

Get the Large-Screen Experience on the Go with Mobile Smart TVs



James Bucklar

When viewing my favorite television shows, movies and sports, I subscribe to the theory that bigger is always better. The good news is that affordable large-screen TVs keep getting bigger, but consumers like me who crave that big-picture experience are often limited by wall space, room size and the eyesore of a massive TV. New display solutions called **mobile smart TVs** offer large images in stylish, portable packages.

Imagine taking your movie-time fun on the go and streaming your content virtually anywhere. Mobile smart TVs are quick to set up, can be displayed on virtually any surface, and have the ability to scale the projected image size based on the distance between the product and viewing surface. By having one adaptable unit, consumers can turn their inside wall into a screen, show the big game on the garage door, host movie night in the backyard (**Figure 1**) or even bring it with them while camping.



Figure 1. Mobile Smart TV for Camping

How is it possible to create a large, high-quality image from a small portable device? DLP® Pico technology enables the display of impressive imagery through its small form factor. The technology comprises tiny digital micromirror devices (DMDs) capable of producing wide video graphics array (WVGA)-to-1080p resolution images, which can scale up to 120 inches diagonally. With key optical efficiency, contrast, speed and advanced image-processing algorithms, you have the ability to design ultra-mobile display solutions for a variety of resolutions by leveraging the same award-winning technology found in DLP Cinema® products.

Today, there are several innovators and partners of mobile smart TV products, including JmGO, LG and xGIMI. For new entrants developing mobile smart TV's, the integration of DLP Pico technology optical engines is easier than ever given TI's ecosystem of third-party partners. Systems integrators can focus on more compelling, differentiated features in potential mobile smart TV solutions and consider product size, brightness, resolution, interfaces and audio capability.



Figure 2. Use Mobile Smart TV's While in the Kitchen

If you're not sure where to begin, TI has [mobile smart TV training](#) that explains how you can start designing effective solutions for this burgeoning product category. TI designed this training based on questions from product development managers and engineers.

Additional Resources

- Check out the [Getting started with TI DLP Pico display technology](#) page.
- Download the white paper, [DLP Pico Technology for Screenless Display](#).
- Buy [production-ready optical modules](#).
- Read the technical article, [Your Next Home Theater Might Just Fit in Your Pocket](#).

IMPORTANT NOTICE AND DISCLAIMER

TI PROVIDES TECHNICAL AND RELIABILITY DATA (INCLUDING DATA SHEETS), DESIGN RESOURCES (INCLUDING REFERENCE DESIGNS), APPLICATION OR OTHER DESIGN ADVICE, WEB TOOLS, SAFETY INFORMATION, AND OTHER RESOURCES "AS IS" AND WITH ALL FAULTS, AND DISCLAIMS ALL WARRANTIES, EXPRESS AND IMPLIED, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT OF THIRD PARTY INTELLECTUAL PROPERTY RIGHTS.

These resources are intended for skilled developers designing with TI products. You are solely responsible for (1) selecting the appropriate TI products for your application, (2) designing, validating and testing your application, and (3) ensuring your application meets applicable standards, and any other safety, security, regulatory or other requirements.

These resources are subject to change without notice. TI grants you permission to use these resources only for development of an application that uses the TI products described in the resource. Other reproduction and display of these resources is prohibited. No license is granted to any other TI intellectual property right or to any third party intellectual property right. TI disclaims responsibility for, and you will fully indemnify TI and its representatives against, any claims, damages, costs, losses, and liabilities arising out of your use of these resources.

TI's products are provided subject to [TI's Terms of Sale](#) or other applicable terms available either on [ti.com](https://www.ti.com) or provided in conjunction with such TI products. TI's provision of these resources does not expand or otherwise alter TI's applicable warranties or warranty disclaimers for TI products.

TI objects to and rejects any additional or different terms you may have proposed.

Mailing Address: Texas Instruments, Post Office Box 655303, Dallas, Texas 75265
Copyright © 2023, Texas Instruments Incorporated