Industry leading interface and timing solutions

Texas Instruments is a total solutions provider to the professional and broadcast video industry. Our comprehensive portfolio of energy efficient and easy-to-use analog, mixed signal, and DSP solutions accelerate design and reduce development cost.

Offering best in class performance in signal integrity and power efficiency, TI's interface products extend reach and distribute high speed video signals for serial digital video interface (SDI), Ethernet (video over IP), HDMI, display port, PCIe, SAS/SATA, LVDS, and other common signaling technologies.

TI's clocking and timing portfolio of buffers, clock generators, and oscillators deliver the industry's best phase noise and jitter performance (60 fs RMS, typical). With programmable features to support multiple standards, TI's easy-to-use clocking solutions generate multiple frequencies in different I/O formats.

Design resources and references

WEBENCH® Interface Designer

Get results faster with easy-to-use design tools that deliver custom results.

- Easily create new high-speed serial interface systems
- Analyze and enhance signal integrity for existing designs
- Select the right interface devices for your requirements

Get more information

Packaged interface and timing solutions

<table>
<thead>
<tr>
<th>Interface</th>
<th>Device</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SDI</td>
<td>Coax</td>
<td>Digital Video/Serializer/Deserializer</td>
</tr>
<tr>
<td>Ethernet</td>
<td>RJ-45</td>
<td>100 GbE Retimer</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10 GbE Retimer</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 GbE PHY Muti-rate/Prog. OSC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10/100/1000 Mbit Ethernet/RJ-45</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 GbE PHY Switch/Crosspoint</td>
</tr>
</tbody>
</table>

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Get more information: ti.com/webench

Broadcast and Professional Video Interface Solutions

Extend reach, distribute video over SDI and IP networks

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Extend reach, distribute video over SDI, IP networks

Texas Instruments (TI) offers the industry’s most comprehensive multi-rate portfolio of serial digital interface (SDI) and Ethernet solutions to transport 4K/8K video resolution over coaxial cables, printed circuit board material, and optical fiber interconnects.

Offering best in class performance in signal integrity, power and cable reach, TI’s interface products simplify system design for broadcast, professional, and commercial video applications.

Flexible products with easy upgrade path

- **Bidirectional I/O**
  - Configurable as receive equalizer or transmit driver to enable design reuse, dynamic port provisioning.
  - Pin compatible portfolio simplifies transition from 3G-SDI to 12G-SDI.
  - Single chip solution supports SDI and Ethernet IP based video transport over coax or fiber.

Industry leading interface and timing solutions

- **12G SDI/10G Ethernet**
  - Pin compatible cable equalizer simplifies upgrade from 3G-SDI to 12G-SDI.
  - Industry’s first: 12G cable driver with integrated reclocker to support SDI and IP-based 4K video.

Easy to analyze, evaluate and design

- **Featured reference designs and EVMs**
  - Supports Devices:
    - LMH1219
    - LMH1218
    - LMH0318
  - Supports Devices:
    - LMH1228
    - LMH0324

Industry's first: LMH1219

12G SDI Bidirectional I/O with integrated reclocker and return loss network enables design reuse, and dynamic port provisioning.

- **Bidirectional I/O**
  - Easy upgrade
  - Dual media, dual protocol
  - Configurable as receive equalizer or transmit driver to enable design reuse, dynamic port provisioning.

Industry's first: LMH1219 / LMH0324

Pin compatible cable equalizer simplifies upgrade from 3G-SDI to 12G-SDI.

- **Function**
  - Cable Equalizer
  - Cable Equalizer with Integrated Reclocker

- **Data Rates**
  - 3G, 1.5G, 2.7G
  - 12G, 10G, 6G, 3G, 1.5G, 270M

- **Protocol Supported**
  - SDI
  - SDI & 10GbE (SMPTE 2022-5/6)

- **Media Supported**
  - Coax, Optical (SFP+)

- **Cable Reach**
  - 200m at 3G-SDI
  - 75m at 12G-SDI

- **Power (Typ)**
  - 75mW

- **Package**
  - Pin compatible for easy upgrade: 4mm x 4mm, QFN24

- **Supports Devices:**
  - LMH1219
  - LMH1218
  - LMH0318

- **Supports Devices:**
  - LMH1228
  - LMH0324

Broadcast and Professional Video

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3

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4

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5
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- **Easy upgrade**
  - Single chip solution supports SDI and Ethernet IP based video transport over coax or fiber.

- **Dual media, dual protocol**
  - Dual media (coax and optical): Enables both short and long haul applications.

Industry leading interface and timing solutions

**LMH1297**

- 12G SDI Bidirectional I/O with integrated reclocker and return loss network enables design reuse, and dynamic port provisioning.

**LMH0324**

- Pin compatible cable equalizer simplifies upgrade from 3G-SDI to 12G-SDI.

