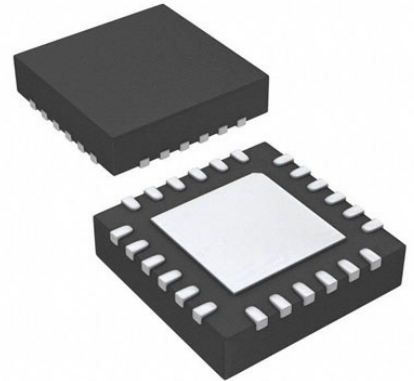



## Adaptive Equalizer 24-Pin WQFN EP T/R



Images are for reference only

[Inquiry](#)

<b>Manufacturer:</b>	<a href="#">Texas Instruments, Inc</a>
<b>Package/Case:</b>	WQFN24
<b>Product Type:</b>	Discrete Semiconductor Modules
<b>RoHS:</b>	RoHS Compliant/Lead free 
<b>Lifecycle:</b>	Active

### General Description

The LMH1219 is a low-power, dual-input and dual-output, adaptive equalizer with integrated reclocker. It supports SMPTE video rates up to 11.88 Gbps and 10 GbE video over IP, enabling UHD video for 4K/8K applications. An extended reach adaptive cable equalizer at IN0 is designed to equalize data transmitted over 75 coaxial cable and operates over a wide range of data rates from 125 Mbps to 11.88 Gbps. An adaptive board trace equalizer at IN1 is SFF-8431 compatible and supports both SMPTE and 10 GbE data rates.

The integrated reclocker attenuates high frequency jitter and provides the best signal integrity. High input jitter tolerance of the reclocker improves timing margin. The reclocker has a built-in loop filter, and operates without the need of a precision input reference clock. A non-disruptive eye monitor allows real time measurement of the serial data to simplify system debug and accelerate board bring-up.

The integrated 2:1 Mux and 1:2 Fanout provide flexibility for multiple video signals. The output drivers offer programmable de-emphasis to compensate board trace losses at its outputs. The integrated return loss network meets stringent SMPTE specifications across all data rates. The typical power consumption of LMH1219 is 250 mW. In the absence of input signal, power is further reduced to 16 mW.

The LMH1219 is pin compatible to LMH1226 (12G UHD reclocker) and LMH0324 (3G adaptive cable equalizer).

## Key Features

Supports ST-2082-1(12G), ST-2081-1(6G), ST-424(3G), ST-292(HD), and ST-259(SD)

Supports SFF8431 (SFP+) for SMPTE2022-5/6

Compatible with DVB-ASI and AES10 (MADI)

Integrated Reference-Less Reclocker Locks to SMPTE and 10GbE Rate: 11.88 Gbps, 5.94 Gbps, 2.97 Gbps, 1.485 Gbps, or Divide-by-1.001 Sub-Rates, 270 Mbps and 10.3125 Gbps

Adaptive Cable Equalizer at Input 0 (IN0)

Cable Reach(Belden 1694A):  
75 m at 11.88 Gbps (4Kp60 UHD)

120 m at 5.94 Gbps (UHD)

200 m at 2.97 Gbps (FHD)

280 m at 1.485 Gbps (HD)

600 m at 270 Mbps (SD)

Adaptive Board Trace Equalizer at Input 1(IN1)

Low Power: 250 mW (Typical)

Power Saving Mode: 16mW

Integrated Input Return Loss Network

2:1 Input Mux, 1:2 Fanout Output With De-Emphasis

Supports Signal Splitter Mode (–6 dB Launch Amplitude)

On-Chip Loop Filter Capacitor and Eye Monitor

Powers from Single 2.5 V with On-Chip 1.8 V Regulator

Configurable by Control Pins, SPI, or SMBus Interface

4 mm× 4 mm 24-pin QFN Package

Operating Temperature Range: –40°C to +85°C

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## Recommended For You

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### LMH0024MA/NOPB

Texas Instruments, Inc

SOP

### LMH0344SQ/NOPB

Texas Instruments, Inc

QFN16

### LMH0344SQE/NOPB

Texas Instruments, Inc

QFN

### LMH0074SQ/NOPB

Texas Instruments, Inc

WQFN16

### LMH0044SQE/NOPB

Texas Instruments, Inc

WQFN16

### LMH0034MA/NOPB

Texas Instruments, Inc

SOP16

**LMH0384SQ/NOPB**

Texas Instruments, Inc  
WQFN16

**LMH0384SQE/NOPB**

Texas Instruments, Inc  
WQFN-16

**LMH0395SQE/NOPB**

Texas Instruments, Inc  
WQFN-24

**LMH0394SQE/NOPB**

Texas Instruments, Inc  
WQFN-16

**LMH0074SQE/NOPB**

Texas Instruments, Inc  
WQFN16

**LMH0024MAE/NOPB**

Texas Instruments, Inc  
SOIC-16

**LMH0044SQ/NOPB**

Texas Instruments, Inc  
WQFN16

**LMH0394SQX/NOPB**

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WQFN-16

**LMH0394SQ/NOPB**

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