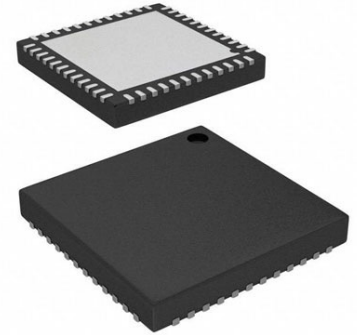


LVDS Deserializer 2528Mbps Automotive Medical 48-Pin VQFN EP T/R



Images are for reference only

[Inquiry](#)

Manufacturer: [Texas Instruments, Inc](#)

Package/Case: VQFN48

Product Type: Drivers

RoHS: RoHS Compliant/Lead free 

Lifecycle: Active

General Description

The DS90UB936-Q1 is a versatile deserializer capable of receiving serialized sensor data from source through an FPD-Link III interface. When paired with a DS90UB935-Q1 serializer, the DS90UB936-Q1 receives data from imagers supporting up to 2.528 Gbps CSI-2 throughput. The DS90UB936-Q1 may also be used with other compatible serializers such as the DS90UB933-Q1, and DS90UB913A-Q1. When configuring the CSI-2 interface for 2-lane operation, a duplicate MIPI CSI-2 clock lane is available to provide a replicated output. Replication mode creates two copies of the video stream for data logging and parallel processing.

The DS90UB935/936-Q1 chipset is AEC-Q100 qualified and designed to receive data across either 50-Ω single-ended coaxial or 100-Ω differential STP cables. AEC-Q100 qualification includes device temperature grade 2 (−40°C to +105°C ambient operating temperature range), device HBM ESD classification level ±4.5 kV, and device CDM ESD classification level C5. The deserializer hub is ideal for Power-over-Coax applications and the receive equalizer automatically adapts to compensate for cable loss characteristics with no additional programming required, including cable degradation over time.

Each FPD-Link III interface includes a separate low latency bidirectional control channel (BCC) that continuously conveys I2C, GPIO, and other control information. GPIO signals purposed for sensor synchronization and diagnostic features also make use of the BCC.

Key Features

AEC-Q100 qualified for automotive applications:

Device temperature grade 2: -40°C to +105°C ambient operating temperature range

2.528 Gbps CSI-2 video bandwidth per channel

MIPI DPHY Version 1.2 / CSI-2 Version 1.3 compliant

CSI-2 output ports

Supports 1, 2, 4 data lanes

CSI-2 data rate scalable for 400 Mbps / 800 Mbps / 1.5 Gbps / 1.6 Gbps each data lane

Programmable data types

Four virtual channels

ECC and CRC generation

2x2 Output replication mode

Ultra-low data and control path latency

Supports single-ended coaxial or Shielded Twisted-Pair (STP) cable

Adaptive receive equalization

I2C with fast-mode plus up to 1 Mbps

Flexible GPIOs for camera diagnostics

Compatible with DS90UB935-Q1, DS90UB953-Q1, DS90UB933-Q1 and DS90UB913A-Q1 serializers

Line fault detection and advanced diagnostics

ISO 10605 and IEC 61000-4-2 ESD compliant

Recommended For You

SN65LVDS3486D

Texas Instruments, Inc

SOP-16

SN65LVDS3487D

Texas Instruments, Inc

SOP16

DS90C032TM

Texas Instruments, Inc

SOP16

DS90C031BTM

Texas Instruments, Inc

SOP16

SN65LVDS31PW

Texas Instruments, Inc

TSSOP-16

SN65LVDS33D

Texas Instruments, Inc

SOP-16

SN65LVDS32D

Texas Instruments, Inc

SOP-16

SN65LVDS31D

Texas Instruments, Inc

SOP

SN65LVDS32PW

Texas Instruments, Inc

TSSOP16

DS90UB954TRGZIQ1

Texas Instruments, Inc
QFN48

DS90UB954TRGZRQ1

Texas Instruments, Inc
VQFN48

SN65DSI83TPAPRQ1

Texas Instruments, Inc
HTQFP-64

DS90UB947TRGCTQ1

Texas Instruments, Inc
VQFN-64

DS90LV011AQMF/NOPB

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SOT23-5

DS90UB924TRHSTQ1

Texas Instruments, Inc
WQFN-48