LVDS Serializer/Deserializer 1400Mbps 0.412V Automotive 32-Pin WQFN EP T/R

Manufacturer:	Texas Instruments, Inc
Package/Case:	QFN
Product Type:	Drivers
RoHS:	RoHS Compliant/Lead free
Lifecycle:	Active
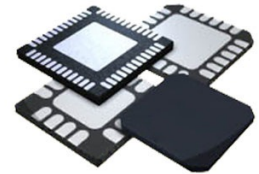
Images are for reference only

Inquiry

General Description

The DS90UB913A-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 DS90UB913A-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 ECU (Electronic Control Unit). 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
Device temperature grade 2: –40℃ to +105℃ ambient operating temperature

25-MHz to 100-MHz input pixel clock support

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

12-Bit payload up to 75 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 15m coaxial or 20m shielded twisted-pair cables

Robust Power-Over-Coaxial (PoC) operation

4 Dedicated general purpose input/output

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

Small serializer footprint (5 mm × 5 mm)

Recommended For You

SN65LVDS3486D	SN65LVDS3487D	DS90C032TM
Texas Instruments, Inc	Texas Instruments, Inc	Texas Instruments, Inc
SOP-16	SOP16	SOP16
DS90C031BTM	**SN65LVDS31PW**	**SN65LVDS33D**
Texas Instruments, Inc	Texas Instruments, Inc	Texas Instruments, Inc
SOP16	TSSOP-16	SOP-16
SN65LVDS32D	**SN65LVDS31D**	**SN65LVDS32PW**
Texas Instruments, Inc	Texas Instruments, Inc	Texas Instruments, Inc
SOP-16	SOP	TSSOP16
DS90UB954TRGZTQ1	**DS90UB954TRGZRQ1**	**SN65DSI83TPAPRQ1**
Texas Instruments, Inc	Texas Instruments, Inc	Texas Instruments, Inc
QFN48	VQFN48	HTQFP-64

DS90UB947TRGCTQ1

Texas Instruments, Inc

VQFN-64

DS90LV011AQMF/NOPB

Texas Instruments, Inc

SOT23-5

DS90UB924TRHSTQ1

Texas Instruments, Inc

WQFN-48