



# THCV243

SerDes transmitter with bi-directional transceiver

## 1 General Description

THCV243 is designed to support 1080p60 2Mpixel uncompressed video data over 100ohm differential STP or single-end 50ohm Coaxial cable between camera and processor by V-by-One® HS.

THCV243 supports a MIPI CSI-2. Each CSI-2 data lane can transmit up to 1.2Gbps/lane. Virtual channel is supported.

High-speed V-by-One® HS lane can transmit up to 1080p60fps. The maximum serial data rate is 4Gbps.

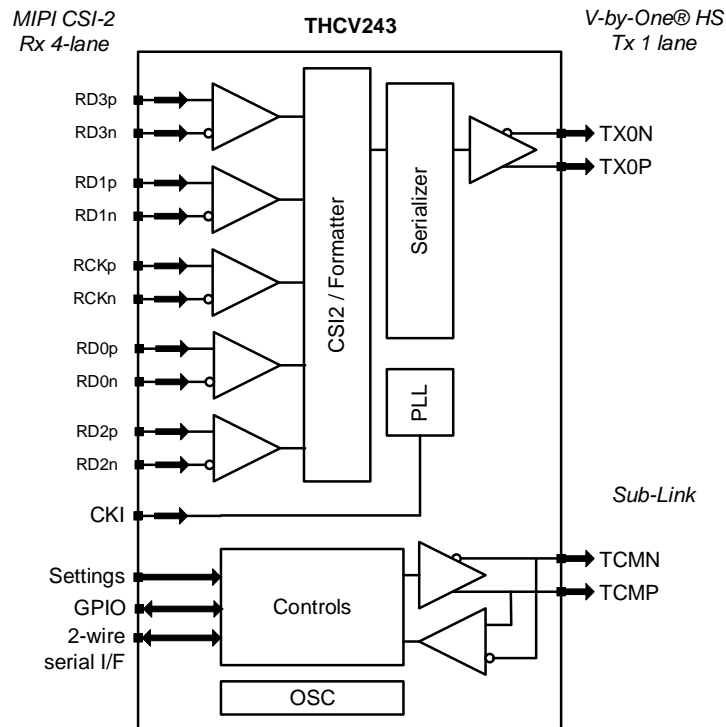
THCV243 is capable to control and monitor camera module from remote ECU via GPIO or 1Mbps 2-wire serial interface.

Several fault and error detection function including CRC provides hardware functional safety design.

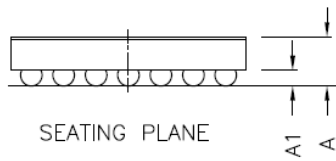
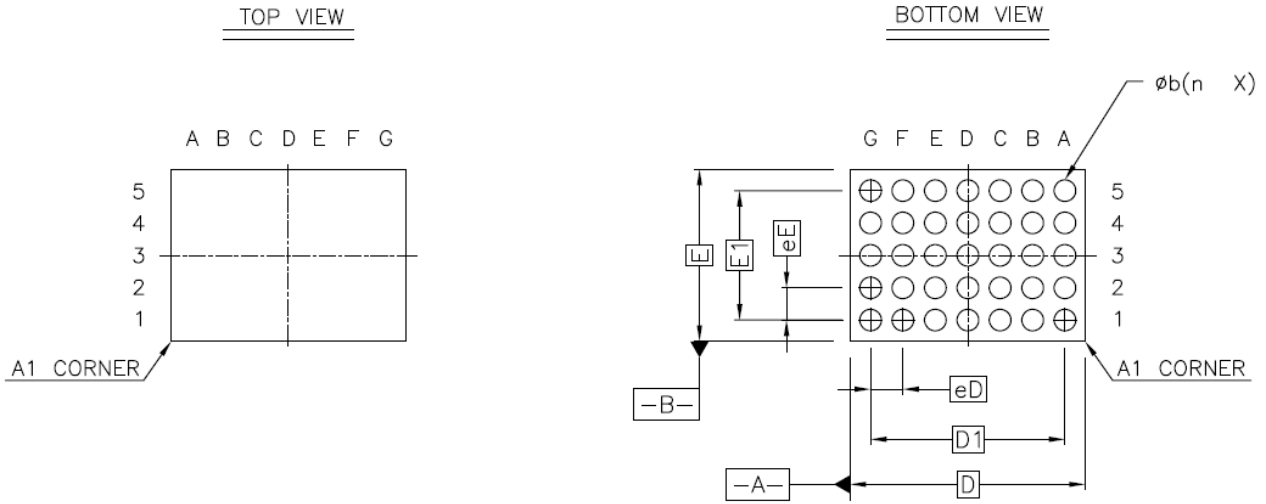
## 2 Features

- MIPI CSI-2 with 1,2 or 4-lane input
- MIPI D-PHY supports 80Mbps~1.2Gbps
- Video formats: RAW8/10/12/14/16/20, YUV422/420, RGB888/666/565, JPEG, User-defined generic 8-bit
- V-by-One® HS 400Mbps~4Gbps
- V-by-One® HS standard version1.5
- Reference clock input CKI range 10~40MHz shareable with video source CMOS sensor
- Wide range IO voltage from 1.7V to 3.6V
- Additional spread spectrum to reduce EMI
- 2-wire serial interface 1Mbps bridge function
- Remote GPIO/UART control and monitoring
- Error detection including CRC and notification
- CSP35 2.1x2.9mm 0.4mm pitch package

## 3 Block Diagram



4 Package



	symbol	typical	unit
Total Thickness	A	0.609	(mm)
Stand Off	A1	0.194	(mm)
Body Size	D	2.9008	(mm)
	E	2.129	(mm)
Ball Diameter	-	0.250	(mm)
Ball/Bump Width	b	0.269	(mm)
Ball/Bump Pitch	eD	0.400	(mm)
	eE	0.400	(mm)
Ball/Bump Count	n	35	-
Edge Ball Center to Center	D1	2.400	(mm)
	E1	1.600	(mm)

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5. Product Application
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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.

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