



Military Grade Extreme Duty Waterproof Ultrabright Digital Computer Monitor

MPC-ML2D

The MPC-ML2D Series is a 2nd generation Military Grade marine flat panel Active Matrix LCD Monitor designed for rugged use where environmental conditions and operational reliability are beyond normal limits. The MPC-MLD is designed to meet applicable military standards MIL-STD-810G, MIL-STD-461E and others. The MPC-ML2D is available in 8.4", 10.4", 12.1" and 15.0" sizes and has an extremely bright (up to 1,000) nit display for use in full sunlight but dimmable to about 1 nit for use on blackout nights without destroying the user's night vision. The MPC-ML2D connects directly to any DVI-D digital display output. All Marine PC ML products are available to authorized customers with MIL-STD-3009 NVIS Red/Green, compatible with NVG's. This results in the maximum in readability in any situation. Front mounted display setup and dimming control adjusts the display qualities and brightness with pushbutton simplicity. Fully sealed MIL-C circular connectors on the rear allow for connection to a custom cable or to our standard 3m. power and video cables (ordered separately). The native LCD resolution is SVGA 800x600 or XGA 1024x768, and the MPC-ML2D will auto-scale any standard 4:3 input resolution to fit full screen. The optional analog resistive touch screen will operate perfectly even in the wettest conditions. The normal operating temperature range of -40 to 70°C (-40 to 158°F) is accomplished without heaters or fans. The precision milled aluminum case is the smallest possible allowing mounting where others can't fit. Our sealed construction eliminates fogging and will normally give years of service with the roughest handling. Mounting is accomplished via a shock resistant adjustable ball mount, surface mount with rear studs, or ordered with the optional flush bezel. Common applications include primary display or repeater from a computer, chart plotter, blackbox radar, sounder or weather computer and can be remotely located 24/7 in an open unprotected location.



Standard Features

- **Completely Sealed Case Rated IP67 Watertight.**
- **Designed to Meet MIL-STD-810G, 461E, others.**
- **8.4", 10.4", 12.1" or 15" Color TFT AMLCD.**
- **SVGA(800x600) or XGA(1024x768) Hi-Resolution LCD.**
- **Standard DVI-D Digital Video from any Source.**
- **Up to 1,000 nit Ultra-Bright Dimmable to <1 nit.**
- **Optional MIL-STD-3009 NVIS Red/Green.**
- **Extreme Temperature Range: -40to70°C (-40to158F).**
- **High Shock, Vibration and Lifecycle Withstand.**
- **RAM Shock Resistant Adjustable Ball Mount.**
- **Thin Profile Black Anodized Aluminum Case.**
- **Optional Flush Bezel for Console Mounting.**
- **Powered from 10-36 VDC or optional 120/240 VAC.**
- **Anti-Reflective Glass.**
- **10 Ft. (3m.) Power and Video Cables Available.**

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Specifications

- **Display**
 - AMTFT LCD
 - LED Backlight
 - SVGA - 262,144 colors
 - XGA - 1,777,216 colors

- **NVIS Option** MIL-STD-3009 NVIS Red/Green (Day/NVIS Mode Selectable)
- **Video Input** DVI-D Digital Video from Any Source
- **Input Resolution** 640x480 up to 1280x1024, 4:3 Autoscaling
- **Cables** (Order Separately, Custom Lengths Available)
 - Power - 10 Ft. (3m.) Sealed Cable, Flying Leads (DC only)
 - Video - 10 Ft. (3m.) Sealed Cable, Standard DVI-D (Male)
- **Connectors** MIL-DTL-38999 (Video), MIL-DTL-26482 (Power)
- **Housing** MIL-PRF-22750F
 - NEMA 6P/IP67 Rated Outdoor Weatherproof and Watertight
 - Main Case Black Anodized/Clear Coated Milled Aluminum Billet
 - Powder Coated Aluminum Pod, All Stainless Steel Hardware
 - RAM Adjustable Shock Resistant Ball or Surface Mount Stud Kit
 - Optional Flush Mount Bezel (Adds 0.45" Front Flange All Sides)

