Advanced Interactive Display

DLP®
TEXAS INSTRUMENTS

The Next Generation of Advanced Displays for Industrial and Medical Applications

Texas Instruments

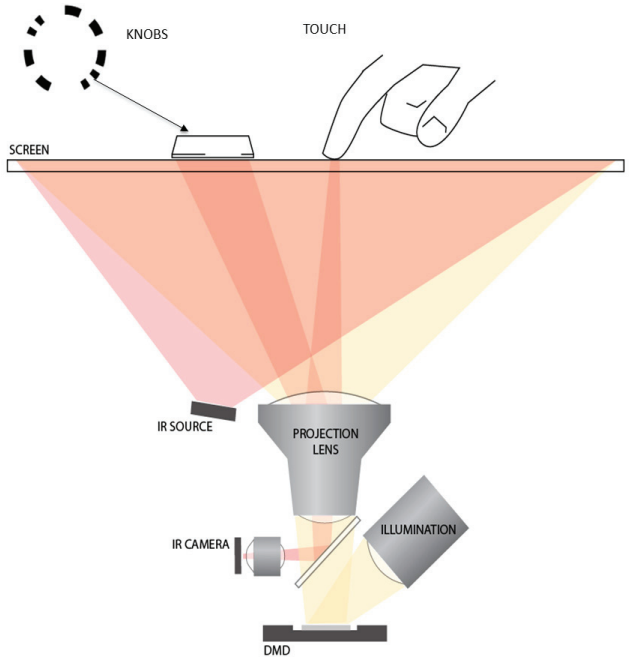
Interactive Displays using DLP® Technology

Since 1996, DLP technology from Texas Instruments has powered projection displays found everywhere from cinemas to classrooms and cell phones. At the core of each DLP chipset is a highly efficient optical MEMS component: the digital micromirror device (DMD). As new developments in display technology strive for a more immersive user experience, the speed and flexibility of the DMD is enabling new levels of interaction.

High image quality and robust performance are uniquely enabled by DLP technology. DLP interactive displays are distinguished by the capability to project onto large, curved surfaces while maintaining consistent contrast levels and color richness. Human-Machine Interfaces (HMI) defined in software, including knobs and other physical controls that do not require wiring, further enable versatile designs. As a result, developers and free to experiment with a variety of shapes and aesthetic displays.

Robust performance complements the superior image quality and flexibility of DLP interactive displays, making them well suited for industrial and medical settings. Sophisticated multi-touch interaction enables near-field gesture control and unlimited touch points in systems that can be operated with gloved or dirty hands. These advanced display systems are not susceptible to damage from touch overlay and are resistant to wear off and mechanical impacts.

Visit www.ti.com/mems to learn more about the advantages of DLP® technology and broad range of development tools available to kickoff your interactive display development.



System Block diagram: DLP Interactive Display

Key Features and Benefits

- **Multi-touch control**
  - Enables near-field gesture control (pre-touch detection)
  - Supports an unlimited number of touch points
- **Robust operation**
  - Well suited for industrial and medical uses
  - Can be used with dirty, oily, or gloved hands
  - Resistant to touch overlay damage and mechanical impacts
- **High image quality**
  - Enables display on curved surfaces
  - Consistent brightness, contrast, and colors
  - High power efficiency
  - Easily scalable for large display areas
- **Flexible designs**
  - Physical controls (knobs) without wiring
  - HMI fully re-definable in SW

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