



## GS2989 Multi-Rate Dual-Output Dual-Slew-Rate Cable Driver

### Features

- SMPTE 424M, SMPTE 292M and SMPTE 259M compliant
- Supports DVB-ASI at 270Mb/s
- Supports data rates from 270Mb/s to 2.97Gb/s
- Wide common-mode range input buffer
  - ◆ 100mV sensitivity
  - ◆ supports DC coupling to industry-standard differential logic
  - ◆ on-chip 100Ω differential data input termination
- Input signal trace equalization
- Dual differential coaxial-cable-driving outputs
  - ◆ selectable slew rates
  - ◆ adjustable output swing from 500mVpp to 1800mVpp
  - ◆ independent DISABLE controls for each output
- Robust output signal presence function
- Excellent output eye quality
- Power supply operation at 3.3V or 2.5V
- 125mW power consumption (2.5V supply)
- Operating temperature range: -40°C to +85°C
- Small footprint QFN package (4mm x 4mm)
  - ◆ new dual-output pin out
  - ◆ use the GS2988 for a single-output variant that is drop-in compatible to the GS2978
- Pb-free and RoHS compliant

### Applications

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

### Description

The GS2989 is a high-speed BiCMOS integrated circuit designed to drive one to four 75Ω coaxial cables.

The GS2989 may drive data rates up to 2.97Gb/s and provides two selectable slew rates in order to achieve compliance to SMPTE 424M, SMPTE 292M and SMPTE 259M.

The GS2989 accepts industry-standard differential input levels including LVPECL and CML.

Input trace equalization compensates for up to 10 inches of FR4 trace loss. This feature can be disabled using the  $\overline{\text{EQ\_EN}}$  pin.

The  $\overline{\text{DISABLE1}}$  and  $\overline{\text{DISABLE2}}$  pins power-down the first and second output drivers respectively, leaving the serial data outputs in a high-impedance state. When applied simultaneously, the entire device is powered-down.

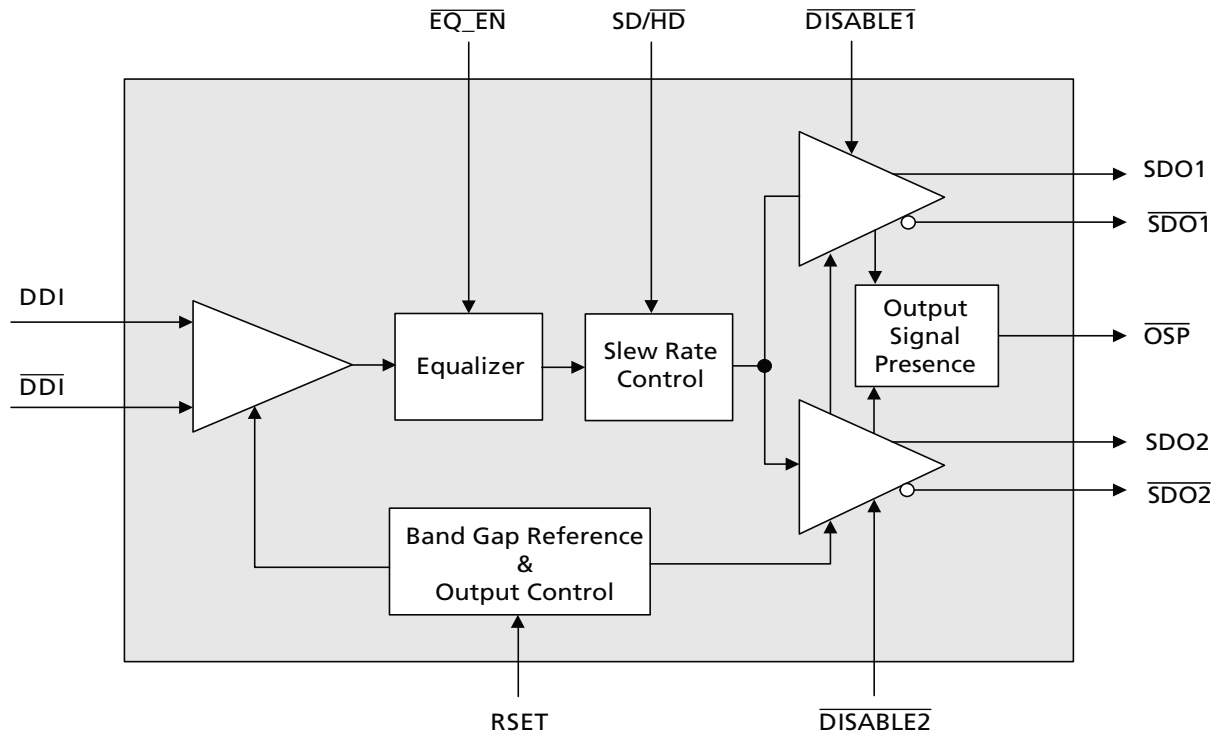
The GS2989 features adjustable output swing using an external bias resistor. The single-ended output swing is adjustable from 500mVpp to 1800mVpp.

An output signal presence function, the  $\overline{\text{OSP}}$  pin, indicates whether an active signal is present at the output of the GS2989.

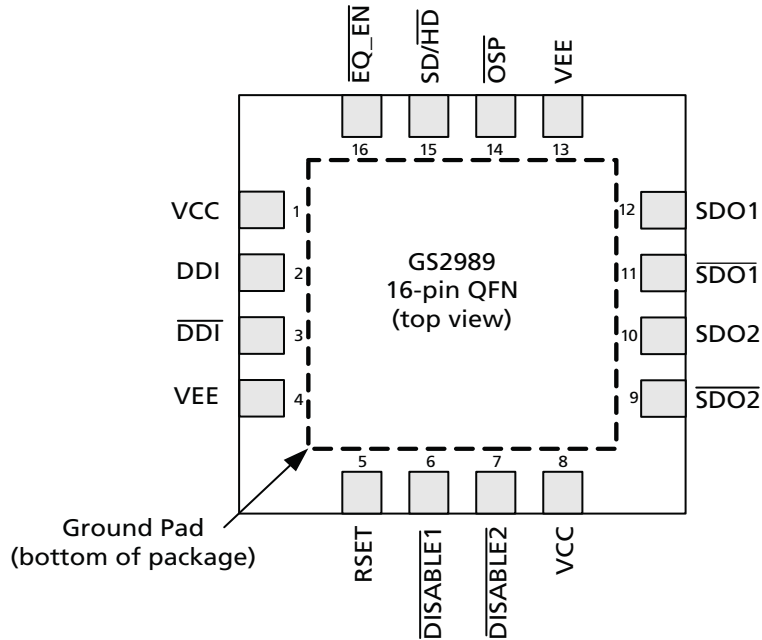
The GS2989 can be powered from either a 3.3V or a 2.5V supply. Power consumption is typically 125mW using a 2.5V power supply with one output enabled.

The GS2989 is Pb-free, and the encapsulation compound does not contain halogenated flame retardant.

This component and all homogeneous subcomponents are RoHS compliant.



GS2989 Functional Block Diagram



GS2989 Pin Out

## Revision History

Version	ECR	PCN	Date	Changes and/or Modifications
C	152039	-	June 2009	Removed 'Proprietary & Confidential' from document footer.
B	151792	-	April 2009	Updates
A	150293	-	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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