- **Mounting**
- **Weight**

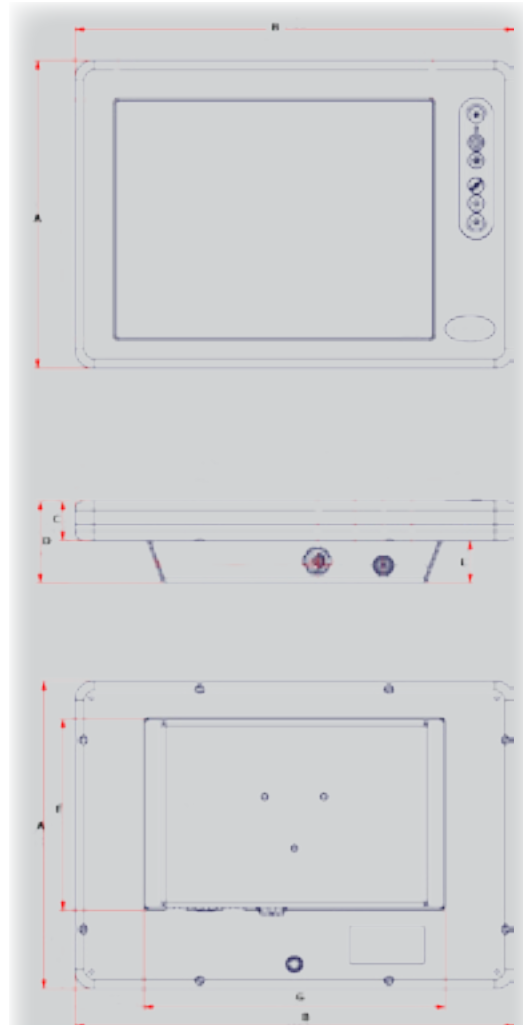
8.4"	3.0 kg / 6.6 lbs.
10.4"	3.5 kg / 7.7 lbs.
12.1"	4.1 kg / 9.0 lbs.
15.0"	5.0 kg / 11 lbs.

- **Power Supply** MIL-STD-1275D Wide Range DC Input (10-36 VDC)
 - Nominal Operating Voltages 12, 24, 28, 32 VDC
- **Power Consumption** Min: 6 watts Max: 8.4", 10.4", 12.1" - 20 Watts, 15" - 40 Watts
- **Environmental** MIL-STD-810G

	Operating	Non-Operating
Temp. Method 501.4 & 502.4	-40°C to 70°C (-40°F to 158°F)	-40°C to 75°C (-40°F to 167°F)
Relative Humidity	0% to 100%	Method 507.4
Shock	50 G	50 G Method 516.5
Vibration (@ 5-500 Hz sine sweep)	5.8 G	5.8 G Method 528
- **EMI/RFI** MIL-STD-461E CE102, CS114, CS115, CS116
RE101, RE102, RS101, RS103
- **MTBF** (approx.) 50,000 Hrs.

SIZE	Resolution	Brightness(nits)	Viewing Angle (H x V)	Contrast Ratio
8.4"	800x600	800	160° x 160°	900:1
10.4"	800x600	800	160° x 160°	900:1
10.4" *	1024x768	1,000	160° x 130°	700:1
12.1"	800x600	550	160° x 140°	600:1
12.1" *	1024x768	1,000	160° x 140°	600:1
15"	1024x768	800	160° x 140°	800:1

* Optional Upgrade



Dim Model	A	B	C	D	E	F	G
ML208D	6.90" 175mm	9.90" 251mm	1.10" 28mm	2.50" 64mm	1.40" 36mm	5.11" 130mm	8.04" 204mm
ML210D	8.13" 207mm	11.60" 295mm	1.10" 28mm	2.50" 64mm	1.40" 36mm	5.11" 130mm	8.04" 204mm
ML212D	9.20" 234mm	13.00" 330mm	1.20" 30mm	2.60" 66mm	1.40" 36mm	5.11" 130mm	8.04" 204mm
ML215D	11.0" 279mm	14.86" 377mm	1.20" 30mm	2.60" 66mm	1.40" 36mm	5.11" 130mm	8.04" 204mm

(Note: MPC-ML products are designed to meet a broad range of MIL-STD's. Consult factory for current list of Certified Test results.)