

LVDS Deserializer 4160Mbps Automotive 64-Pin VQFN EP T/R

Manufacturer:	Texas Instruments, Inc	<input type="text" value="DS90UB960WRTDTQ1 Image"/>
Package/Case:	VQFN64	Images are for reference only
Product Type:	Drivers	<input type="button" value="Inquiry"/>
RoHS:	RoHS Compliant/Lead free 	
Lifecycle:	Active	

General Description

The DS90UB960-Q1 is a versatile sensor hub capable of connecting serialized sensor data received from four independent video data streams through a FPD-Link III interface. When paired with a DS90UB953-Q1 serializer, the DS90UB960-Q1 receives data from sensors such as imagers supporting full HD 1080p/2MP resolution at 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 for data-logging and parallel processing. The DS90UB960-Q1 includes four FPD-Link III deserializers, each enabling a connection through cost-effective 50-Ω single-ended coaxial or 100-Ω differential STP cables. The receive equalizers automatically adapt to compensate for cable loss characteristics, including degradation over time. Each of the FPD-Link III interfaces also includes a separate low latency bidirectional control channel that continuously conveys I2C, GPIOs, and other control information. General-purpose I/O signals such as those required for camera synchronization and diagnostics features also make use of this bidirectional control channel.

The DS90UB960-Q1 is AEC-Q100 qualified for automotive applications and is offered in a cost-effective and space-saving 64-pin VQFN package.

Key Features

AEC-Q100 Qualified for Automotive Applications:

Device Temperature Grade 2: -40°C to +105°C Ambient Operating Temperature Range

Quad 4.16-Gbps Deserializer Hub Aggregates Data From up to 4 Sensors Simultaneously

Supports 2-Megapixel Sensors With Full HD 1080p Resolution at 60-Hz Frame Rate

Precise Multi-Camera Synchronization

MIPI DPHY Version 1.2 / CSI-2 Version 1.3 Compliant

2 × MIPI 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 / 1.2 Gbps / 1.5 Gbps / 1.6 Gbps per Data Lane

Port Replication Mode

Functional Safety-Capable

Documentation available to aid ISO 26262 system design

Ultra-Low Data and Control Path Latency

Supports Single-Ended Coaxial Including Power-over-Coax (PoC) or Shielded Twisted-Pair (STP) Cable

Adaptive Receive Equalization

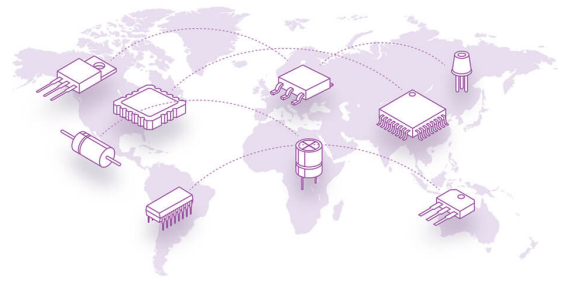
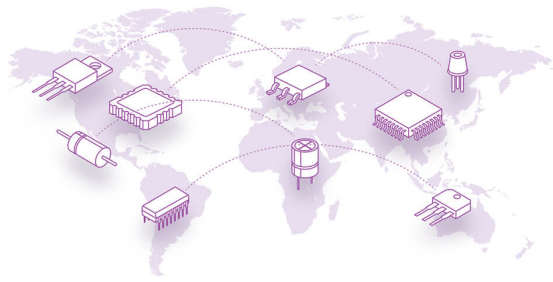
Dual I2C Ports With Fast-Mode Plus up to 1 Mbps

Flexible GPIOs for Sensor Synchronization and Diagnostics

Compatible With DS90UB953-Q1, DS90UB935-Q1, DS90UB933-Q1, DS90UB913A-Q1 Serializers

Internal Programmable Precision Frame Sync Generator

Line Fault Detection and Advanced Diagnostics



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

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SOT23-5

DS90UB924TRHSTQ1

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WQFN-48