

# M21324 3G/HD/SD MLF Pin Compatible Cable Equalizer

#### Product Overview

#### 3G/HD/SD MLF Pin Compatible Cable Equalizer

The M21324 is a high-speed, low-power, adaptive co-axial cable equalizers designed to increase the maximum low-jitter transmission distance of serial digital interface (SDI) video signals and DVB-ASI across commonly used bandwidth-limiting  $75\Omega$  coaxial cable. This device automatically optimizes the transfer function based on the bit rate and cable length to minimize the inter-symbol interference (ISI) jitter caused by the cable and to remove the DC offset components introduced with the pathological test pattern and AC coupling in systems.

The M21324 is designed to support data rates from 143 Mbps to 2970 Mbps.

The low-noise, high-gain equalizer allows for low jitter 3G transmissions up to 100m (Belden 1694A) and HD transmissions up to a length of 200m (Belden 1694A) and 120m (Belden 8281). For SD data rates, cable lengths up to 400m (Belden 1694A) and 300m (Belden 8281) are supported.

The M21324 shares the same footprint as the GS2974, GS1574, GS9074, LMH0344, LMH0044, and LMH0074.

Features	Benefits
> Adaptive cable equalization	Design flexibility and control
> SMPTE 259M, 292M, 344M, 424M compliant, DVB-ASI (270 Mbps)	Robust standard compliant equalizer
> Optimized data rate from 143 Mbps to 2.97 Gbps	Single Chip Solution for multiple data rates
> Typical equalized length of Belden 1694A cable: 100m at 2.97 Gbps	Extend legacy cable length at higher speeds
> 200m at 1.485 Gbps, and 400m at 270 Mbps	Extend industry standard cable length
> Mute and manual BYPASS mode	Supports non standard rates
$ ightarrow$ Differential CML outputs (50 $\Omega$ on-chip terminations)	Low cost integration
> Single 3.3V power supply	Standard voltage supply supported
> Small form factor (4x4mm, 16-pin MLF package)	Industry standard package
> Extended operating temperature range: -10°C to +85 °C	Provides additional margin for most applications

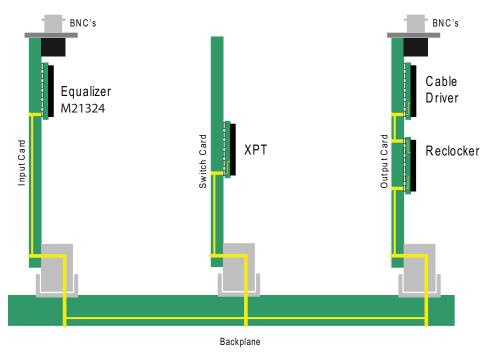


Fig. 1 - Routing Switcher Application Diagram

## Product Features

## **Applications**

- Serial Routing Switchers
- Production/Master Control Switchers
- Distribution Amplifiers
- Broadcast Video Applications
- SMPTE Coaxial Cable Interface

#### **Standards Compliance**

- SMPTE 424M, 259M, 292M, 344M
- Supports DVB-ASI (270 Mbps)

## Package (RoHS Compliant)

4x4mm, 16-pin MLF

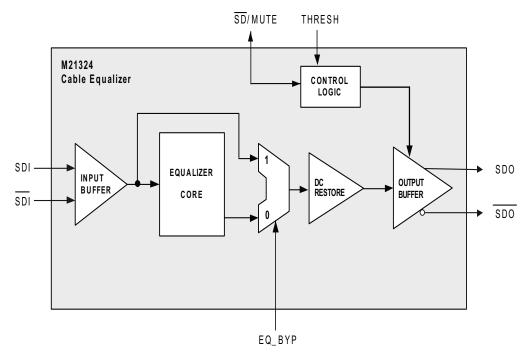


Fig. 2 - Block Diagram (M21324 Cable Driver)

# For more product information, please visit www.mindspeed.com

# www.mindspeed.com/salesoffices

General Information: (949) 579-3000 Headquarters – Newport Beach 4000 MacArthur Blvd., East Tower Newport Beach, CA 92660-3007

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Ordering Info: M21324G-11