

M08046

DEVICE OVERVIEW

3G/HD/SD Serial Digital Video Cable Equalizer With Dual Outputs

The M08046 is a high-speed, low-power, adaptive co-axial cable equalizer designed to increase the maximum low-jitter transmission distance of serial digital video signals across commonly used bandwidth-limiting 75Ω coaxial cable.

The M08046 is designed for data rates at 2.97 Gb/s, 1.485 Gb/s, and 270 Mb/s to support serial digital video transmission for standard definition (525i and 625i) and high definition (720p, 1080i, and 1080p) component video. The device also supports 8-bit or 10-bit component digital video (RGB or YCbCr 4:4:4 sampled and YCbCr 4:2:2 or 4:2:0 sampled).

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 video pattern and AC coupling in systems.

The low-noise, high-gain equalizer allows for low jitter 2.97 Gb/s transmissions up to 100m (Belden 1694A), 1.485 Gb/s transmissions up to a length of 200m (Belden 1694A) and 120m (Belden 8281). At 270 Mb/s, cable lengths up to 400m (Belden 1694A) and 300m (Belden 8281) are supported.

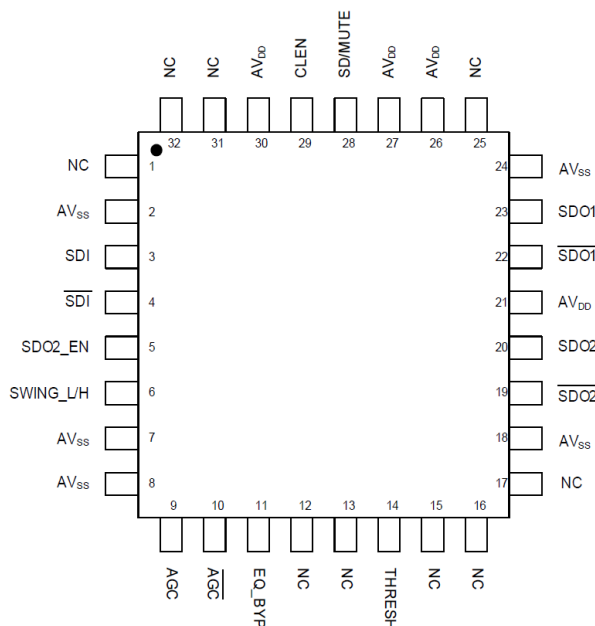


Figure 1 – M08046 Pin-out diagram



M08046

Serial Digital Video
Cable Equalizer with
Dual Outputs for
2.97 Gb/s,
1.485 Gb/s,
and 270 Mb/s
data rates

> Applications

- Digital Video Recorders (DVR)
- Video Mixers and Switchers
- Surveillance / CCTV Cameras
- Industrial and Professional Cameras
- Digital Image Capture Devices
- Digital Video Displays
- Distribution Amplifiers
- Repeaters

| Features | Benefits |
|---|---|
| Adaptive cable equalization | Design flexibility and control |
| Optimized data rates at 270 Mb/s, 1.485 Gb/s, and 2.97 Gb/s | Single Chip Solution for multiple data rates |
| Allows typical equalized length of up to 100m (Belden 1694A) for transmissions at 2.97 Gb/s | Extend industry standard cable lengths |
| Allows typical equalized length of up to 200m (Belden 1694A) and 120m (Belden 8281) for transmissions at 1.485 Gb/s | Extend industry standard cable lengths |
| Allows typical equalized length of up to 400m (Belden 1694A) and 300m (Belden 8281) for transmissions at 270 Mb/s | Extend industry standard cable lengths |
| Mute and manual bypass mode | Supports non standard rates |
| Differential CML outputs (50 Ω on-chip terminations) | Low cost integration |
| 2.5V or 3.3V power supply | Standard voltage supply supported |
| Small form factor and foot print (5x5 mm ² , 32-pin QFN package) | Industry standard package |
| Low power dissipation (175mW at 2.5V, 230mW at 3.3V) | Low power and thermal management costs |
| Extended operating temperature range: -10°C to +85 °C | Provides additional margin for various applications |

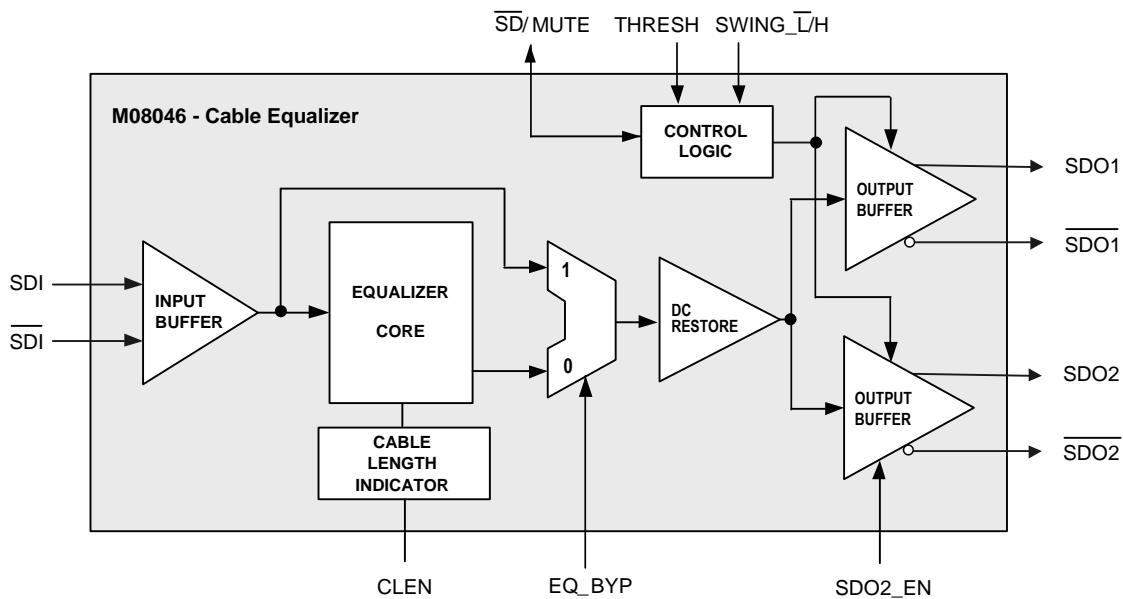


Figure 2 – M08046 Functional Block Diagram

Package (RoHS Compliant)

- 5x5 mm², 32-pin QFN



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

MINDSPEED

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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