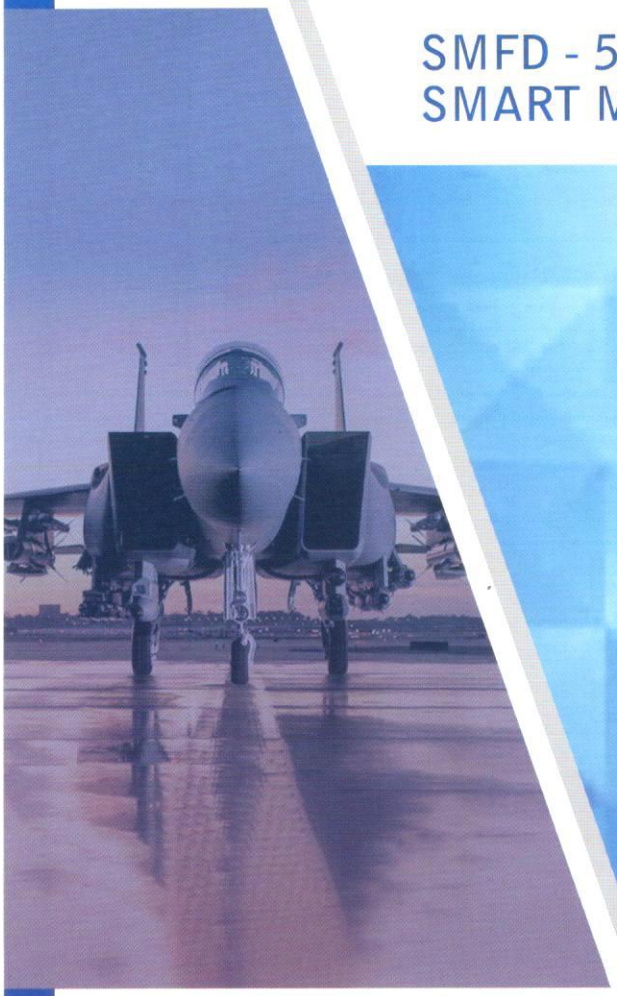
Datasol™
Innovative Labs

SMFD - 54 :
SMART MULTI-FUNCTION DISPLAY



Smart Display System Architecture consists of Smart Multi-Function Display Unit, Signal Interfacing & Processing Unit and A/C sensors.

The Smart Multi-Function Display (SMFD-54) Unit is a rugged standalone, programmable, processing and displaying unit with a color AMLCD Display Unit capable of displaying the data/signals received from signal interfacing & processing unit (SIPU) in a graphical format.

The 5" Smart Multi-Function Display (SMFD-54) is an advanced Display unit with PowerPC based drive electronics, suitable for adaptation to a wide array of helicopter and fixed-wing applications.

The display unit can accept data on two ARINC 429 channels from two redundant on-board computers external to the unit and the software is capable of validating and generating the display page to present to the pilot in a graphical format.

The display features a rugged 3" x 4" Color Active Matrix LCD, with high brightness and contrast and wide viewing angles with excellent readability in direct sunlight. Also, an NVIS model with full compatibility with Night Vision Goggles is available.

EXTERNAL INTERFACES:

- Adjustable Display Brightness
- Auto Brightness control of AMLCD based on Ambient Light
- Adjustable Bezel Back Light Brightness
- NVIS Compatible Bezel Back Light
- Built-in Test Page
- Display Page Switching

AMLCD: 5" LCD panel ruggedized by General Digital, USA for airborne application by trimming the glass to fit in standard 4x5 ATI enclosure.

Re-packaged by bonding EMI glass, AMLCD heater glass, providing sunlight readability coating, and adding LED backlight.

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Enclosure, Bezel and Drive Electronics designed and developed at Datasol Innovative labs, Bangalore, India to meet Military specifications and standards.
Software developed by Datasol Innovative labs, Bangalore, India and qualified to DO-178B Level A.

SPECIFICATIONS	
Input Power	12V – 32VDC
Brightness	0.05 to 270 fL.
Interfaces	Dual RS422, Dual ARINC 429
Operating Temperature	- 40°C to +71°C
Environmental	MIL-STD-810F, DO-160E
EMI/EMC	MIL-STD-810F, Mil-Std-462
Connectivity	D38999 20WG39SN
Dimension	
Mechanical Chassis	Aircraft grade Aluminum alloy 6061-T6.
Mechanical Surface Finish	All internal surfaces of the part are subjected to ALCHROME Treatment as per MIL 5541E. External Surface is Black Matte Anodized
Weight	
MTBF	Better than 10,000 Hrs.
MIL-STD-461/462	EMI/EMC Tests Requirements
MIL-STD-704D	Power Supply Requirements

SPECIFICATIONS	
MIL-STD-810E	Environmental Conditions & Test Procedures
RTCA-DO-178B	Software Considerations in Airborne Systems
MIL-C-14806A	Anti-Reflective Coating
MIL-C-26482	Electrical Connector
MIL-STD-129P	Marking for Shipment & Storage
MIL-STD-889	Identification of Materials and Finishes
MIL-C-38999	Electrical Connector
FED-STD-595	Case Finish (Color)
MIL-A-8625F, Type III, C/2	Case Finish (Process)
TSO C113	Air Borne Multipurpose Electronic Display
TSO C153	Integrated Modular Avionics Hardware Elements
ARINC 429	Mark 33 Digital Information Transfer System
MIL-HDBK-217F	Reliability Predictions of Electronics Equipment, Notice-2

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