LVDS Deserializer 3125Mbps Automotive 64-Pin VQFN EP T/R

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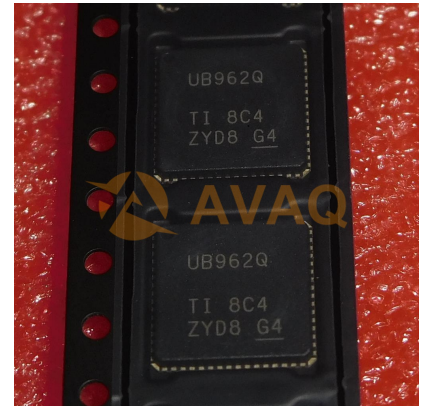
Images are for reference only

Inquiry

General Description

The DS90UB962-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 DS90UB935A-Q1, DS90UB953-Q1, DS90UB913A-Q1 or DS90UB933-Q1 serializer, the DS90UB962-Q1 receives data from 1-Megapixel image sensors supporting 720p/800p/960p/1MP 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.

The DS90UB962-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 DS90UB962-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 3-Gbps Deserializer Hub Aggregates Data From up to 4 Sensors Simultaneously

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

Precise Multi-Camera Synchronization

MIPI DPHY Version 1.2 / CSI-2 Version 1.3 Compliant

1 × CSI-2 MIPI Output Port

Supports 1, 2, 3, 4 Data Lanes

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
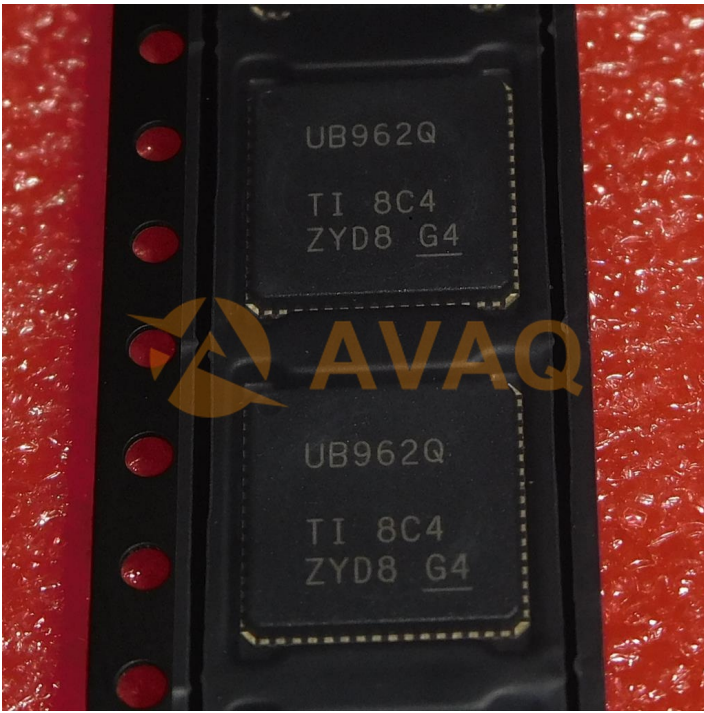
Adaptive Receive Equalization

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

Flexible GPIOs for Sensor Synchronization and Diagnostics

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

Internal Programmable Precision Frame Sync Generator

Line Fault Detection and Advanced Diagnostics

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