reports are provided below:

- Turbulence Inspection
- Engine Oil Monitoring
- Ground Run-up
- Overweight Inspection
- Maintenance Report
- Maximum MACH Exceedance
- EGT Divergence
- ETA
- Go-around Landing
- Flap Placard Speed Exceedance
- N1 Overshoo
- Wind Factor
- APU Auto-shutdown
- Gear Down Speed Exceedance
- Flight Control
- Aborted Take-off
- Flap/Slat at Altitude Exceedance
- Engine Trend
- APU Trend
- Aircraft Stable Frame
- Max Operating Altitude Exceedance
- Touch and Go Landing
- APU Aborted Start

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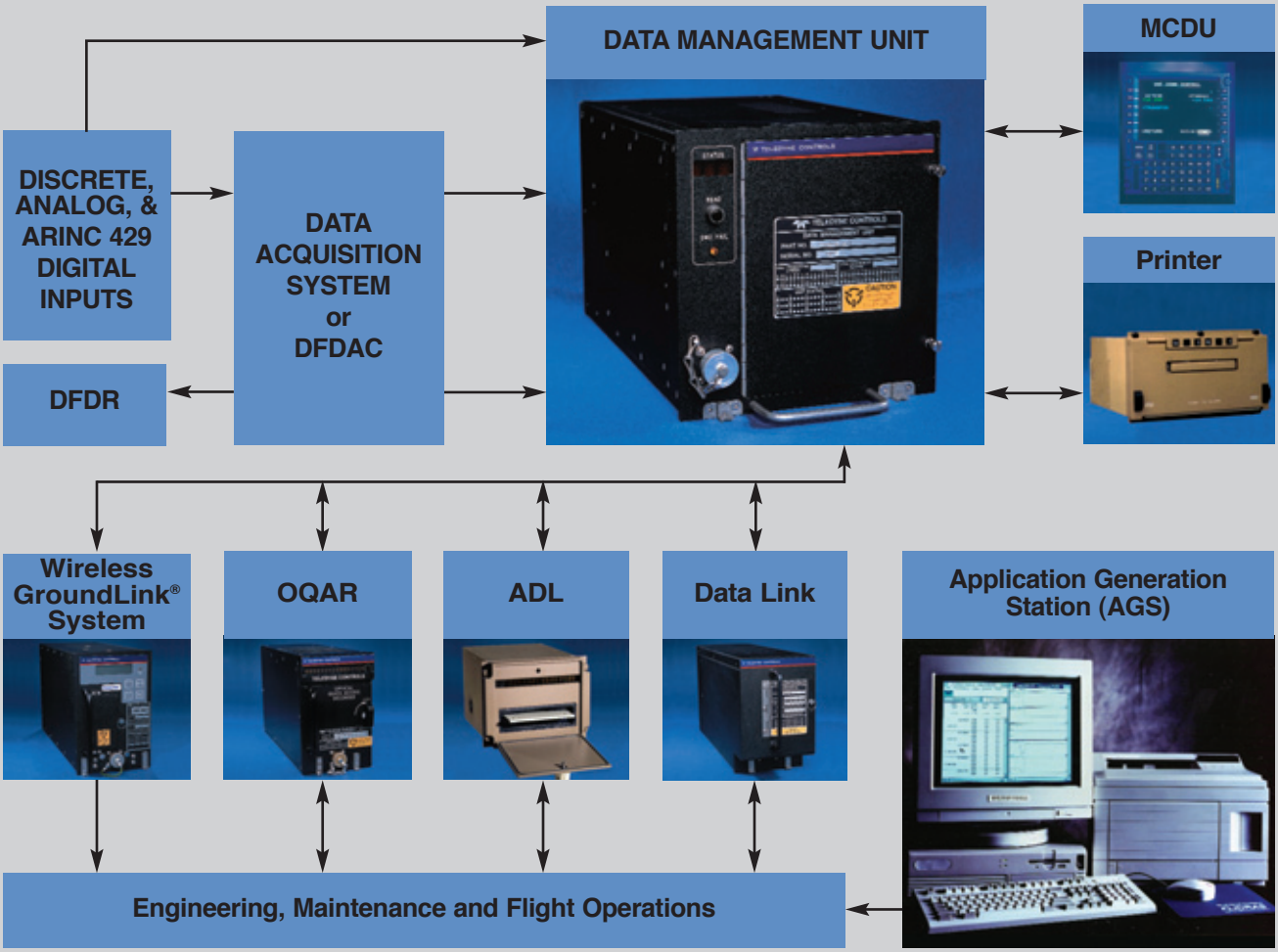
TYPICAL ACMS SYSTEM DIAGRAM



USER-PROGRAMMABLE ACMS APPLICATION

The Teledyne DMU ACMS Application is fully user-programmable via the Teledyne Application Generation Station (AGS). The AGS allows the operating airline to define operational exceedance triggers for each aircraft parameter, by simply manipulating the maximum / minimum normal operating value of that parameter in the application database. The creation of new reports, report formats and content, along with parameter definitions, QAR data map outputs and MCDU display screens are also fully programmable via the MS Windows based AGS. *For more information, please consult our AGS data sheet.*