

Smart Data Management System (SmartDMS) provides deeper insights into aircraft operational data and performance



Proven Aircraft Management and Optimization

Connect your aircraft to your operations and increase reliability and availability, minimize costs, and improve performance.

Connect

The Smart Data Management System (SmartDMS) supports continuous connectivity between your aircraft systems and your maintenance infrastructure using on-aircraft communications and/or GE's built in Wireless and Cellular communications interfaces. GE's SmartDMS is part of an end-to-end IVHM solution that collects and analyzes aircraft operational data. With GE's IVHM solution aircraft issues are identified in a fast, accurate, easily-detectable and concise manner.

Understand

The SmartDMS provides complete aircraft health state awareness and seamlessly integrates in to your maintenance strategies and supports your unique aircraft operating environment. Eliminating the guesswork with actionable insights and targeted maintenance actions, the SmartDMS delivers unparalleled visibility of aircraft performance. Delivering continuous recording of full flight data of up to 40,000 samples per second to support analysis and improved maintenance practices. Operators can easily reconfigure the SmartDMS to specify parameters and events to be recorded and securely transmitted.

Manage

- Increase aircraft reliability
- Prevent AOG's
- Optimize maintenance and materials

Trusted by operators

- 2,800+ aircraft across 6 aircraft types
- Supports both retrofit and forward fit applications
- STC forthcoming 2023

On Board Functions

- Health data recording
- Remote parameter display (RPD)
- Priority event data transmission over aircraft SATCOM communications
- ARINC 615/615S data loader

Ground Functions

- At-aircraft data access for maintenance investigations with rich data visualization capabilities
- Secure web server allows for at-aircraft review of live and recorded data via hosted web pages using standard internet browsers
- Flexible, web-based configuration tools for customers to configure recording parameters and exceedance checks
- Global access via remote connections over SATCOM networks

Software

- RTCA DO-178C, DAL D
- Linux operating system

SmartDMS Characteristics

- Highly configurable parameter set
- Acquisition rates up to 64 Hz
- Sampling and recording rates as high as 40k per second
- Support for multiple I/O interfaces
- 115 GB on board storage
- Direct mount

Modular design

- SmartDMS (Smart Data Management System) full up system 2.15 lbs
 - SmartHMU (Smart Health Monitoring Unit) 0.95 lbs.
 - SmartWiFi 1.0 lbs.
 - SmartCM (Smart Cellular Module) 0.2 lbs.

Supported Interfaces

- 1 x 10/100/1000 Ethernet
- 6 x 10/100 Ethernet – A664 Rx only
- 12 x A429 receive channels
- 3 x A429 transmit channels
- 1 x A717 receive channel (bi-polar & bi-phase)
- 1 x 4G Cat6 cellular
- 1 x 802.11N CWLU
- 4 x RS422 (1) Tx (3) Rx
- 1 x ASCB-C
- 14 x OG discrete inputs
- 3 OG discrete outputs

GE Integrated Vehicle Health Management (IVHM) System

