

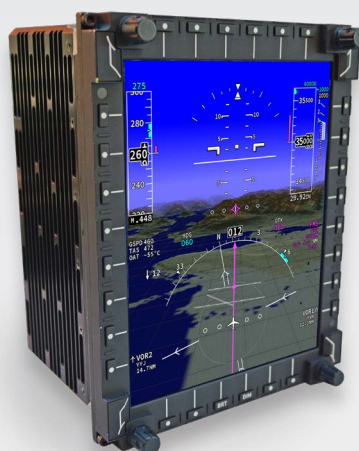


Advanced Visualization

## MFD-3068

10.4" (6" x 8")

Multi-Function Smart Display



### Main features:

- Powerful processing and graphics module with substantial growth capability
- ScioTeq's MOSArt™ 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 viewability
- 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

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. These applications run on the ARINC 653 display platform and ScioTeq's MOSArt™ (Modular Open System Architecture) middleware.

Modular by design, the MFD-3068 allows customers to simultaneously host combinations of software applications that can be customer proprietary, ScioTeq proprietary, such as Primary Flight Display (PFD), Navigation Display (ND), Synthetic Vision System, etc., and from 3<sup>rd</sup> 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, ScioTeq's 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 ScioTeq's proprietary control mechanisms

## Technical specifications

### MFD-3068

| Processing                            |   |
|---------------------------------------|---|
| Common processor module (CPM)         | Freescall QorIQ P3041   |
| Graphic processor module (GPM)        | Up to 2 times M9 (Mobility Radeon 9000) performance<br>Integrity of the graphics solution segregated from any knowledge of the hosted applications  |
| RTOS                                  | ARINC-653 RTOS  |
| ScioTeq MOSArt™ open platform         | Allows development and hosting of customer supplied, 3 <sup>rd</sup> party or ScioTeq 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"> <li>• H: +/-80°</li> <li>• V: +/-80°</li> </ul> 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"> <li>• 0.1 up to 275fL (non-NVIS mode)</li> <li>• 0.03 up to 2fL (NVIS mode)</li> </ul> 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 <sup>(1)</sup> | Inputs: 1 x RGB, 1x NTSC<br>Outputs: 2x DVI-D, 2xRGB  |
| Digital Interfaces <sup>(1)</sup>     | Arinc 429, Arinc 708A, RS-422/485, IEEE-1394B, CAN Bus (Arinc 825), Ethernet, MIL-STD-1553 (optional)   |
| Analog Interfaces <sup>(1)</sup>      | Sensors, transducers, potentiometers, thermocouples, synchros, discreets, etc.  |
| Controls                              |   |
| Brightness control                    | ALS sensors, bezel control, or remote   |
| Bezel controls <sup>(1)</sup>         | 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   |

<sup>(1)</sup> Please contact ScioTeq for other possible options

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The information and data given are typical for the equipment described. However any individual item is subject to change without any notice.

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