

CHASSIS PLANS

ENGINEERED SOLUTIONS

The Application

Situational awareness, the ability to see and to know where the enemy is and what they are doing, is critical to war fighter safety and survival. All well and good for static surveillance but providing the same information to mobile units significantly improves their effectiveness and survivability.

The Force Protection Display was designed as a tethered ultra-rugged portable LCD display to be used in Humvees, Bradleys, and similar vehicles to provide situational information either inside the vehicle or to be carried outside as the mission requires.



The Specification

LCD Resolutions	17-Inch TFT 1600x1200 scaled to 1280x1024, 6.7M Colors
LCD Enhancements	Circular polarizers, bonded enhancement filters
Contrast Ratio	>500:1 (6:1 in sunlight)
Touch Screen	Resistive, 88% light transmission, hard coated
Enclosure	Milled 5052 aluminum billets
Weight	15 lbs
Operating Temp	0 to +55°C
Environmental Rating	Sealed to IP65

The Solution

Chassis Plans started with a high quality 17-inch 1280x1024 panel and significantly modified the optical properties by adding circular polarizers, bonded optical enhancement filters, and a touch screen with ITR coating. The touch screen provided 88% light transmission. These enhancements allows use of the display in direct sunlight with outstanding contrast and brightness.

A military grade LCD controller was modified to provide 1600x1200 scaling to the native 1280x1024 panel to work with existing software.



Starting with two solid 5052 aluminum billets, a front and rear housing were fabricated to provide mechanical and environmental protection for the LCD and electronics. Conductive gaskets provide for sealing and EMI protection of the unit. An ITR coating provides EMI protection across the face of the LCD. Waterproof switches, indicators, and tether connectors are provided.