



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

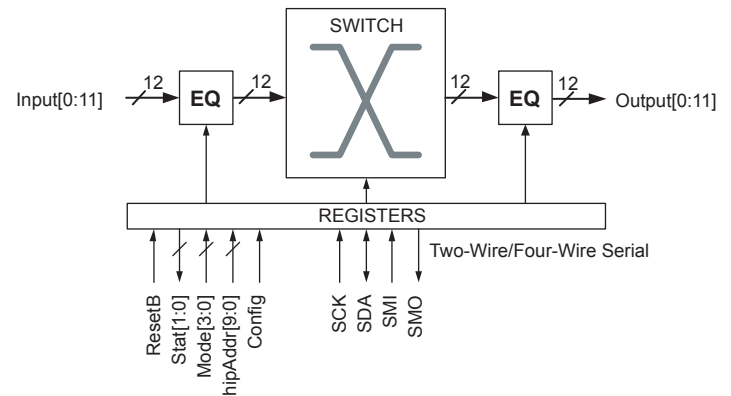


VSC3312

6.5 Gbps 12x12 Crosspoint Switch



BLOCK DIAGRAM:



FEATURES:

- ▶ 6.5 Gbps non-return-to-zero (NRZ) data bandwidth
- ▶ Fully non-blocking and multicasting switch core with per-pin signal inversion capability
- ▶ Multiple time-constant programmable input and output equalization
- ▶ Wide equalization adjustment range
- ▶ Fully asynchronous operation with <1 ns latency
- ▶ Reconfigurable Input/Output (I/O) capability
- ▶ LOS detection and forwarding

BENEFITS:

- ▶ Transparent support for virtually all data rates and protocols
- ▶ Allows complete flexibility in routing and distributing signals
- ▶ Compensates for multiple impairments in a signal path
- ▶ Supports all types of interconnect media: PCB, backplanes, and cable
- ▶ No adjustments based on data rate or reference clock required
- ▶ Customize the I/O to the application
- ▶ OOB forwarding for protocols like SAS and SATA

APPLICATIONS:

- ▶ Wideband signal switching and clean-up
- ▶ Line driver or receiver
- ▶ Backplane signal fanout, driver, or receiver
- ▶ Copper cable driver or receiver
- ▶ PCB signal enhancement

VSC3312

6.5 Gbps 12x12 Crosspoint Switch

GENERAL DESCRIPTION:



The VSC3312 is a 12-port 6.5 Gbps asynchronous switch with advanced signal equalization designed for high-speed serial backplanes and cable interconnect applications. VSC3312 switches allow multicast, loopback, and reconfigurable Input/Output (I/O) capability, allowing for great flexibility in allocating and routing signals in a broad range of applications. The VSC3312 includes dual time-constant equalization, which significantly reduces jitter associated with driving multigigabit signals across backplanes and cables.

Using a fully asynchronous architecture allows any data rate or protocol on any channel without the need for an external reference clock. This gives the VSC3312 wire-like interoperability in virtually any application that uses binary signaling.

The VSC3312 can also be used as a buffer that simplifies and enhances the design of high-speed signal paths by providing signal equalization at both inputs and outputs to reduce or reverse signal degradation due to transmission line effects.

The VSC3312 has a total of 24 ports. Eight are dedicated inputs, eight are dedicated outputs, and the remaining eight may be configured as either inputs or outputs without restriction. This design provides the flexibility of using the device as a standard 12x12 crosspoint, or any ratio from 8x16 to 16x8. This unique feature allows full I/O utilization in any application that has less than a 2:1 ratio between inputs and outputs. In many cases, this translates to a significant reduction in chip count.

Featuring programmable input signal equalization and output pre-emphasis, each with multiple time constants, the VSC3312 is also ideal for countering signal degradation over a wide variety of transmission media types and lengths.

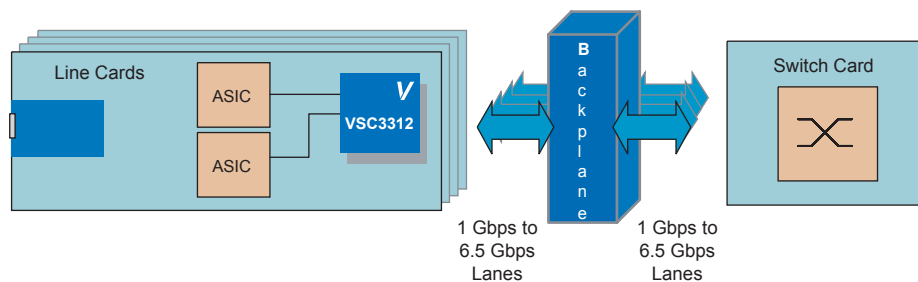
Typical power consumption for the device is 160 mW per active channel, and unused channels may be de-activated to save the power associated with those ports. The output drivers for the VSC3312 also feature a wide supply voltage range, from 1.8 V to 3.3 V, that allows flexibility in matching the output swing to the application requirements.

The VSC3312 has a LOS detector with programmable thresholds on every input port. The LOS status can be made to appear at either of two status pins for external use. The LOS signal can also be switched to each of the outputs in concert with the high-speed switching core. LOS forwarding can be enabled for each of the outputs, which will cause the outputs to be squelched in response to a LOS detect at the corresponding input, thereby propagating signal envelopes through the switch.

Programming of the VSC3312 is through a standard two-wire serial interface. The interface address can be hardwired through static pins or through a proprietary two-pin interface that allows for address selection after power-up. All pin functions such as Config, ResetB, and Status pin states are also accessible through registers to ensure maximum flexibility.

For more information about signal integrity solutions, visit the Vitesse Web site at www.vitesse.com/SI.

BACKPLANE APPLICATION:



SPECIFICATIONS:

- ▶ 6.5 Gbps non-return-to-zero (NRZ) per-channel data rate
- ▶ 2.5 V core, 1.8 V, 2.5 V, and 3.3 V high-speed I/O
- ▶ 3.2 W maximum at 3.3 V, or 2.4 W at 2.5 V, or 2 W at 1.8 V

Trademarks™

Vitesse, ASIC-Friendly, FibreTimer, TimeStream, Snoop Loop, Super FEC, FOCUSConnect, Meigs-II, Meigs-Ile, Lansing, Campbell-I, Barrington, PaceMaker, HOVCAT48, HOVCAT48e, HOVCAT192, HOVCAT192e, Micro PHY, FOCUS32, FOCUS16, IQ2200, NexSAS, VersaCAT, GigaStream, HawX, SparX, StaX, VstaX, SimpliPHY, VeriPHY, ActiPHY, XFP PRO, SFP PRO, Smart-LINK, OctalMAC, EQ Technology are trademarks in the United States and/or other jurisdictions of Vitesse Semiconductor Corporation. All other trademarks or registered trademarks mentioned herein are the property of their respective holders.

Copyright © 2006

Vitesse Semiconductor Corporation ("Vitesse") retains the right to make changes to its products or specifications to improve performance, reliability or manufacturability. All information in this document, including descriptions of features, functions, performance, technical specifications and availability, is subject to change without notice at any time. While the information furnished herein is held to be accurate and reliable, no responsibility will be assumed by Vitesse for its use. Furthermore, the information contained herein does not convey to the purchaser of microelectronic devices any license under the patent right of any manufacturer.

741 Calle Plano
Camarillo, CA 93012, USA
Tel: +1 805.388.3700
Fax: +1 805.987.5896
www.vitesse.com
sales@vitesse.com