

SturdyView™ MFD 8

8.4 Inch High Resolution, Ruggedized, Waterproof, Fully Submersible, Very Bright Active Matrix Sunlight Readable TFT LCD Monitor with 16.77 Million Display Colors, for Industrial, Military and Marine Use. All-Weather, All-Terrain, Harsh-Duty LCD Display System Features Ultra-Wide Viewing Angles and Very High Contrast. Can Operate in Extreme Temperatures. Video Inputs are HD15 (F), DVI-D Pin, Composite BNC, Mini Din (S-Video). Ideal for Industrial, Military and Marine Applications.



Features

- Engineered for All Weather even in direct sunlight
- 8.4" Very Bright Active Matrix Sunlight Readable TFT Display, 1200 nits cd/m²
- Mounting configurations: RAM, VESA, panel, or optional console or flush mount
- Optical bonding of protective window (or touch screen) directly to the front surface of the LCD face (VBOND)
- Integration of light management films
- A multitude of video inputs: HD15 (F), DVI-D Pin, Composite BNC, Mini Din (S-video)
- High contrast ratio
 - Standard SVGA Type: 600:1
 - Optional XGA Type: 400:1
- Machined NEMA 6 (IP67) rated, black powder coated, very rugged aluminum gasket sealed enclosure
- Wide color gamut
- Very wide viewing angles
 - Standard SVGA: Up/Dwn/L/R: 80°/60°/80°/80°
 - Optional XGA: Up/Dwn/L/R: 88°/88°/88°/88°
- 16.8 million colors
- Energy efficient, low power consumption
- High environmental performance and reliability
- Anti-Reflective protective window
- Standard: SVGA 800 x 600 Native (Optional: XGA 1024 x 768 Native)
- Advanced thermal management system
- Wide operational temperature range:
 - Standard: -20° to +70°C (-4°F to 158°F)
 - Optional: -40° to +70°C (-40°F to 158°F)
- Harsh Duty variable power supply, 9 to 36 VDC, wide range, low noise, wide operational temperature (optional AC power, universal input 85 to 264 VAC)
- RoHS compliant
- ISO 9001 registered
- Engineered, fabricated and assembled in the USA
- Two (2) year warranty

Overview

The SturdyView™ MFD 8 is a ruggedized 8.4 inch all-weather, all-terrain, harsh-duty LCD Display System. It is engineered to withstand the harshest environments and most demanding real world applications. The sunlight readable display is equipped with proprietary Enhanced Light Transmission Technology (ELTT) which allows for true Sunlight Readability and also provides exceptional clarity and viewing angles.

The SturdyView MFD 8 meets the IP67 Ingress Protection standard – which means it is totally protected against dust, and that is submersible and protected against temporary immersion for up to one meter for 30 minutes.

This advanced user friendly LCD display system provides extensive operational temperatures of -20°C to +70°C (-4° to 158°F) (standard) or -40°C to +70°C (-40°F to +158°F) (optional) and unprecedented video input capabilities from traditional VGA to up to FOUR individual direct composite BNC video feeds with easy one-touch toggle select function between each input.

The SturdyView MFD 8 offers several mounting options including VESA, panel, and RAM mount.

Applications

- Military vehicles
- Ships
- Submarines
- Aircraft (up to 10,000 feet – option for up to 45,000 feet)
- Industrial use – factories, labs, etc.

DVEO
Broadcast Division

Computer Modules, Inc.

