



**6.25-INCH X 6.25-INCH DESIGNED AND
BUILT FOR THE COMBAT ENVIRONMENT**

**An advanced color active matrix liquid
crystal display and video system designed
for the Longbow Apache**

Color multipurpose display suite

The Longbow Apache multipurpose display suite is a state-of-the-art color active matrix liquid crystal display (AMLCD) and video system in production today. This 6.25-inch x 6.25-inch AMLCD is suitable for adaptation to a wide array of helicopter and fixed-wing applications. It is designed and built to meet the rigors of the demanding tactical combat environment of the US and international Longbow Apache helicopter fleets.

Our logistics and production base provides superior capability at affordable costs.

The Longbow Apache display system includes four color multipurpose displays (MPDs) and two color display processors (CDP). The MPD acts as a video monitor and all graphics processing is provided by the CDP.

The color display processors graphics can be configured to provide a maximum of four completely independent channels. The CDP includes a MIL-STD-1553 bus interface that can act either as a bus controller or remote terminal. This provides extensive capabilities for both new aircraft and aircraft retrofit/modernization programs.

A full-feature digital map system can be easily embedded within the CDP through a modular upgrade. Provisions exist for

this upgrade and a single card map prototype is already developed, integrated and tested.

The MPD is equipped with 31 bezel buttons for pilot/display interface. The MPD provides 256 gray shades and is equipped with a digital video interface to provide 32 independent bits per pixel of RGGB data for high-resolution monochromatic and color video. This high resolution is essential for mission-critical targeting/pilot LIR and digital map video requirements. A sophisticated, closed-loop backlight control system provides superior optical performance. The backlight and LC temperatures are optimized for any given ambient temperature and brightness command setting.



Features

Apache Longbow Multipurpose Color Display

| | |
|----------------------------|---|
| Display area | 6.25" x 6.25" active area |
| Size | 13.5 lbs |
| Power | 115 VAC 3f 400 Hz, 115W full brightness without heaters, including fan |
| Cooling | Forced air/cold wall construction |
| Operating environment | -40°C to +71°C |
| MTBF | 9961 hours (predicted) |
| VideoInterface | Dual redundant, high-speed serial digital data ling |
| Optical Performance | |
| Resolution | 512 x 512 color pixels |
| Pixel arrangement | Quad RGGB color pixel |
| High ambient | >5.66:1 green, <6.5:1 white within primary contrast ratio |
| Luminance | >250 fL white (new lamp) >140 fL green, >160 white, minimum over life |
| Dimming | >20,000:1 |
| Viewing | |
| Angle | H ± 30 V + 13 to + 35 Extended |
| NVIS | Class B compliant; tested compatibility with class A goggles in mono green mode |

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