



Air Systems, UAS & Simulators

SMD-55 SMART MULTI FUNCTION DISPLAY

The SMD-55 is a 5 inches by 5 inches high performance Active Matrix Liquid Crystal Display with full colour capability under all conditions, from full sunlight to NVG operations. The SMD unit includes twenty soft keys.

The Smart MFD is designed to:

- Manage dual redundant 1553B bus used to receive controls and real time symbology parameter update and to transmit internal status and soft key inputs.
- Accept two selectable RGB video input according to STANAG 3350 Class B or C.
- Generate synthetic imageries by using the state-of-the-art digital technology. The on-the-board symbol generator is based on high performance “SHARK 21060 DSP” and on the last generation of Graphic Co-processor ASICs.

The active thermal management allows the unit to operate in the full environmental range without external cooling.

The SMD-55 is especially optimized for avionics application using the best AMLCD technology today available and ultrabright LEDs for backlight. Optical filters are used to re-direct light into the specified viewing angle.

KEY FEATURES

- 5 inches by 5 inches usable screen area
- RGB pixel structure
- High resolution
- High brightness
- AMLCD technology to prevent ripple effect
- Customizable viewing angle
- Integrated multifunction soft keys
- Ultra-bright LEDs backlight
- Dual RGB video input and dual 1553B connection to support system redundant configuration
- COTS Graphics SW Factories
- Advanced anti-aliasing technique optimized for the digital interface (LCD Matrix)
- High Reliability
- Self Test and BIT
- NVG compatible



TECHNICAL CHARACTERISTICS

Physical characteristics

| | |
|--|--|
| Dimensions | 224 mm (L) x 166 mm (W, behind the bezel) x 176 mm (H) |
| Weight | 5,25 Kg max. |
| Cooling system | Natural convection with onboard cooling fan |
| Controls | Twenty momentary pushbuttons |
| Rocker switches for brightness, contrast controls. | and balance controls. |

Display characteristics

| | | | |
|-----------------------------------|--|--------|-------|
| Display Type | Colour Active Matrix Lyquid Crystal (AMLCD) | | |
| Active Area | 5,03" x 5,03" | | |
| Resolution | 600 x 600 RGB triads. | | |
| roughly 120 colour group per inch | | | |
| Grey levels | 255 grey level per primary colour >16.000.000 colours | | |
| Contrast | > 500 in dark | > 5 at | |
| 100800 lux ambient, 2000 fL | incident | | |
| Viewing angle | Customizable from wide to narrow angles | | |
| Colour Coordinates | u' | v' | r |
| | red | 0,392 | 0,525 |
| | blue | 0,128 | 0,346 |
| | green | 0,160 | 0,557 |
| Luminance | Up to 1000 cd/m ² | | |
| Anti-reflection | Coating MIL-C-14806 | | |
| NVIS Compatibility | Type I, class B, MIL - STD-3009 | | |
| Dimming range | Up to 6000 : 1 | | |

Electrical Interface

| | |
|-----------------------|--|
| Video Input | Two RGB video input STANAG 3350 B or C |
| Video Output | One RGB video output STANAG 3350 B or C (interface to a video recorder) |
| System Communications | One dual redundant 1553B RT interface Two RS422 serial links |
| General I/O | Eight general purpose digital input |
| Power | 28 VDC aircraft according to MIL-STD-704E 28 VDC lighting power for illuminated legends |
| Power consumption | <100 W in normal operations <200 W during cold start |

Environmental characteristics

| | |
|-------------|--|
| Temperature | -40 °C, +70 °C - MIL-STD-810E (operating) -55 °C, +90 °C - MIL-STD-810E (storage) |
| Vibration | 0.033 g ² /Hz, MIL-STD-810E, Method 514.4, Procedure I |
| Altitude | operating in continuous duty from 107.9 kPa at sea level to 14.7 kPa approximating an altitude of 45.000 ft. |
| Humidity | As per MIL-STD-810E, Method 507.3, Procedure II or III |
| Shock | As per MIL-STD-810, Method 516.4, Procedures I and V |
| EMI/EMC | As per MIL-STD-461D / MIL-STD-462D |
| Reliability | > 4000 hrs |

For more information please email infomarketing@selex-es.com

Selex ES S.p.A. - A Finmeccanica Company

Via dell'Industria, 4 - 00040 Pomezia (RM) - Italy - Tel: +39 06 918531

This publication is issued to provide outline information only and is supplied without liability for errors or omissions. No part of it may be reproduced or used unless authorised in writing.

We reserve the right to modify or revise all or part of this document without notice.

2014 © Copyright Selex ES S.p.A.

www.selex-es.com

ASD MM07944 12-14