

THCV231(-Q), THCV235(-Q) and THCV236(-Q)

SerDes transmitter and receiver with bi-directional transceiver

General Description

The THCV231(-Q), THCV235(-Q) and THCV236(-Q) are designed to support video data transmission between the host and display.

THCV231(-Q)

One high-speed lane can carry up to 14bits data at a pixel clock frequency from 12MHz to 160MHz.

THCV235(-Q)/THCV236(-Q)

One high-speed lane can carry up to 32bit data and 3bits of synchronizing signals at a pixel clock frequency from 6MHz to 160MHz by converting RGB444 to YCbCr422.

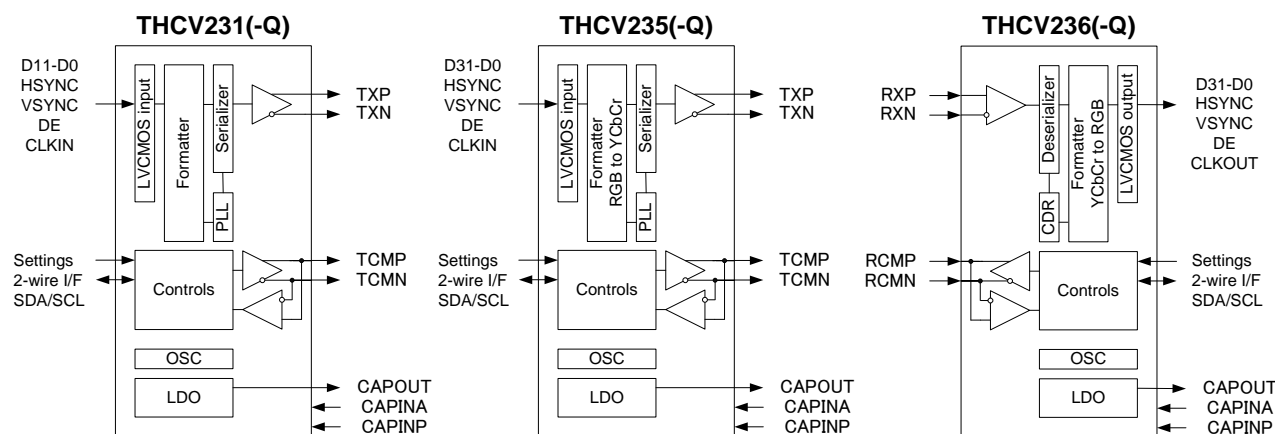
The chipset, which has one high-speed data lane, can transmit video data up to 1080p/60Hz.

The maximum serial data rate is 4.00Gbps/lane.

Features

- RGB ↔ YCbCr422 color space conversion function (THCV235(-Q)/THCV236(-Q))
- Wide frequency range
- CDR requires no external frequency reference
- Wide range supply voltage from 1.7V to 3.6V
- Additional spread spectrum on data stream
- 2-wire serial interface bridge function(400kbps)
- Remote side GPIO control and monitoring
- Low speed data bridge function (THCV235(-Q)/THCV236(-Q))
- THCV231(-Q): QFN32 (5mm x 5mm) with exposed pad ground
- THCV235(-Q)/THCV236(-Q): QFN64 (9mm x 9mm) with exposed pad ground
- Automotive grade product : AEC-Q100 Grade 2 compliant (THCV231-Q/THCV235-Q/THCV236-Q)
- ISO/TS16949 compliant (THCV231-Q/THCV235-Q/THCV236-Q)
- V-by-One® HS standard version1.4 compliant(THCV235(-Q)/THCV236(-Q))
- RoHS compliant

Block Diagram



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