

TL/2 rugged displays

Stunning images for the most rugged environments



A series of thin and lightweight displays

This family of thin and lightweight displays offers significant benefits with respect to dimensions, ruggedization and intelligence. The TL display series combines unmatched thinness with exceptionally low weight to provide a unique, rugged display solution, especially for applications where space and weight are critical.

The innovative TL series features first-class AMLCD technology, providing excellent performance in terms of brightness, contrast, dimming, and viewing angle. Several options and bezel configurations are available to address virtually any mounting need in any application. Additionally, the TL displays combine this high level of performance and versatility with a very competitive price/performance value.



Flawless performance

Thin

The thin footprint of the TL series allows easy integration into systems and platforms where space is limited. TL displays have been specifically designed for full SWaP-C compliance and ensure flawless performance in mission-critical environments.

Multi-touch

TL displays feature PCAP multi-touch technology optimized for use in military applications, allowing fluent drag and drop actions. The screen can be operated with finger tips, most common gloves or stylus. TL displays have an anti-fingerprint and anti-reflective coating and its touch technology excels with high touch accuracy, dust and water resistance. The built-in On-Screen Display functionality and web interface make interaction with the display even more user-friendly.



Multi-touch



Light

The TL displays have an exceptionally low weight in combination with a high level of ruggedization. This allows for major savings in applications where weight is critical.

Innovative

TL displays feature the latest innovations in electronics and video processing. They come standard with 2xDVI-I and VGA signal inputs and support new digital interfaces such as HD-SDI. What's more, TL displays offer outstanding video processing capabilities, including extensive Picture in Picture and scaling possibilities.

Versatile

TL displays are truly the most versatile display solutions around, in terms of size, ruggedness and mountability.

The full family of thin and lightweight displays, available in 19", 21" and 23", has been designed and qualified for application in the most hostile environments. Two levels of ruggedization allow integrators to choose the TL display that meets their specific program requirements. All displays come as a fully enclosed, drip-proof unit. Ruggedization includes a front bonded optical stack and integrated heaters for sub-zero temperature operations.

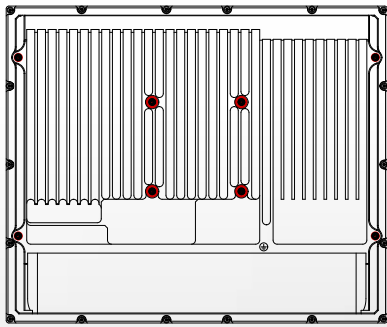
With its amazing dimensions and full range of mounting possibilities, the TL display is fully tailored to integrator needs and ready for integration into practically any mounting configuration, in any application and on any platform.

A family of versatility

Mountable anywhere

We developed the TL display series with a special eye to easy integration into several mounting configurations, such as racks, consoles, and even portable workstations and standalone configurations with VESA mount. The TL series features a very compact footprint, minimal depth and a broad choice of bezel configurations, all conforming to open industry standards. All these features make TL the most versatile display solution on the market.

The several fixation points allow the TL displays to be mounted in practically any mounting configuration, in any application and on any platform





TL-248/2



TL-354



TL-358/2



Compatibility with legacy displays

The optional MIL connector interface and AC power option offer the possibility to connect the latest TL displays with legacy display systems without the need to change cabling or mechanical interfaces.

Additionally, TL displays are form-, fit-, and function-compatible with legacy displays, like the TL-248/2 is with its predecessor and the TL-354 with the TL-351 console mount.



Proven technology

The TL display family features proven, proprietary Esterline technology which has made our rugged displays so successful over the past decades in many naval, landbased and airborne programs worldwide.

Automatic Phase Adjust (APA)

The APA technology, which is especially effective for high-resolution displays, helps to avoid image artifacts like pixel noise. The APA function automatically locks the LCD sampling clock to the (drifting) graphics generator pixel frequency. Drift can be caused by temperature changes, electromagnetic interference and other environmental factors.

Low latency

TL displays are configured to have the lowest possible impact on system latency. Esterline therefore reduces the internal image processing delay to an absolute minimum (one frame only).

Extended dimming ratio

For many products, Esterline uses in-house manufactured circuitry to provide advanced dimming solutions.





By courtesy of Agusta Westland



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Optional LCD Flicker Compensation

The TL displays can be equipped with Esterline's unique patented LCD Flicker Compensation (LFC) solution, which allows operators to view acoustic sonar images or dense scrolling data without distracting flicker effects.

Picture in Picture

Advanced Picture in Picture functionality allows you to select any input signal and present it just the way you want it (e.g. quad view), without losing track of scaling, window size or position.



About Esterline

Esterline Corporation is a leading global supplier to the aerospace and defense industry specializing in three core areas: Avionics & Controls, Sensors & Systems, and Advanced Materials. The company employs approximately 12,000 people and operates manufacturing facilities in over a dozen countries worldwide. Esterline is headquartered in Bellevue, Wash., and trades on the New York Stock Exchange under the symbol ESL.

Operations within the Advanced Materials segment focus on technologies including high-temperature-resistant materials and components used for a wide range of military and commercial aerospace purposes, and combustible ordnance and electronic warfare countermeasure products.

Operations within the Avionics & Controls segment focus on technology interface systems for commercial and military aircraft and similar human-machine interface devices for land-

and sea-based military vehicles, cockpit integration systems and advanced display technologies, secure communications systems, specialized medical equipment, and other high-end industrial and gaming applications.

The Sensors & Systems segment includes operations that produce high-precision temperature and pressure sensors, specialized harsh-environment connectors, electrical power distribution equipment, and other related systems principally for aerospace and defense customers.

Esterline is an ISO 9001 registered company. The information and data given are typical for the equipment described. However any individual item is subject to change without any notice. The latest version of this product sheet can be found on www.barco.com

DEF - TL family - 15-04-2015 / 001

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