



# THCV231-Q and THCV236-Q

SerDes transmitter and receiver with bi-directional transceiver

## General Description

The THCV231-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.

### 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.

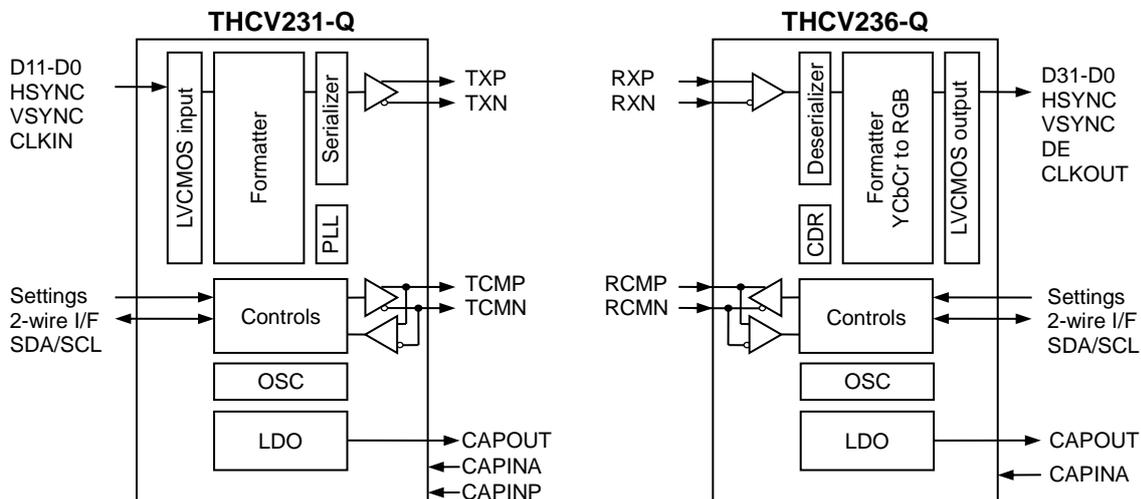
The chipset, which has one high-speed data lane, can transmit video data up to 1080p/60Hz.

The maximum serial data rate is 4.00Gbps/lane.

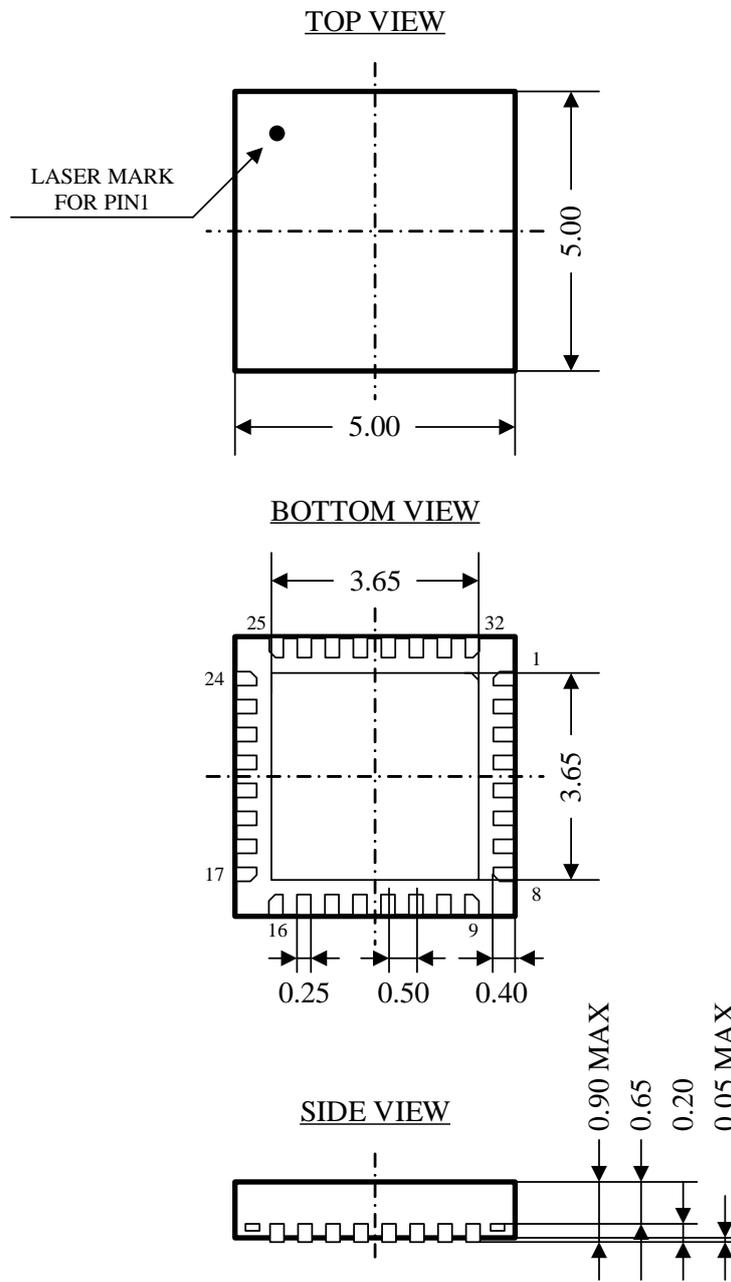
## Features

- Data width selectable
- Wide frequency range
- AC coupling for high-speed lanes
- 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
- THCV231-Q
  - QFN32 (5mm x 5mm) with exposed pad ground
- THCV236-Q
  - QFN64 (9mm x 9mm) with exposed pad ground
- AEC-Q100 Grade 2 support
- EU RoHS compliant

