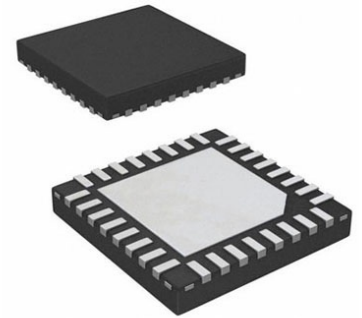


LVDS Serializer 1600Mbps 0.4V Automotive 32-Pin WQFN EP T/R



Images are for reference only

[Inquiry](#)

Manufacturer: [Texas Instruments, Inc](#)

Package/Case: WQFN32

Product Type: Drivers

RoHS: RoHS Compliant/Lead free 

Lifecycle: Active

General Description

The DS90UB933-Q1 device offers an FPD-Link III interface with a high-speed forward channel and a bidirectional control channel for data transmission over a single coaxial cable or differential pair. The DS90UB933-Q1 device incorporates differential signaling on both the high-speed forward channel and bidirectional control channel data paths. The serializer/deserializer pair is targeted for connections between imagers and video processors in an electronic control unit (ECU). This device is ideally suited for driving video data requiring up to 12-bit pixel depth plus two synchronization signals along with bidirectional control channel bus.

Using TI's embedded clock technology allows transparent full-duplex communication over a single differential pair, carrying asymmetrical-bidirectional control channel information. This single serial stream simplifies transferring a wide data bus over PCB traces and cable by eliminating the skew problems between parallel data and clock paths. This significantly saves system cost by narrowing data paths that in turn reduce PCB layers, cable width, and connector size and pins. Internal DC-balanced encoding/decoding is used to support AC-coupled interconnects.

Key Features

AEC-Q100 qualified for automotive applications with the following results:
Device temperature grade 2: -40°C to +105°C ambient operating temperature

37.5-MHz to 100-MHz input pixel clock support

Robust Power-Over-Coaxial (PoC) operation

Programmable data payload:
10-Bit payload up to 100-MHz

12-Bit payload up to 100-MHz

Continuous low latency bidirectional control interface channel with I2C support at 400-kHz

Embedded clock with DC-balanced coding to support AC-coupled interconnects

Capable of driving up to 15-m coaxial or Shielded Twisted-Pair (STP) cables

4 Dedicated General-Purpose Input/Output (GPIO)

1.8-V, 2.8-V or 3.3-V compatible parallel inputs on serializer

Single power supply at 1.8-V

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

DS90UB954TRGZTQ1

Texas Instruments, Inc
QFN48

DS90UB954TRGZRQ1

Texas Instruments, Inc
VQFN48

SN65DSI83TPAPRQ1

Texas Instruments, Inc
HTQFP-64

DS90UB947TRGCTQ1

Texas Instruments, Inc

VQFN-64

DS90LV011AQMF/NOPB

Texas Instruments, Inc

SOT23-5

DS90UB924TRHSTQ1

Texas Instruments, Inc

WQFN-48