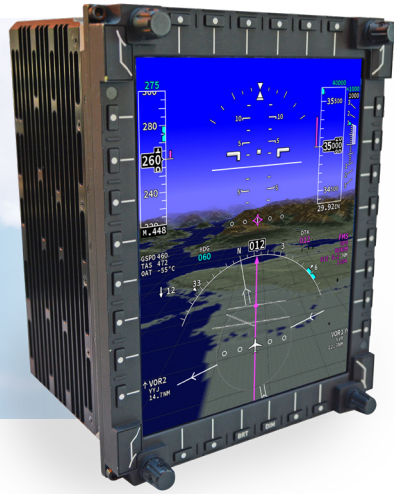


MFD-3068 10.4" (6" x 8") Smart Multi-Function Display



Using a powerful processing platform based on a Common Processor Module (CPM) and Graphic Processor Module (GPM), the MFD-3068 is an open system very well suited for hosting today's demanding applications.

This ARINC 653-based display platform is based on Green Hills' Integrity 178 tuMP Real Time Operating System (RTOS) and middleware.

Modular by design, the MFD-3068 allows customers to simultaneously host combinations of software applications that can be customer proprietary, CMC Electronics proprietary, such as Primary Flight Display (PFD), Navigation Display (ND), Synthetic Vision System, etc., and from 3rd parties. Importantly, these hosted applications can be individually designed to varying Design Assurance Levels (DAL), up to and including DAL A, reducing development and integration costs.

Optically, CMC Electronics proprietary Active Matrix Liquid Crystal Display and LED backlight technology delivers a visual performance second to none: true 8-bit color depth with high contrast ratio and superior color stability, very wide viewing angles and superior brightness in Day, Night and NVIS modes. And there is even more: the optical quality is guaranteed over the complete temperature range and life-time of the display, thanks to CMC Electronics proprietary control mechanisms.

MAIN FEATURES

- Powerful processing and graphics module with substantial growth capability
- Middleware platform for hosting multiple software applications at different DAL levels (A to E)
- Best-in-class true 8-bit AMLCD for superior color rendering
- Very wide viewing angles – ideal for cross-cockpit visibility
- Brightness up to 275fL, making it suitable for installation in helicopters and open cockpit aircraft
- NVIS Class B compatibility
- Guaranteed brightness and color range over the operating temperature of the display and over its lifetime
- Large array of Input and Output interfaces – reduces the need for external data concentration
- Continuous operations at up to 70C without external cooling
- Quiet by design, thanks to its closed and fan-less architecture

MFD-3068 Smart Multi-Function Display – Specifications

Processing	
Common processor module (CPM)	Freescale QorIQ P3041
Graphic processor module (GPM)	Up to 2 times M9 (Mobility Radeon 9000) performance Integrity of the graphics solution segregated from any knowledge of the hosted applications
RTOS	ARINC-653 Green Hills Integrity-178 tuMP RTOS
Open platform	Allows development and hosting of customer supplied, 3 rd party or CMC applications. Can host multiple applications at different DAL levels simultaneously.
Electro-optical	
Panel type	Active matrix LCD (normally black)
Panel active area	10.4" diagonal (6" x 8")
Panel resolution	1024 x 768
Color depth	True 8-bit – 16,777,216 colors and 256 grayscales
Viewing angle	<ul style="list-style-type: none"> • H: +/-80° • V: +/-80° Can be tailored to program requirements, such as the addition of specific collimation to reduce canopy reflections, etc.
Backlight	LED backlight
Luminance	<ul style="list-style-type: none"> • 0.1 up to 275fL (non-NVIS mode) • 0.03 up to 2fL (NVIS mode) Luminance stabilized over the life time and the complete temperature range of the display
Sunlight readability	Contrast ratio >14:1 @ 10,000 fC
NVG compatibility	MIL-STD-3009 Type I/II, NVIS Class B
Heater	Heater for display startup at extremely cold temperatures
Interfaces	
Video inputs / Outputs ⁽¹⁾	Inputs: 1 x RGB, 1x NTSC Outputs: 2x DVI-D, 2xRGB
Digital Interfaces ⁽¹⁾	Arinc 429, Arinc 708A, RS-422/485, IEEE-1394B, CAN Bus (Arinc 825), Ethernet, MIL-STD-1553 (optional)
Analog Interfaces ⁽¹⁾	Sensors, transducers, potentiometers, thermocouples, synchros, discreets, etc.
Controls	
Brightness control	ALS sensors, bezel control, or remote
Bezel controls ⁽¹⁾	Available with custom bezels
Touch screen	Multi-touch capability through PCAP with built-in mechanisms for certifiable touch interface (optional)
General specifications	
Power supply	28VDC, MIL-STD-704A
Power consumption	95W @ 200fL (20°C ambient)
Weight	6.77 kg / 14.92 lbs
Cooling	Passive cooling (no requirement for forced external cooling) – fan-less design
Built-in testing	PBIT / CBIT / IBIT
Software	RTCA/DO-178C up to Design Assurance Level (DAL) A
Hardware	RTCA/DO-254 up to Design Assurance Level (DAL) A
Environmental conditions	
Compliance	DO-160G; MIL-STD-810G & MIL-STD-461E (optional)
High temperature	+70C operational / +85C short-time / +85C ground survival
Low temperature	-45C operational / -55C ground survival
Altitude	55,000 ft
Waterproofness, salt fog, sand & dust	Withstands harsh environments - closed and fan-less unit design

⁽¹⁾Please contact CMC Electronics for other possible options

For more information, visit www.cmcelectronics.ca
or email us at sales@cmcelectronics.ca


 Over 100 Years
 of Innovation

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