

Features

- multi-rate serial operation: 1.25Gb/s, 2.5Gb/s, or 5Gb/s per channel
- low output jitter
- 1.25Gb/s Source Synchronous LVDS parallel interface
- 625MHz DDR clocking on source synchronous interface
- 125MHz HSTL system clock input
- high input jitter tolerance clock and data recovery
- equalization on serial inputs enables communication over 30 inches of 10 mil traces at 5Gb/s
- serial and parallel loopback modes
- on-chip 100 ohms differential input/output termination
- serial output level adjustment control
- power consumption 4W typical at 5.0Gb/s
- package size 23mm × 23mm

Applications

- multi-rate serial backplane communication

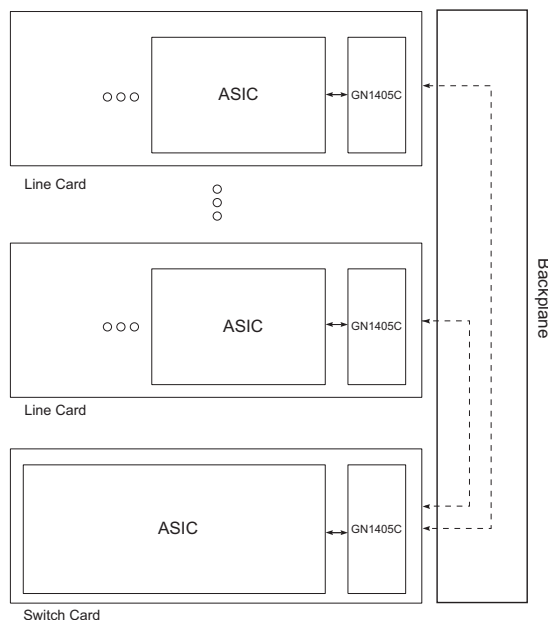
Description

The GN1405C is a monolithic integrated circuit that enables serial backplane communication at 1.25Gb/s, 2.5Gb/s, or 5Gb/s by translating between a low speed 1.25Gb/s LVDS (ASIC) interface and a high-speed 5Gb/s CML interface using bit interleaving and bit de-interleaving. The GN1405C is a quad device; thus there are four high-speed serial lanes in each direction operating at up to 5Gb/s, translating to 40Gb/s full duplex bandwidth.

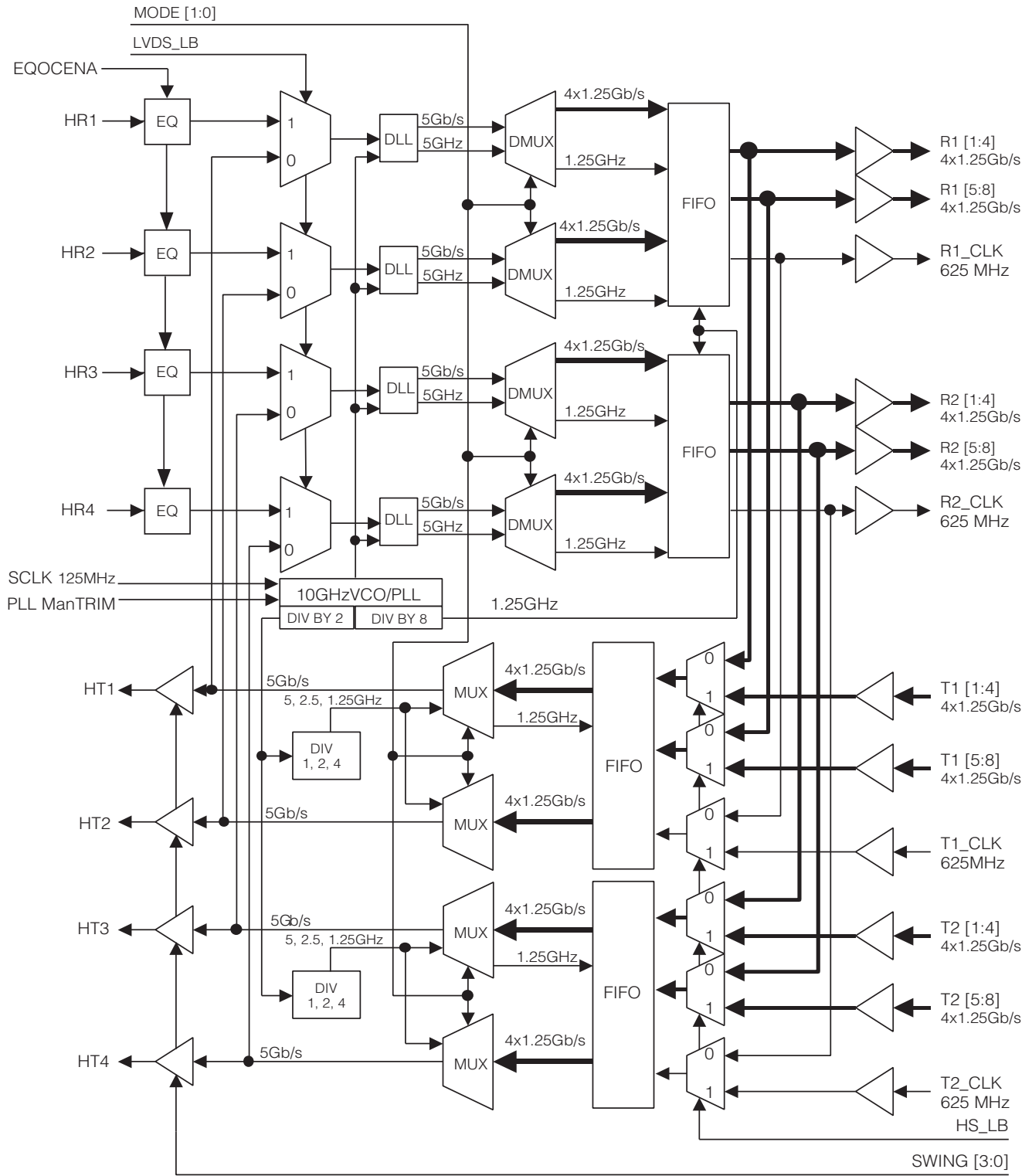
In the GN1405C, each high-speed serial input interface includes an integrated high IJT clock and data recovery circuit with equalization.

Each high-speed serial output interface features very low jitter and allows for amplitude adjustment through the use of dedicated pins.

The parallel interface is comprised of two 8-channel source synchronous 1.25Gb/s LVDS lines in each direction. Rate selection is made using dedicated pins, which determine the mapping of 1.25Gb/s parallel channels to/from the high-speed serial channels.



Application Diagram



GN1405C Block Diagram

Ordering Information

Part Number	Package	Temperature *
GN1405C-CB	484 pin BGA	-5°C to +90°C

* Case Temperature

Revision History

Version	ECR	Date	Changes and/or Modifications
0	141371	July 2006	New Document.

CAUTION

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



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.

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