THCV213 and THCV214

LVDS SerDes transmitter and receiver

General Description

THCV213 and THCV214 is designed to support a pixel data transmission between the Host and Display. The chipset can transmit 18bit data and 4bit control data through only a single differential cable at pixel clock frequency from 5MHz to 40MHz.

By V-by-One™ technologies, unique encoding scheme and proprietary CDR technique, a link synchlonization is achieved without any frequency reference such as crystal oscillator. It drastically improves the cost and size of the display system.

THCV213 transmitter converts the data into a single LVDS serial data stream with embedded clock. It supports pre-emphasis mode for long cable transmission. THCV214 receiver extracts the clock from the embedded clock and transforms the serial data stream back into the parallel data.

To confirm the reliability of link, several functions are supported. THCV213 can transmit a INIT pattern to establish a link if INIT sequence is required. THCV214 indicates the LOCK status.

Features

- Transmit 18bit data and 4bit control data through a single differential cable
- Wide frequency range: 5MHz to 40MHz
- Support INIT pattern and LOCK indicator
- Pre Emphasis Mode
- Clock Edge Selectable
- Dual Display Mode
- Power Down Mode
- Low power single 3.3V CMOS design
- 48pin TQFP/QFN

Block Diagram