



GS6081 6G/3G/HD/SD Dual-Output Cable Driver

Features

- Supports data rates from 270Mb/s to 5.94Gb/s
- SMPTE ST 424, SMPTE ST 292 and SMPTE ST 259 compliant
- Supports DVB-ASI at 270Mb/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 500mV_{pp} to 1040mV_{pp}
 - ◆ independent disable controls for each output
- Robust signal presence function
- Excellent output eye quality
- Power supply operation at 3.3V or 2.5V
- 135mW 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 XS6080 for a single-output variant that is drop-in compatible to the GS2978
- Pb-free and RoHS compliant

Applications

- 6G (5.94Gb/s), SMPTE ST 424, SMPTE ST 292 and SMPTE ST 259 coaxial cable serial digital interfaces

Description

The GS6081 is a high-speed BiCMOS integrated circuit designed to drive one to four 75Ω coaxial cables.

The GS6081 may drive data rates up to 5.94Gb/s and provides two selectable slew rates in order to achieve compliance to SMPTE ST 424, SMPTE ST 292 and SMPTE ST 259.

The GS6081 accepts industry-standard differential input levels including LVPECL and CML.

Input trace equalization compensates for up to 10 inches of FR4 trace loss while in HD, 3G and 6G modes. This feature is enabled and disabled using the $\overline{EQ_EN}$ pin.

The $\overline{DISABLE1}$ and $\overline{DISABLE2}$ 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.

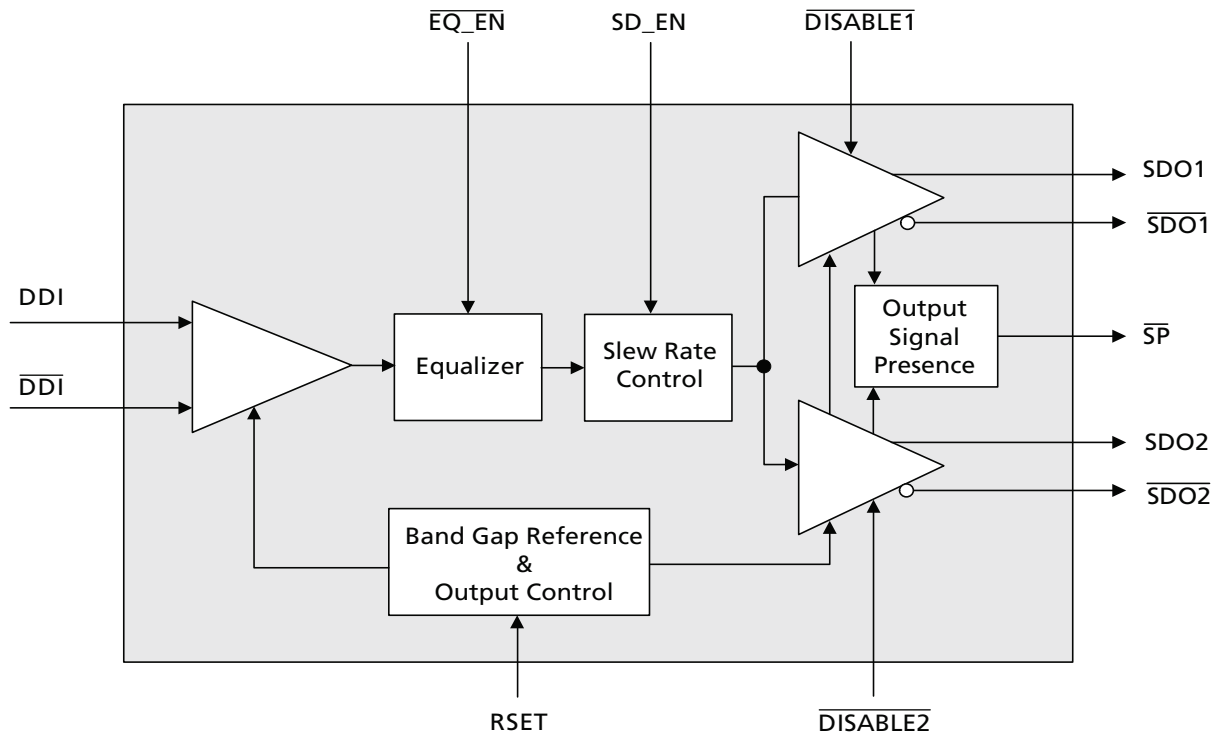
The GS6081 features adjustable output swing using an external bias resistor. The single-ended output swing is adjustable from 500mV_{pp} to 1040mV_{pp}.

An output signal presence function, the \overline{SP} pin, indicates whether an active signal is present at the output of the GS6081.

The GS6081 can be powered from either a 3.3V or a 2.5V supply. Power consumption is typically 135mW using a 2.5V power supply with one output enabled.

The GS6081 is Pb-free, and the encapsulation compound does not contain halogenated flame retardant.

This component and all homogeneous subcomponents are RoHS compliant.



Functional Block Diagram



**DOCUMENT IDENTIFICATION
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