



## GS2964 Short Reach Adaptive Cable Equalizer

### Features

- SMPTE 424M, SMPTE 292M and SMPTE 259M compliant
- Automatic cable equalization
- Multi-standard operation from 19Mb/s to 2.97Gb/s
- Performance optimized for 270Mb/s, 1.485Gb/s and 2.97Gb/s. Maximum guaranteed equalized length of Belden 1694A cable:
  - ♦ 50m at 2.97Gb/s (0.4UI maximum)
  - ♦ 50m at 1.485Gb/s (0.25UI maximum)
  - ♦ 50m at 270Mb/s (0.2UI maximum)
- Supports DVB-ASI at 270Mb/s
- Manual bypass (useful for low data rates with slow rise/fall times)
- Single 3.3V power supply operation
- 150mW power consumption (typical)
- Small footprint QFN package (4mm x 4mm)
  - ♦ Drop-in compatible with GS2974
- Pb-free and RoHS compliant

### Applications

- SMPTE 424M, SMPTE 292M and SMPTE 259M coaxial cable serial digital interfaces

### Description

The GS2964 is a high-speed BiCMOS integrated circuit designed to equalize and restore signals received over 75Ω coaxial cable.

The device is designed to support SMPTE 424M, SMPTE 292M and SMPTE 259M, and is optimized for performance at 1.485Gb/s and 2.97Gb/s.

The GS2964 features DC restoration to compensate for the DC content of SMPTE pathological test patterns.

The Carrier Detect output pin ( $\overline{CD}$ ) indicates whether a valid input signal has been detected. It can be connected directly to the MUTE pin to mute the output on loss of carrier.

The equalizing and DC restore stages are disengaged when the BYPASS pin is HIGH. No equalization occurs in Bypass mode.

The differential outputs can be DC-coupled to Gennum 3.3V cable drivers and reclockers and to industry-standard 3.3V CML logic.

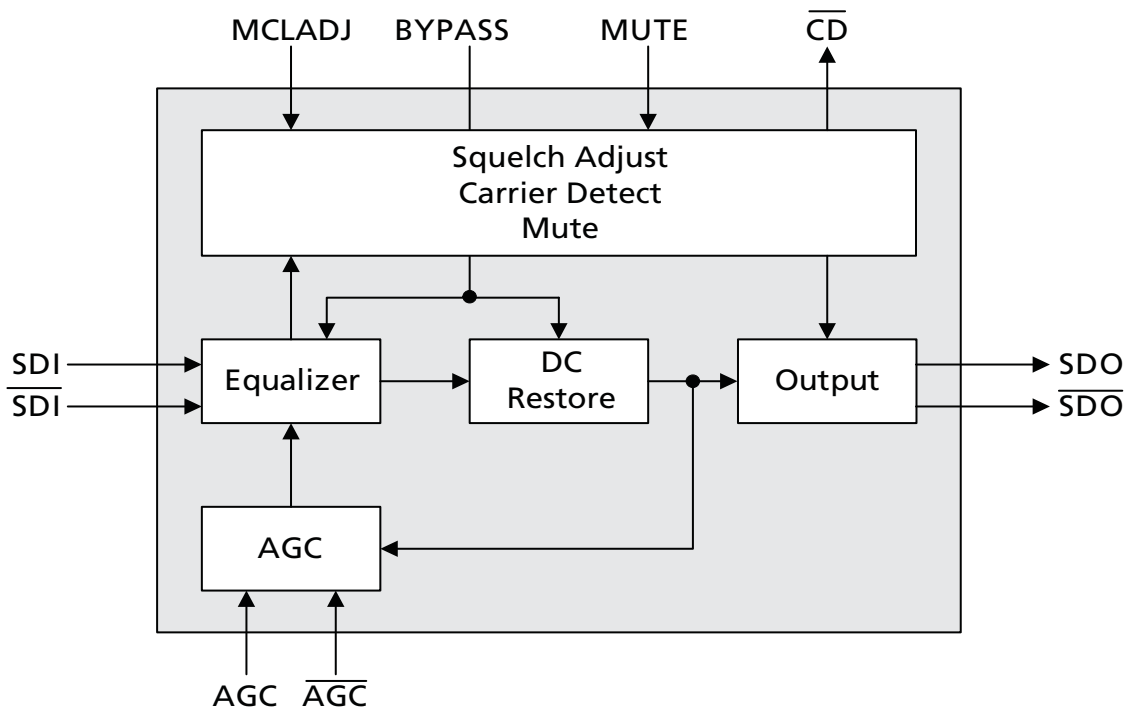
The GS2964 is footprint and drop-in compatible with existing GS2974 designs, with no additional application changes required.

The device is available in a 16-pin, 4mm x 4mm QFN package.

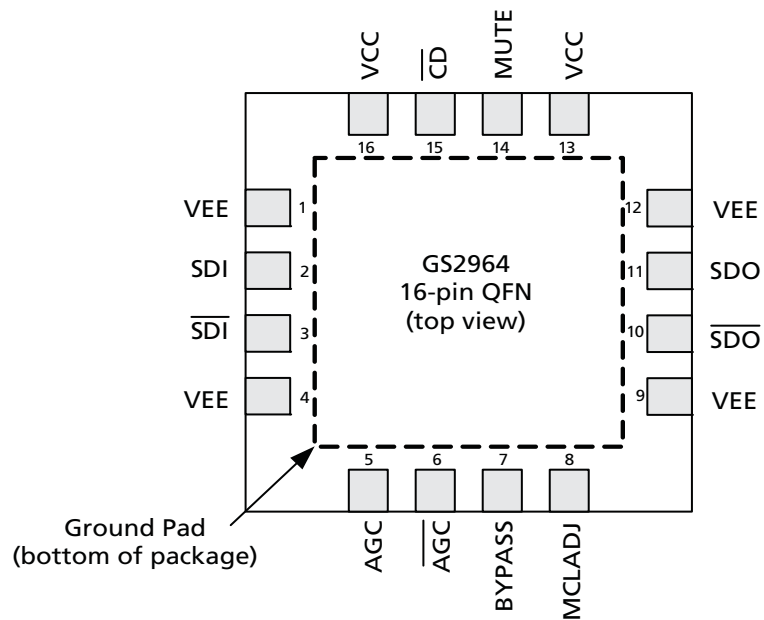
Power consumption of the GS2964 is typically 150mW.

The GS2964 is Pb-free, and the encapsulation compound does not contain halogenated flame retardant.

This component and all homogeneous subcomponents are RoHS compliant.



GS2964 Functional Block Diagram



GS2964 Pin Out

## Revision History

Version	ECR	PCN	Date	Changes and/or Modifications
A	150290	–	August 2008	New document.

### DOCUMENT IDENTIFICATION PRODUCT BRIEF

The product is in a development phase and specifications are subject to change without notice. Gennum reserves the right to remove the product at any time. Listing the product does not constitute an offer for sale.

### CAUTION

ELECTROSTATIC SENSITIVE DEVICES

DO NOT OPEN PACKAGES OR HANDLE EXCEPT AT A  
STATIC-FREE WORKSTATION



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