



Innovative
Solutions & Support



Next Generation Flight Management System (FMS)

IS&S Flight Management System (FMS)

Next Generation FMS Retrofit for Commercial and Cargo Aircraft

The IS&S Flight Management System (FMS) increases operational flexibility and reliability, improves dispatch and on time arrival availability, simplifies maintenance and provides enhanced safety through improved situational awareness and reduced crew workload.

The FMS offers performance navigation and mission planning capabilities, storage for up to 128 Waypoints, storage for up to 100 Flight Plans, the ability to store a Global Nav Database on a 32 GB Solid State Drive, a common ARINC 424 Database, and integration with existing IRU/AHRS equipment. Flight crews will utilize the data in the navigation database to create, edit and modify flight plans. Navigation data includes airways, jet routes, SIDS, STARS, user stored routes and more.

The FMS interfaces with the IS&S SBAS GPS receiver to provide a WAAS/Global Positioning System (GPS) based navigation solution. The GPS receiver is located remotely depending on space availability.

To reduce LRU count and ease installation efforts the FMS is fully-integrated in an ARINC 739B compliant Advanced Navigation Multifunction and Control Display Unit (AN-MCDU) no supporting LRUs are required. The touchscreen display is a 5 inch LCD with LED backlighting and is sunlight readable with VGA (640 x 480 pixels) resolution.

Each AN-MCDU has a keyboard, mode and function keys, line select keys, annunciator lights and supports Ethernet data loading. The flight crew can manually enter or datalink load waypoint flight plans, routes or user-defined waypoints on the IS&S FMS and modify and update these plans via the AN-MCDU screen. Once the flight plan data is entered, the AN-MCDU computes optimal flight profiles and provides steering commands for use by the aircraft control system to fly the airplane along the desired route.

The AN-MCDU is ARINC 739B compliant, which provides an interface option for other cockpit equipment such as SATCOM, ACARS, CMU, HUD, and a printer.

A first step in preparing your aircraft for NextGen the IS&S FMS design provides enabling technology to support evolving communication, navigation and surveillance requirements. The FMS is a platform that supports Data Link and ADS-B implementation. Combined with the IS&S Flat Panel Display System (FPDS) and Integrated Standby Unit (ISU) the FMS is the state-of-the-art hub for a Next Generation cockpit retrofit.



Benefits

- Performance, Navigation and Mission Planning Capabilities
- Improved Data Entry Interface - Full Color Display
- Integrates With Existing IRU/AHRS Equipment
- Reduces LRU Count
- Lower Power Consumption and Reduced Weight
- Common ARINC 424 Database for FMS
- Storage for up to 128 Waypoints
- Storage for up to 100 Flight Plans
- Ability to Store Global Nav Database on 32 GB Solid State Drive
- I/O Growth Capability
- Navigation Database Update According to 28 Day AIRAC Cycle

Functions

- Coupled Lateral Navigation
- Coupled Vertical Navigation
- Data Recording Capability
- Full ARINC 424 Procedures and Leg Types
- Fuel Data Integration and Planning
- Geometric and Performance Descent Vertical Navigation
- INS Alignment
- LPV Approaches
- Navigation for En Route, Terminal and Approach, Primary Oceanic/Remote
- Receiver Autonomous Integrity Monitoring
- RNP/ANP Navigation with curved paths
- DME/DME Positioning
- Supports Auto Flight, Indicators, Displays (EFIS) and Alerts
- WAAS GPS Interface Beta 3 TSO C145c

System Specifications

User Interfaces

- Twelve (12) Line Select Keys
- Sixteen (16) Function Keys
- Forty (40) Alphanumeric Keys
- Six (6) Annunciators
- USB Connector for Loading of Software, Databases and Flight/Mission Plan Data
- Integrated Touch Pad for Data Entry and Flight Planning
- Control and Display for 8 External Subsystems via ARINC 739B