## Block Diagram

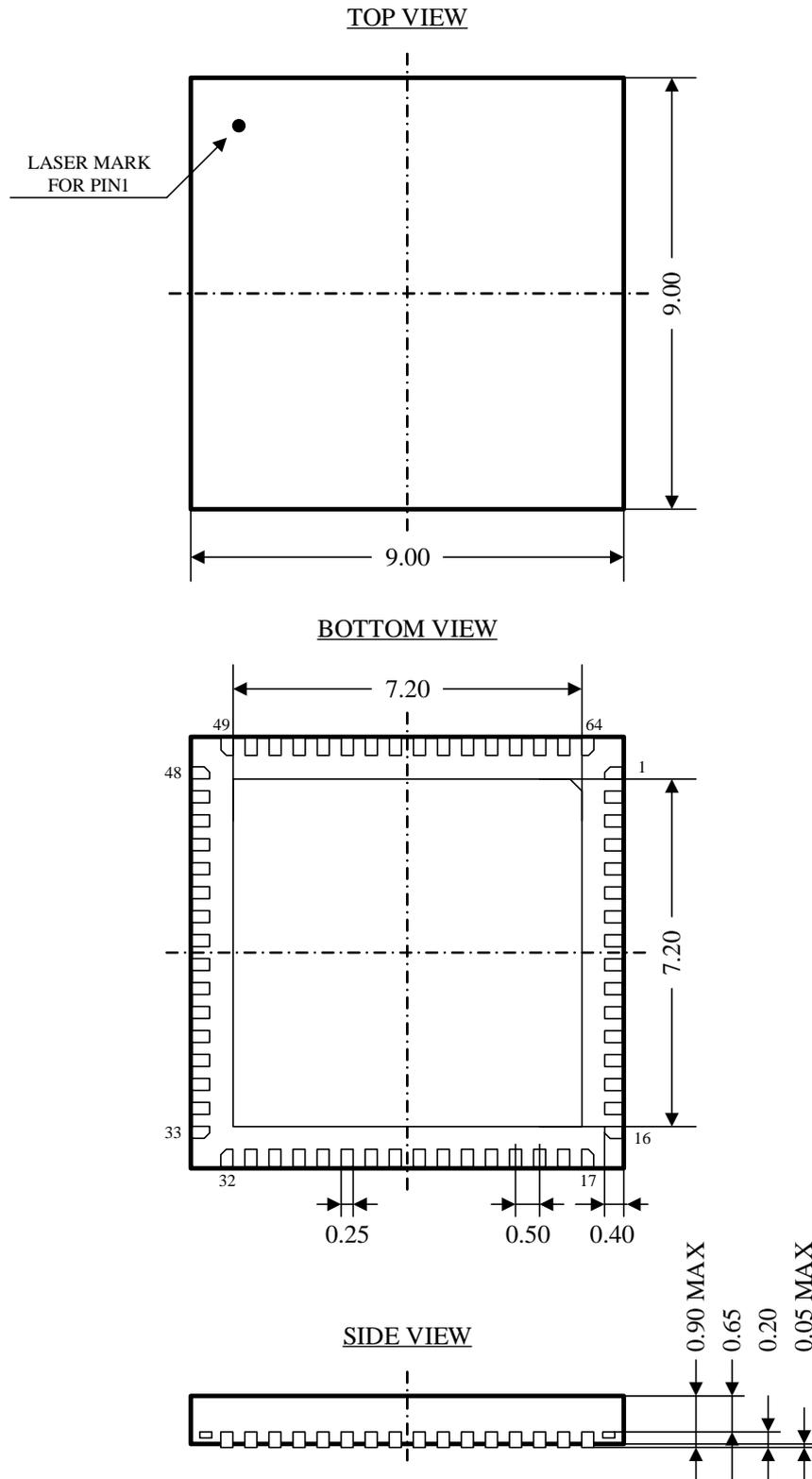


**Package**



Unit : mm

**Figure 1. 32-pin QFN package physical dimension**



Unit : mm

**Figure 2. 64-pin QFN package physical dimension**

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10. The product or peripheral parts may be damaged by a surge in voltage over the absolute maximum ratings or malfunction, if pins of the product are shorted by such as foreign substance. The damages may cause a smoking and ignition. Therefore, you are encouraged to implement safety measures by adding protection devices, such as fuses.

## ***THine Electronics, Inc.***

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