**Goggle Based on Silicon MicroDisplay**

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Audiences’ expectation to the movies resolution is greatly advanced. However, the resolution of Head-mounted Display (HMD) in market is up to Video Graphics Array (VGA) or Super Video Graphics Array (SVGA) standard only. With the advancement of micro-display technology of the new Silicon MicroDisplay (Wide Extended Graphics Array), HMD has been put forward to a new era. A much more detail as well as high resolution images can be viewed in the HMD by implemented new kind of Silicon Microdisplay.

Designing a set of Evaluation Board (EVB) to drive the new Silicon MicroDisplays, which is on the marketing demand of highly resolution of Displays, as well as designing a high resolution of HMD for the standard of High-Definition Television (HDTV) are our project goal. The demonstration is achieved by using HMD to display movies from the input multimedia sources such as DVD players. With eyepieces for viewing the display, we have demonstrated virtual video image of 60” at 2 meters in front of the viewers.
Basic Logic of Figure Cancellation

Control Signals of Left and Right LEDs

Control Signals of WXGA panel from EVB kit

from LED Controller

Normal driving of Data of Color Sequential

for Left side circuit

Color Shifting of Data of Color Sequential

for Right side circuit
RESULTS

Front view of a set of EVB kit

Picture Captured from EVB kit

Picture Captured from HMD kit

Front view of a Complete set of HMD

Picture Captured from HMD kit