**LMH1219**

- Dual media, dual protocol
  - Easy upgrade
  - Configurable as receive equalizer or transmit driver to enable design reuse, dynamic port provisioning.

Easy to analyze, evaluate and design

- Featured reference designs and EVMs

FPGA FMC development module for 4K video supporting 12G SDI and video over IP

- Supports Devices:
  - LMH0324-18EVM: 3G distribution amplifier TI reference design
  - LMK0420: 12G distribution amplifier TI reference design

Industry’s first: LMH1228

- SDI and 10 GbE (SMPTE 2022-5/6): Single device provides transport flexibility
  - Dual media (coax and optical): Enables both short and long haul applications
  - Integrated reference-less reclocker: 40% board area savings with faster lock time
  - Low power consumption (300 mW typ): 30% lower than a discrete solution

- Integrated eye-opening monitor: Accelerates system debug and diagnostics

- Small package: QFN24, 4mm x 4mm. Pin compatible 3G-SDI option available

Industry’s first: LMH1218

- 12G cable driver with integrated reclocker to support SDI and IP-based 4K video.

- Supports Devices:
  - LMH1218
  - LMH0340
  - LMH0341
  - DM25DF1010
  - DS25CP104A
  - DS100DF410
  - DS250DF410
  - DP83867
  - DS125DF1610
  - TIDA-00428: 12G distribution amplifier TI reference design

Industry’s first: LMH1297

- Extend reach, distribute video over SDI, IP networks

- Supports Devices:
  - LMH0324-18EVM: 3G distribution amplifier TI reference design
  - TIDA-00428: 12G distribution amplifier TI reference design

- Broadcast and Professional Video

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- **Dual media, dual protocol**
  - Single chip solution supports SDI and Ethernet IP based video transport over coax or fiber.

Industry leading interface and timing solutions

- **SDI Interface**
  - Video over IP Interface
  - Clock & Timing

Industry’s first: **LMH1219**

- 12G SDI Bidirectional I/O with integrated reclocker and return loss network enables design reuse, and dynamic port provisioning.

- Features:
  - Integrated eye monitor: Accelerates system debug and diagnostics
  - Low power consumption (300 mW typ): 30% lower than a discrete solution
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  - Dual media (coax and optical): Enables both short and long haul applications
  - SDI and 10 GbE (SMPTE 2022-5/6): Single device provides transport flexibility

- **LMH1219**
  - Pin compatible cable equalizer port from 3G-SDI to 12G-SDI.
  - Single chip solution supports SDI and Ethernet IP based video transport over coax or fiber.
  - Features:
    - Configurable as SDI equalizer or cable driver: Provides transport flexibility
    - Integrated reclocker and return loss network: Saves board space and simplifies design
    - Cable equalizer: Extends reach up to 75m+ at 12G, 120m+ at 6G, 200m+ at 3G, 300m+ at HD
    - EQ Mode: Additional line-side reclocked 75-Ω loop-through output
    - CD Mode: Additional host-side reclocked 100-Ω loopback output
    - Small package: QFN 32, 5mm x 5mm. Pin compatible 3G-SDI option available (LMH0397)
    - Pin compatible cable driver options available (LMH0318, LMH0324)

- **LMH0324**
  - Pin compatible cable equalizer simplifies transition from 3G-SDI to 12G-SDI.
  - Features:
    - Configurable as receive equalizer or transmit driver: Provides transport flexibility
    - Integrated reclocker and return loss network: Saves board space and simplifies design
    - Cable equalizer: Extends reach up to 75m+ at 12G, 120m+ at 6G, 200m+ at 3G
    - EQ Mode: Additional line-side reclocked 75-Ω loop-through output
    - CD Mode: Additional host-side reclocked 100-Ω loopback output
    - Small package: QFN 32, 5mm x 5mm. Pin compatible 3G-SDI option available (LMH0397)
    - Pin compatible cable driver options available (LMH0318, LMH0324)

Easy to analyze, evaluate and design

- Featured reference designs and EVMs

- **LMH1219EVM**
  - Development module for 12G Bidirectional I/O with Reclocker and Integrated Return Loss Network Evaluation Module
  - Supports Devices: LMH1219

- **LMH0324-18EVM**
  - 3G distribution amplifier
  - Supports Devices: LMH0318, LMH0324

Industry’s first: **LMH1218**

- 12G cable driver with integrated reclocker to support SDI and IP-based 4K video.

- Features:
  - SDI and 10 GbE (SMPTE 2022-5/6): Single device provides transport flexibility
  - Dual media (coax and optical): Enables both short and long haul applications
  - Integrated reference-less reclocker: 40% board area savings with faster lock time
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  - Integrated eye monitor: Accelerates system debug and diagnostics
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Get more information at 

Design resources and references

E2E high speed interface forum

Get more information on TI's professional and broadcast video portfolio at:

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