11409 West Bernardo Court

San Diego, CA 92127

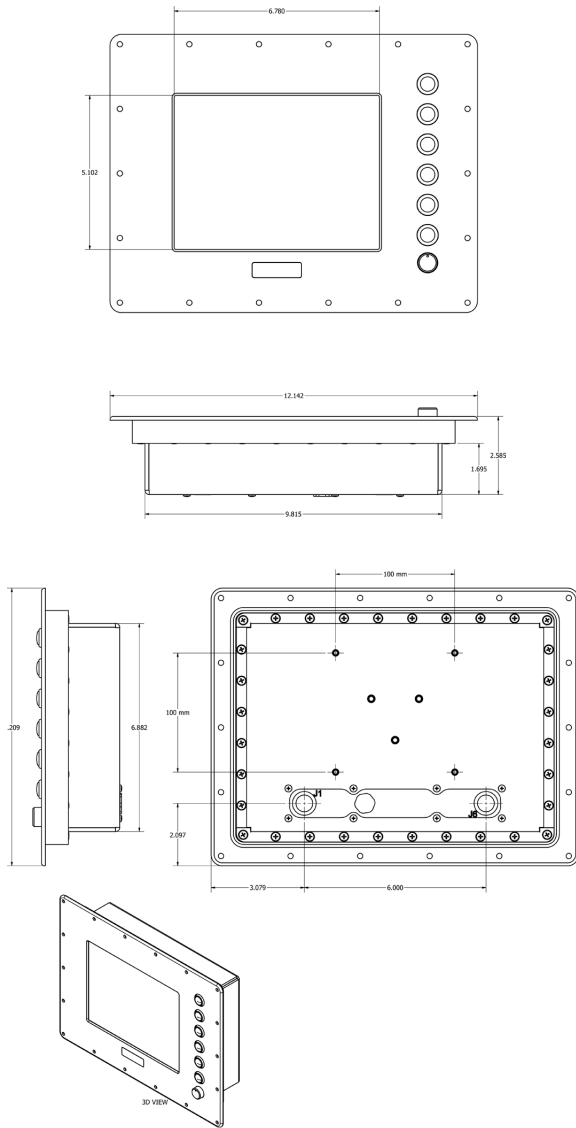
Tel: 858-613-1818 Fax: 858-613-1815

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Rear View



Mechanical Drawings



Options

Optional XGA Resolution LCD Panel

- 1024 x 768 XGA Resolution
- Luminance Level: 1000 nits (cd/m2)
- Contrast Ratio 400:1
- Pixel Pitch: 0.1665 x 0.1665
- Viewing Angles: Up/Dwn/L/R: 88/88/88/88
- Response Time: 25ms

Optional Connectors

- "Right Angle" Connectors
- MIL-DTL-38999 qualified connectors

Optional Touch Screen

- 5-Wire, durable, resistive touch screen
- Armor Touch

Mechanical Mounting Options

- RAM/VESA Mounting (Standard)
- Flush Mounting
- Gimbal Mounting
- Console Mounting with Helio-Coil Inserts

Optional Night Vision Compliance

- NVIS MIL-STD-3009 Class B Green (Night mode)

Dual Mode NVIS Compatibility

- NVIS MIL-STD-3009 Class B Green (Night mode)
- Toggle between Day/Night Mode via one touch tactile button
- 4 nit brightness (Night Mode)

Optional Blackout Button

- One-touch tactile interface button for instantaneous enable/disable of display backlight

Optional EMI/EMC

- MIL-STD-461E (FCC Class B is standard)

Optional User Interface

- Programmable function keys

Optional D38999 Military Style Connectors



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Specifications

General

Construction:	IP67 (NEMA 6) fully enclosed / fully sealed submersible machined 6061 T6 aluminum enclosure
Display Size:	Viewable area – 8.4 inches
Panel Type:	Harsh Duty LCD cell with Optically Bonded Protective Overlay (VBOND)
Resolution:	Standard: SVGA 800 x 600 native Optional: XGA 1024 x 768 native
Brightness:	True High Brightness Standard SVGA Type: 1200 nits (cd/m2) Optional XGA Type: 1000 nits (cd/m2) Low-Power, high reliability Solid State LED backlighting
Pixel Pitch:	0.213 x 0.213 (Optional 0.1665 x 0.1665 w/ XGA)
Response Time:	25ms (typical)
Colors:	16.77M
Dimming Ratio:	5000:1 minimum
Backlight Driver:	Advanced driver technology, the latest in technology for driving solid state High Bright Light Emitting Diodes (HBLEDs)
Viewing Envelope:	Standard SVGA: Up/Dwn/L/R: 80°/60°/80°/80° Optional XGA: Up/Dwn/L/R: 88°/88°/88°/88°
Contrast Ratio:	Standard SVGA Type: 600:1 Optional XGA Type: 400:1

