Technical Article

Why the TI DLP® 0.66-Inch 4K Ultra-high Definition Chip Can Be a Game Changer for Business, Home Theater and Education Large Screen Projection Displays

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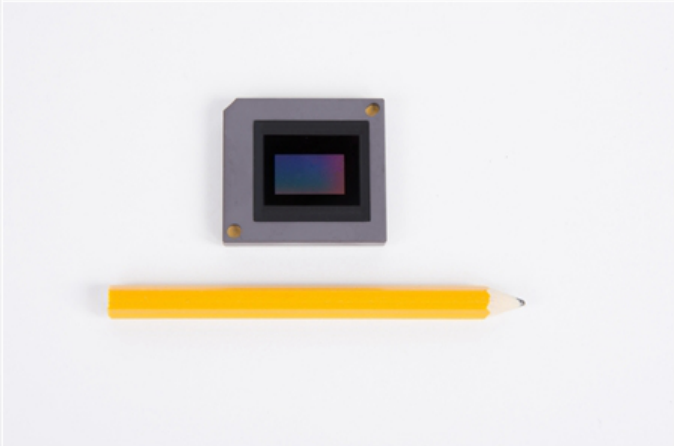
This week in Las Vegas, CES 2016 attendees are getting a first-hand look at a demonstration of the TI DLP® 0.66-inch 4K ultra-high definition (UHD) chip and seeing for themselves why it is being celebrated as an innovation for large screen projection. Based on proven DLP Cinema® technology, the imaging choice for more than eight of 10 digital theater screens worldwide, the DLP 4K UHD chipset combines the fast switching speed of the digital micromirror device (DMD) with advanced image processing to create a more affordable display solution for home theater, business and education applications.

Let’s take a closer look at how DLP technology is enabling bright, affordable 4K UHD projectors.

More Affordable 4K UHD

With a small, 0.66-inch micromirror array that is similar in size to the array of the DLP 0.65-inch 1080p chip, brands, developers and system integrators will be able to create a range of 4K UHD projector solutions suitable for the home, office or classroom. The DLP chip enables high resolution and high brightness solutions at a price point that allows manufacturers to expand 4K UHD projection displays to a broad audience.



Seeing Is Believing

4K ultra-HD resolution gives viewers an immersive experience with four times more detail than standard 1080p resolution. DLP 4K UHD projection technology brings 4K UHD resolution to life by easily displaying more than 100-inch diagonal razor sharp images on the screen. The solution uses the fast speed of the chip with advanced image processing to deliver more than 8 million pixels to the screen with just 4 million micromirrors. The switching speed of the chip makes it possible to create two distinct and unique pixels on the screen during every frame, resulting in full 4K UHD resolution. In addition, DLP one-chip systems are perfectly aligned, maintaining the color integrity of the content without blurriness between colors for a more vibrant picture.

The Recipe for a Great Image

Resolution and pixel alignment are not the only factors in a great display. ANSI contrast becomes very important in order to see all the fine details 4K UHD resolution brings out. ANSI contrast represents the difference between black and white on the same scene or image, and having a display with high ANSI contrast means fine details will be sharper and easier to see. In addition, bringing its years of industry expertise and being at the vanguard of imaging innovation, TI DLP proprietary algorithms help deliver high quality images with crisp and distinct details.

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