M08016

DEVICE OVERVIEW

HD/SD Serial Digital Video Cable Equalizer

The M08016 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 M08016 is designed for data rates at 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 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.

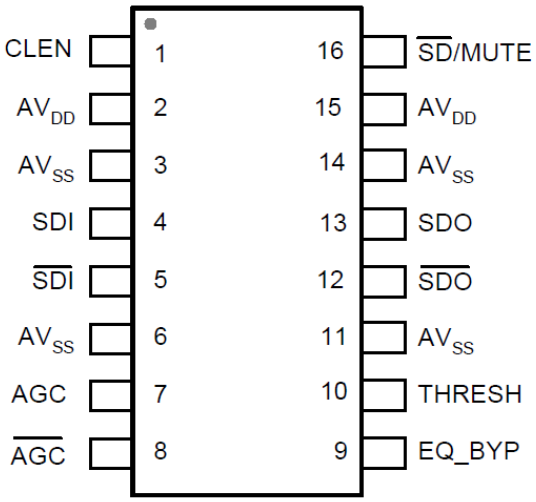


Figure 1 – M08016 Pin-out diagram

M08016

Serial Digital Video Cable Equalizer for 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

TECHNICAL DETAILS

Features	Benefits
Adaptive cable equalization	Design flexibility and control
Optimized data rates at 270 Mb/s to 1.485 Gb/s	Single Chip Solution for multiple data rates
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 and 3.3V power supply	Standard voltage supply supported
Small form factor and foot print (16-pin SOIC package)	Industry standard package
Low power dissipation (177mW at 2.5V and 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

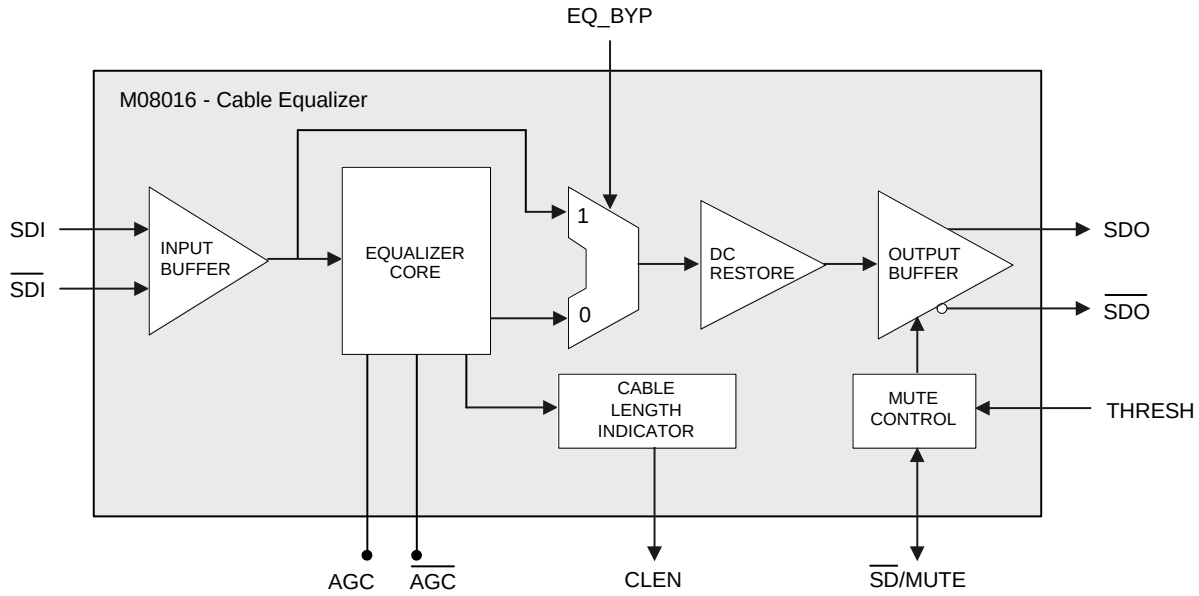


Figure 2 – M08016 Functional Block Diagram

Package (RoHS Compliant)

- 16-pin SOIC

MINDSPEED
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