Video Input

Standard Video Input:	IP67 Sealed Single VGA Connector with/without Optional Touch Interface
Optional Video Input Configurations:	IP67 Sealed Single VGA Connector, Single Composite BNC Feed for NTSC/PAL, Optional Touch Interface IP67 Sealed Single VGA Connector, Dual Composite BNC Feed for NTSC/PAL, Optional Touch Interface IP67 Sealed Single Composite BNC Feed for NTSC/PAL IP67 Sealed Dual Separate Composite BNC Feed for NTSC/PAL IP67 Sealed Three Separate Composite BNC Feed for NTSC/PAL IP67 DVI Input only or with various combinations including VGA and BNC video feeds IP67 Sealed Four Separate Composite BNC Feed for NTSC/PAL
Coming Soon:	IP67 Sealed Dual VGA Connectors with/without Optional Touch Interface IP67 Sealed Dual VGA Connectors, Single Composite BNC Feed for NTSC/PAL, Optional Touch Interface IP67 Sealed Dual VGA Connectors, Dual Composite BNC Feed for NTSC/PAL, Optional Touch Interface

Conformities

Conformities:	FCC47 CFR part 15, subpart B EMC: EN 55022:2006, EN 55024:1998, CISPR 22:2005, CISPR 24:1997 Canada: ICES-003 Australia/New Zealand: AS/NZS CISPR 22 Product Safety: 2006/95/EC, EN 60950-1:2006 CE, RoHS, WEEE
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Specifications

Physical & Power

Electrical Input:	Harsh Duty Variable Power Supply, 9 to 36 VDC, Wide Range, Low Noise, Wide Operational Temperature (Optional AC Power, Universal Input 85 to 264 VAC)
Maximum Power Requirements:	SVGA Panel – 25 watts, 32 watts w/heater XGA Panel – 38 watts, 45 watts w/heater
Video Controller:	Harsh Environment Controller Board Backlight MTBF, 65,000 hours
Operational Temperatures:	Standard: -20° to +70°C (-4°F to 158°F) Optional: -40° to +70°C (-40°F to 158°F)
Storage Temperature:	-40° to +75°C (-40°F to 167°F)
Dimensions:	W - 10.742", H - 7.809", Depth - 2.59"
Weight:	5.5 lbs.
Humidity:	Operating: 0 to 100%
Altitude:	10,000 ft. (optional 45,000 ft.)
EMI / EMC	Designed to meet FCC Class B (optional MIL-STD-461E)
Vibration:	Designed to meet MIL-STD-167 Designed to meet Marine IEC 60945 and IACS-E10
Environmental Design:	Designed to meet MIL-STD-810F
Airborne Equipment Environmental Conditions:	Designed to meet DO-160E
MIL-L-85762A:	Sunlight readability (air force - open canopy) Available: Optional MIL-DTL-38999 qualified - connectors
MIL-C-22750 (CARC):	Enclosure aluminum, black finish with Corrosion Protection
All input connectors are rated for full submersion including:	Power, VGA, Touch and BNC Composite Video and to ensure that each connector maintains its sealing, the socket is additionally tested for helium leakage (according to MIL 1344A)
Optional input connectors:	Optional MIL-DTL-38999 qualified - connectors
MIL-STD-1275:	Wide range DC power input 9-36 VDC (12 VDC, 24 VDC, 28 VDC nominal)
Cables:	Length - 3m (9'10") each Available IP67 Connector (monitor end) Cables: Power Video - 15-pin D-Sub Touch (optional) - Serial or USB Direct Composite BNC Video Feed (optional)
Touch Screen (optional):	5-Wire, Durable, Resistive or Armor Touch
Mounting:	RAM/VESA Mounting – standard Flush Mounting – optional Console Mounting with Helio-Coil Inserts – optional
Electrical Protection:	Internal Short Circuit Protection, Load Dump Protection, Over Voltage Protection, Reverse Polarity Protection
Optional Connectors:	Optional "right angle" Connectors
Optional EMI/EMC:	MIL-STD-461E (FCC Class B is standard)
Warranty:	2 years

Ordering Information

SturdyView MFD 8
SturdyView MFD 8 with optional 220VAC power supply



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