MINDSPEED
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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 75Ω 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.

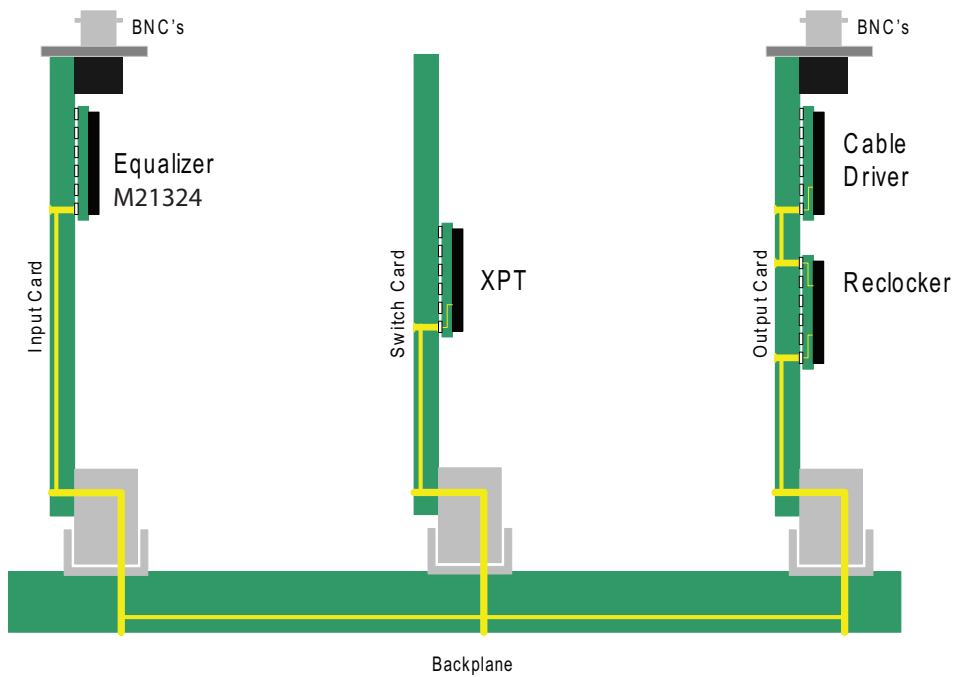| Features	Benefits
Adaptive cable equalization	Design flexibility and control
SMPTE 259M, 292M, 344M, 424M compliant, DVB-ASI (270 Mbps)	Robust standard compliant equalizer
Optimized data rate from 143 Mbps to 2.97 Gbps	Single Chip Solution for multiple data rates
Typical equalized length of Belden 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
Differential CML outputs (50 Ω 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
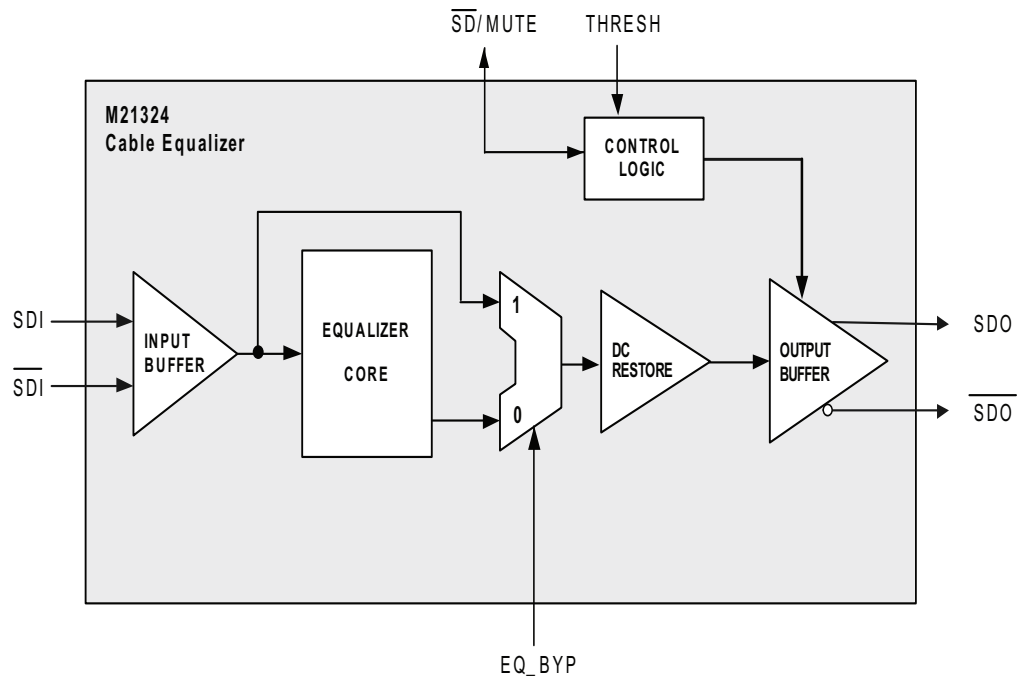- Supports DVB-ASI (270 Mbps)

Package (RoHS Compliant)

- 4x4mm, 16-pin MLF

Fig. 2 – Block Diagram (M21324 Cable Driver)

Ordering Info:

M21324G-11