



GS1675 SD/HD SDI Reclocker

The GS1675 is a multi-rate serial digital reclocker designed to automatically recover the embedded clock from a digital video signal and retime the incoming video data. It will recover the embedded clock signal and retime the data from a SMPTE 292M or SMPTE 259M-C compliant digital video signal.

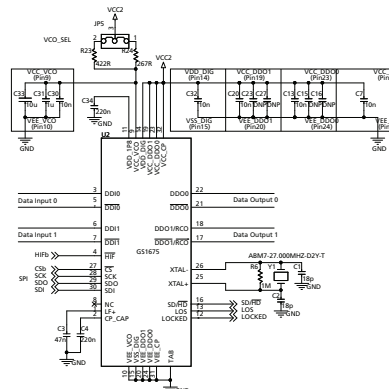
The GS1675 can operate in either Auto or Manual rate selection mode. In Auto mode, the device will automatically detect and lock onto incoming SMPTE SDI data signals at SD and HD data rates. For single-rate data systems, the GS1675 can be configured to operate in Manual mode. In both modes, the device requires only one external crystal to set the VCO frequency when not locked, and provides adjustment-free operation. In systems which require passing non-SMPTE data rates, the GS1675 can be configured to either automatically or manually enter a bypass mode in order to pass the signal without reclocking.

The GS1675 accepts industry-standard differential input levels including LVPECL and CML. The differential data and clock outputs feature selectable output swing via the host interface, ensuring compatibility with most industry-standard, terminated differential receivers. The GS1675 features dual differential outputs. The second output can be configured to emit either the recovered clock signal or the re-timed video data.

Key Features

- SMPTE 292M and SMPTE 259M-C compliant
- Supports DVB-ASI at 270Mb/s
- Single-supply operation at 3.3V or 2.5V
- 180mW typical power consumption (213mW with RCO enabled) at 2.5V
- 2:1 input multiplexer patented technology
- Choice of dual reclocked data outputs or one reclocked data output and one clock output
- Uses standard 27MHz crystal
- Differential inputs and outputs
 - ♦ supports DC-coupling to industry-standard differential logic
 - ♦ on-chip 100Ω differential data input/output termination
 - ♦ selectable 400mVppd or 800mVppd output swing on each output
- 4-wire SPI host interface for device configuration and monitoring
- Standard logic control and status signal levels
- Auto and Manual modes for rate selection
- Standards indication in Auto mode
- Lock Detect Output
- Mute, Bypass and Autobypass functions
- SD/HD indication output to control GS1678 or GS1679 cable drivers
- Operating temperature range: -40°C to +85°C
- 32 pin 5mm x 5mm QFN package
- Pb-free and RoHS compliant
- Forward pin-compatible with the Gennum's 3G GS2965 reclocker

Typical Application Circuit



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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