

LAD 2150 Display Series

Cutting Edge Displays for Commercial and Military Applications

- Multi-patented
- Fully redundant
- Sunlight readable
- Rugged design
- NVIS capable
- Touch screen option



As the first dual-redundant large area display (LAD) of its kind, the LAD 2150 display head assembly (DHA) incorporates high-saturation color filters and 10-bit color depth affording a high-dynamic range of 1024 gray shades and capable of 1.3 billion colors.

This multi-patented technology advances the state of the art in fully redundant display technology, offering independent power and video paths for each of the two displays, which reside on a single active matrix liquid crystal display (AMLCD) substrate with no visible separation between the two independent pixel fields.

The integrated LED backlight provides both day and night mode selection over a serial interface while maintaining a compact packaging design. Separate day/night mode backlight architecture enables the LAD 2150 to fully meet NVIS requirements for night mode operation without any degradation in the day mode color palette.

DHA Features

- Patented 21.5" (20" x 8") dual-redundant large area AMLCD
- 2560x2048 resolution (1280x1024 each panel)
- Redundant, resistive touch panel (optional)
- Day/night mode backlight (MIL-STD-3009 Class B NVIS compliant)
- Designed for harsh environments
- Compact packaging
- Day mode (typical luminance of 300 fL) provides sunlight readability with high resolution, wide viewing angle, low surface reflection

Available Configurations

- LAD 2150 display head assembly (DHA)
 - Includes driver circuit card assembly and backlight controller circuitry
 - LED backlight
 - Compact package design
- LAD 2150 addressable cell assembly (ACA)
 - Includes driver circuit card assembly tab bonded to AMLCD
 - No backlight
- LAD 2150 bare glass

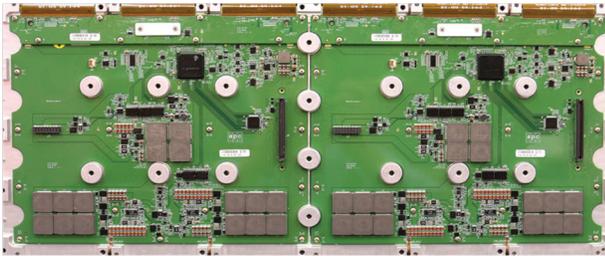


Mercury Systems is a leading commercial provider of secure sensor and safety-critical processing subsystems. Optimized for customer and mission success, Mercury's solutions power a wide variety of critical defense and intelligence programs.



Additional Features

- LVDS digital video interface
- Internal temperature sensors
- Operating temperature at -55°C to +71°C (max +85°C with proper thermal management)
- Storage temperature up to +95°C
- RS-422 serial interface for control and BIT reporting
- Integral heater enables operation below -20°C
- Closed-loop backlight to ensure constant luminance performance over the operating temperature range and lifetime of the product
- 97% NTSC color gamut



General Specifications

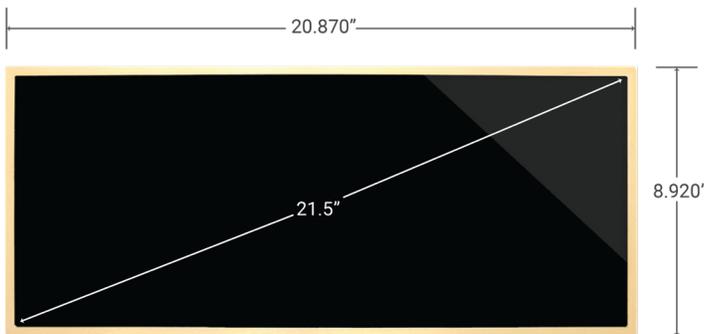
Active Display Area: 19.96" x 8.16", 21.5 diagonal
Pixel Format (HxV): (2x) 1280 x 1024 RGB, vertical stripe arrangement
Color Groups per Inch: 128
Aspect Ratio: 10:4 (overall), 5:4 (per side)
Color Depth: 10-bit, 1024 gray shades
Display Operating Mode: IPS, normally black
Front Surface Treatment: ITO (Indium-Tin-Oxide) for LCD drain and heater

Backlight

Day Mode: white LED, edge-lit, 300fL (max)
Night Mode: white LED, edge-lit
NVIS: MIL-STD-3009, nNRB < 2.2 (optional)

Electrical

Power Supply Voltage: 5 VDC
VCC Power (per side): 5W (max)
Backlight Voltage: 12 VDC
Backlight Power (per side): 50W (max)
Heater Power Voltage: 28 VDC
Heater Power (per side): 115W (max)



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