

**19 In Monochrome Military Grade COTS Display  
 MRD1819G Metal Enclosure Series**



The MRD1819G Series is a **19 In Monochrome Military Grade COTS Display** designed to operate in rugged environments and also develop with high performance, reliability and durability in mind. The rugged mechanical and electrical design makes this monitor ideal for operate where **Military Rugged Display** are required.

Features include High Contrast Ratio (1000:1), High Brightness Level (1300 Nits), Wide Operating Temperature Range, Bonded Anti-Reflective Protective Faceplate Glass for Superior Optical Performance and Better Protection on Extreme Environments, **STANAG 3350 Video** and **Monochrome RS-170 Video** compatible. These monitors features makes the **COTS Military LCD display** great for applications such as; **Air Traffic Control, Airborne, Aviation Display, Ground Mobile, Military Navigation Display Monitor, Ship Board (Submarine and Surface Warship), Shipboard Automation, Stationary Air Defense Systems**

The MRD1819G is capable of operating with legacy signal timings such as **Monochrome RS-170** and **STANAG 3350 Video** Interlace formats. Also, NTSC/PAL Video (RCA Jack), S-Video (4 Pin Mini Din) and VGA (HD15-DSub) Standard VESA Input Timings.

If you need **COTS Military Display, Ground Control Station – GCS, Rugged COTS Monochrome Monitor**, or just have a general-purpose need for rugged computer monitor, the MRD1819G series of **COTS LCD Monitors** is an excellent solution for your rugged display requirements.

**Features:**

- 19" Monochrome Active Matrix High Bright TFT LCD with Solid State LED Backlight
- 1280 x 1024 Native Resolution
- High Bright TFT Display - 1500 Nits
- High Contrast – 1000:1 Typical
- Full-Range Dimming to Black
- **Monochrome RS-170** or **STANAG 3350 Video** signal Compatible
- NTSC/PAL (RCA Jack) and S-Video (4 Pin Mini Din)
- DVI-I and VGA Inputs
- Convenient Front Controls
- Aspect Ratio: 1:1 or 4:3 (OSD Selection)
- Picture In Picture (PIP) and Picture-Outside-Picture (POP) Capable
- Image Size & Position Adjustment
- 90-264 VAC or 12VDC Power
- Bonded Anti-Reflective Protective Faceplate Glass for Superior Optical Performance and Better Protection on Extreme Environments
- Heavy Duty Aluminum Front Bezel

- Heavy Duty Cold Roll Steel Chassis
- VESA 100 Standard Mounting
- Conformal Coating of Internal Assemblies for Enhance Ruggedization
- Front Manual Full Range Brightness and Contrast Control (Dimming)
- Custom Designs including Spec, Color, Finish and Format
- Designed, Engineered and Built to comply with Military Standards

**Options:**

- 24V, 28 and 48V DC Input Voltage Options
- Wireless Remote Control
- 3 Buffered Unity-Gain BNC Outputs (RGB)
- 91 Ohm Video Termination
- Differential Video Input for Enhanced Noise Immunity
- Integrated Heaters for Extended Operational Temperature Capabilities
- Touch screen option (SAW, Resistive and Capacitive)

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| <i>Specifications:</i>       |                                                                                                                                                                                                                 |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LCD Size & Technology:       | 19.0" SXGA Monochrome TFT-LCD                                                                                                                                                                                   |
| Viewing Area:                | 376.32 mm (H) x 301.06 mm (V) – 14.82" (H) x 11.85" (V)                                                                                                                                                         |
| Pixel Pitch:                 | 0.294 mm x 0.294 mm                                                                                                                                                                                             |
| LED Life Time (min):         | 50, 000 Hours                                                                                                                                                                                                   |
| Viewing Angle (H/V, Typ.):   | 178° / 178° @ CR = 10                                                                                                                                                                                           |
| Contrast Ratio (Typ.):       | 1000:1                                                                                                                                                                                                          |
| Brightness (Typ.):           | 1300 Cd/m <sup>2</sup>                                                                                                                                                                                          |
| Response Time (Typ. On/Off): | 25 ms                                                                                                                                                                                                           |
| Display Colors:              | 256 gray scales per one sub-pixel (8 bit)                                                                                                                                                                       |
| Supported Video Formats:     | 1280 x 1024 @ 60 and 75 Hz - Optimal Native Resolution<br>Legacy Timing: 15KHz to 100KHz @ 55 to 85Hz.                                                                                                          |
| Input Video Signals:         | Video Analog: 0.7 Vpp @ 75 Ohms<br>Sync: Separate or Composite Sync TTL Level (Positive/Negative)<br>Sync on Green Video 0.7 Vpp and Sync 0.3 Vpp                                                               |
| Video Input Interface:       | HD15 (VGA Analog), 5 BNC and AV Video (RCA Jack & Din-4)<br>Customer Option: BNC, Triax or Type N.                                                                                                              |
| External Connectors:         | Analog Video and Input Power                                                                                                                                                                                    |
| Display Controls             | OSD (On Screen Display) – Full functions                                                                                                                                                                        |
| <i>Environmental</i>         |                                                                                                                                                                                                                 |
| Temperature:                 | Operating: -0°C to 50°C<br>Storage: -20°C to 60°C                                                                                                                                                               |
| Cold Start-Up:               | Start-up @ 0°C 10min usable picture. 20 min. full spec.                                                                                                                                                         |
| Humidity:                    | Operating/Storage: 10 to 90% RH @ 40°C Non-Condensing.                                                                                                                                                          |
| Altitude Test:               | Operating: 0 to 10,000 ft. above sea level<br>Storage: 0 to 30,000 ft. above sea level                                                                                                                          |
| Shock:                       | Storage: Acceleration: 50G<br>Wave: Half-Sine<br>(Non-Operational): Active Time: 20 ms<br>Direction: ±X, ±Y, ±Z (One Time for Each Axis)                                                                        |
| Vibration:                   | Storage: Acceleration: 1.5G<br>Wave: Random<br>(Non-Operational): Frequency: 10 200 -10Hz<br>Sweep: 30 Minutes each Axis (X, Y, Z)                                                                              |
| Drop Test:                   | Height: 60 CM, Package Test                                                                                                                                                                                     |
| Thermal Shock:               | -20°C/30 min, 60°C/30 min, 100 Cycles                                                                                                                                                                           |
| Power Requirements:          | Power Supply: 100-240 VAC Auto Ranging 50-60 Hz (Internal) or +12 VDC @ 3A (External).<br>Power Dissipation: 48 Watts                                                                                           |
| Power Connector:             | IEC320 Power Cord Standard                                                                                                                                                                                      |
| Dimensions & Weight:         | Height: 14.67" or 18.5" with Tilt and Swivel Base<br>Width: 17.15"<br>Depth: 3.3" or 11.4" with Tilt and Swivel Base<br>Weight: 14.1 Lb. without Tilt & Swivel Base or Weight: 21.8 Lb. with Tilt & Swivel Base |
| Mechanical Configuration:    | Table Top or VESA 100                                                                                                                                                                                           |
| Bezel Finish:                | Aluminum - Black Epoxy Powder Paint with Wrinkle Finish                                                                                                                                                         |
| Construction:                | Metal Ruggedized for Severe Environments. All hardware secured with Loctite                                                                                                                                     |
| Warranty                     | Two Year Limited Warranty                                                                                                                                                                                       |