Technical Article

Plug, Play and Display with the Most Affordable TI DLP® Pico™ Display EVM

TEXAS INSTRUMENTS

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Texas Instruments has taken large steps to enable its groundbreaking DLP® projection display technology. Over five years ago, we released DLP Light Commander, which was our first effort to address developers who wanted easier access to our technology. We now support evaluation modules (EVMs) that include our DLP Pico™ display TRP product line, including the DLP2010 (wide video graphics array [WVGA]), DLP3010 (720p) and DLP4710 (1080p) products.

As the leader in projection display technology, Texas Instruments is committed to providing the best solutions for its customers.

Our DLP Pico technology has been expanding into a wide variety of applications, including augmented reality, virtual reality, aftermarket heads-up display, mobile smart TVs, point of sale, virtual assistants, commercial gaming and pico projectors. With the growth of our reach and ecosystem, developers are asking that we provide them with a wider catalog portfolio to cover markets dominated by low-cost processors. Developers wanting to evaluate DLP technology and develop display applications are now looking for solutions with the least financial burden.

To make our technology accessible to the masses, TI has introduced its most affordable digital micromirror device (DMD) and DLP EVM ever. The DLP LightCrafter™ display DLP2000 EVM enables you to evaluate DLP technology for $99. You can harness the technology as a stand-alone unit or pair it with your favorite low-cost processor. In stand-alone operation and powered by a 5V DC supply, the unit can display one image that showcases image quality, contrast ratio and photo/display panel imagery. Processor connectivity is enabled with a 16-/24-bit red-green-blue (RGB) parallel interface and I^2C to communicate with the unit. In fact, the unit has the same pin out configuration as the BeagleBone Black.

Figure 1. DLP LightCrafter™ Display DLP2000 EVM

The display possibilities are limitless, including free-form and on-demand display applications. Household control panels can disappear when they are not in use and appear when the end user needs to access them. Smart home displays can take virtually any shape to optimize the industrial design and appeal to consumers. Battery-operated tiny mobile smart TVs that fit in your pocket are now possible. Human-machine interfaces used in factories can be front-projected onto a steel surface to deliver a tamper-proof panel.

The new 0.2-inch DLP2000 chipset and $99 DLP® LightCrafter™ Display 2000 evaluation module (EVM) now make it more affordable to leverage DLP technology and design on-demand, free-form display applications such as mobile smart TVs; pico projectors; digital signage; projection displays for smart homes, smartphones and tablets; and control panels and Internet of Things (IoT) display solutions. The DLP2000 is available now for US$19.99 and the DLP LightCrafter Display 2000 EVM is available for US$99 through the TI store and authorized distributors. For more information, see www.ti.com/dlp2000 or watch the DLP LightCrafter Display 2000 video to see how quickly you can get started.
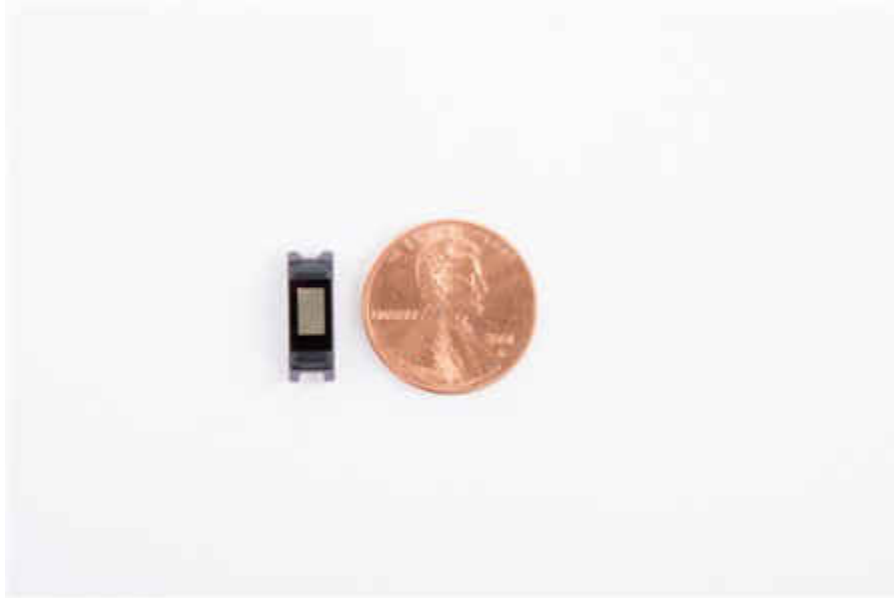
Figure 2. 0.2-Inch DLP2000 Chipset

Additional Resources
- Learn more about DLP Pico display technology:
    – Download the DLP2000 DMD data sheet.
    – Download the DLP2000 reference design.
    – Get started with DLP Pico technology.

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