LVDS Deserializer 1600Mbps Automotive 64-Pin VQFN EP T/R

Manufacturer:	Texas Instruments, Inc
Package/Case:	VQFN64
Product Type:	Drivers
RoHS:	RoHS Compliant/Lead free
Lifecycle:	Active
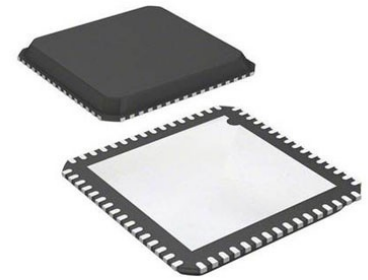
Images are for reference only

Inquiry

General Description

The DS90UB964-Q1 is a versatile camera hub capable of connecting serialized camera data received from 4 independent video datastreams via an FPD-Link III interface. When coupled with DS90UB913AQ/913Q/933Q serializers, the DS90UB964-Q1 receives data from 1-Megapixel image sensors supporting 720p/800p/960p resolution at 30-Hz or 60-Hz frame rates. Data is received and aggregated into a MIPI CSI-2 compliant output for interconnect to a downstream processor. A second MIPI CSI-2 output port is available to provide additional bandwidth, or offers a second replicated output.

The DS90UB964-Q1 includes 4 FPD-Link III deserializers, each enabling a connection via cost-effective 50-Ω single-ended coaxial or 100-Ω differential STP cables. The receive equalizer automatically adapts to compensate for cable loss characteristics, including degradation over time.

Each of the FPD-Link III interfaces also includes a separate low latency bi-directional control channel that conveys control information from an I2C port and is independent of video blanking period. General purpose I/O signals such as those required for camera synchronization and functional safety features also make use of this bi-directional control channel.

Key Features

Qualified for Automotive Applications

AEC-Q100 Qualified With the Following Results:
Device Temperature Grade 2: –40°C to +105°C Ambient Operating Temperature Range

Device HBM ESD Classification Level ±4 kV

Device CDM ESD Classification Level C6

Aggregates Data From up to 4 Cameras Over FPD-Link III Interface

Supports 1-Megapixel Sensors With HD 720p/800p/960p Resolution at 30-Hz or 60-Hz Frame Rate

Multi-Camera Synchronization

MIPI DPHY Version 1.2 / CSI-2 Version 1.3 Compliant
2× CSI-2 Output Ports

Supports 1, 2, 3, 4 Data Lanes per CSI-2 port

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

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 Sync and Functional Safety

Compatible With DS90UB913AQ/913Q/933Q Serializers

CRC protection on the internal Data Path

ISO 10605 and IEC 61000-4-2 ESD Compliant

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	**DS90LV011AQMF/NOPB**	**DS90UB924TRHSTQ1**
Texas Instruments, Inc	Texas Instruments, Inc	Texas Instruments, Inc
VQFN-64	SOT23-5	WQFN-48