

**17" Mil-Spec, COTS Rugged LCD Display
 MRD-1817 Panel Mount Series**



Our Military Rugged Displays (MRD) are designed with shock and vibration safeguards, provisions for extreme temperature operation, high moisture safeguards, as well as Electromagnetic Environmental Interference protection for use in extreme harsh weather conditions found in many Military Applications.

The MRD1817 is a 17" cost effective LCD Display, packaged in a rugged panel mount enclosure. This monitor is designed for use in demanding applications that require graphics, video, and other RGB data on a single, rugged display.

Target application platforms for the MRD-1817 Series COTS LCD Monitors include: fixed-wing aircraft, helicopters, surface ships, submarines, ground vehicles and mobile shelters.

Though rugged enough for most Land based and Shipboard Applications, the MRD-1817 17" rugged LCD is versatile, as well. With provisions for 3 / 4 / 5 Wire BNC Inputs and RS170 / RS343 Video Operation, the MRD-1817 COTS LCD Monitors allow for easy insertion into legacy technologies and lower obsolescence risks.

Features:

- 17" SXGA High Brightness Color TFT-LCD
- Designed, Engineered and Built to comply with MIL-STD-810
- Operating Temperature Range: -30°C to 60°C
- High Bright Active Matrix TFT Display, 1500 Nits
- High Contrast – 1000:1 Typical
- Solid State LED Backlight
- Anti-Reflective LCD bonding for superior optical performance and better protection on extreme environments
- Convenient Front Controls
- Front Mounted Handles
- Heavy Duty Aluminum Front Panel
- Heavy Duty Cold Roll Steel Chassis
- Picture-In-Picture (PIP)
- Picture-Outside-Picture (POP)
- 110 / 220 VAC, 12VDC, 24VDC or 28VDC
- Full-Range Dimming to Black

- Analog and/or Digital Inputs
- HD15 VGA Analog & DVI-Digital Inputs
- NEMA 4/12 & IP65 Front Panel

Options:

- Wireless Remote Control
- Front Manual Full Range Brightness (Dimming) and Contrast Control
- Touch Systems: SAW, Resistive and Capacitive
- Conformal Coating of Internal Circuit Boards for Enhanced Ruggedization
- Integrated Heaters for Extended Operational Temperature Capabilities
- Sunlight Readable
- RS170 & RS343 Interlace Formats
- 3 / 4 / 5 Wire BNC Inputs
- CGA, EGA, MDA Input Video
- Sunlight Readable

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Specifications:	
LCD Size & Technology:	17.0" SXGA Color TFT-LCD (LM-171SX-SHB)
Viewing Area:	337.92 mm x 270.33 mm (13.30" x 12.75")
Pixel Pitch:	0.264 mm x 0.264 mm
LED Life Time (min):	50, 000 Hours minimum
Viewing Angle (H/V, Typ.):	85° (Left), 85° (Right) / 80° (Up), 80° (Down) @ CR = 10
Contrast Ratio (Typ.):	1000:1
Brightness (Typ.):	1500 Cd/m ²
Response Time (Typ. On/Off):	5 ms
Display Colors:	16.2M Colors
Supported Video Formats:	1280 x 1024 @ 60 and 75 Hz - Optimal Native Resolution Legacy Timing: 15KHz to 68KHz @ 55 to 85Hz.
Input Video Signals:	Video: 0.7 Vpp @ 75 Ohms Sync: Separate or Composite Sync TTL Level (Positive/Negative) Sync on Green Video 0.7 Vpp and Sync 0.3 Vpp
Input Video Interface:	HD15 (VGA Analog) & DVI-D (DVI-D Connector)
External Connectors:	Analog HD15 D-Sub Input; Digital DVI-D Input, DC or AC Input.
Display Controls	OSD (On Screen Display) – Full functions

Environmental	
Temperature:	Operating: -30°C to 60°C, MIL-STD-810G, Method 501/502 Procedure II Storage: -30°C to 85°C, MIL-STD-810G, Method 501/502, Procedure I
Cold Start-Up:	Start-up @ -30°C 10min usable picture. 20min. full spec.
Humidity:	Operating/Storage: 5 to 95% RH @ 40°C Non-Condensing. MIL-STD-810G, Method 507, Procedure I
Altitude:	Operating: 0 to 10,000 ft. above sea level Storage: 0 to 15,000 ft. above sea level, MIL-STD-810G, Method 500, Procedure I
Rapid Decompression:	N/A
Explosive Atmosphere:	N/A
Shock:	Operational/Storage: 15 G, 11ms, ½ Sine, MIL-STD-810G, Method 516
Vibration:	Operational/Storage: MIL-STD-810G, Method 514, Category 4 - Restrained Cargo, Category 5 - Loose Cargo (1 Hour/Axis)
Drip Proof:	Operational/Storage: MIL-STD-810G, Method 506 Procedure III. Front Panel Only
EMI:	MIL-STD-461E Ground Army
Sand Dust:	MIL-STD-810G, Method 510 Procedure I – Front Panel Only
Crash Proof:	N/A
Salt/Fog:	N/A
Fungus:	N/A
Power Requirements:	Power Supply: 100-240 VAC Auto Ranging 50-60 Hz (Internal) or +12 VDC @ 3A (External). Power Dissipation: 40 Watts Option: 28VDC Option: Power Dissipation with Heater On: 80 Watts Typ. Option: 115VAC, Single Phase, 400Hz (MIL-STD-704 Aircraft Power Requirements)
Power Connector:	IEC320 Power Cord Standard Options: MS3102A10SL-3P, MS3450W14S-7P
Dimensions & Weight:	13.58" (H) x 16.77" (W) x 4.17" (D) / Weight: 20 Lb.
Mechanical Configuration:	Modular Mount
Bezel Finish:	Aluminum - Black Epoxy Powder Paint with Wrinkle Finish
Construction:	Metal Ruggedized for Severe Environments
Options:	Touch Screen: Surface Accoustic Wave (SAW) and Resistive Screen Protection from Impact - Strengthened Glass NTSC / PAL NVIS Class A & B 5 BNC Input (RGB) TTL Video Input Option for EGA, CGA and MDA
Warranty	Two Year Limited Warranty