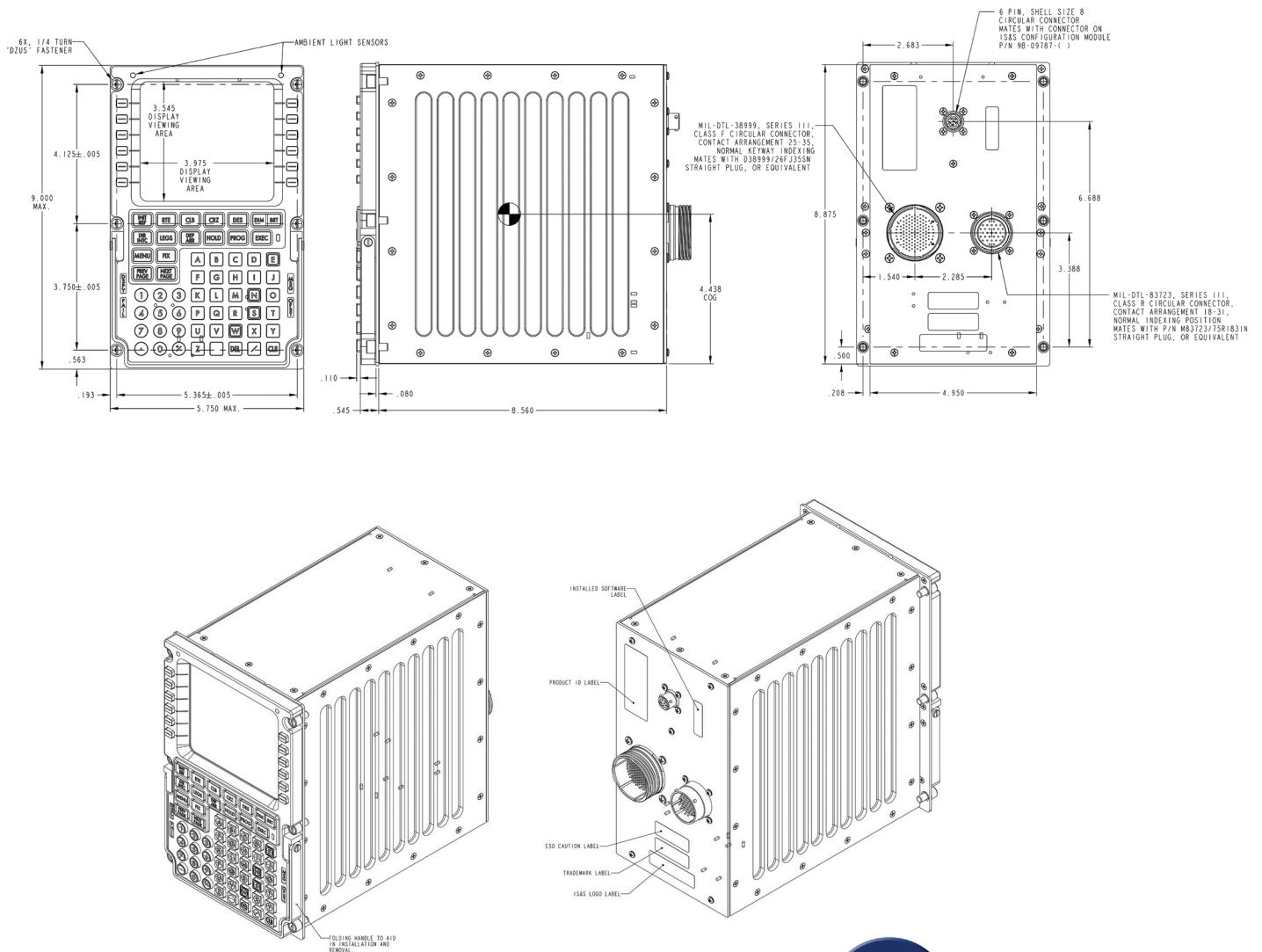
Electrical Interfaces

- Three (3) 100 Base T Ethernet
- Sixteen (16) ARINC 429 Inputs
- Eight (8) ARINC 429 Outputs
- Eight (8) Discrete Outputs
- Two (2) RS-422 Inputs
- Two (2) RS-422 Outputs
- One (1) ARINC-743A-2 GPS time mark input
- 28V Power Input (25 Watts Operating)
- Keyboard Lighting: 5 Vac, 5 Vdc or 28 Vdc

Qualifications

- DO-229D, DO-236B, DO-200A and DO-201A Compliant
- RTCA DO-178B Level Software
- RTCA DO-254 Level B Complex Hardware
- RTCA DO-160G Environmental/EMI

Outline Dimensions





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All specifications subject to change without notice from the manufacturer.

IS&S is the world's leading supplier of RVSM systems and integrator of Cockpit Information Systems (Cockpit/IP®) for the Commercial Air Transport, Military, and Business Aviation Markets. IS&S incorporates leading edge technologies into sophisticated, cost-effective solutions for the aerospace industry.

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