DATACOM PRODUCTS

VSC055

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Enhanced I²C Backplane Controller



APPLICATIONS:

- Any Embedded Control Application Including:
- SCSI and Fibre Channel JBODs or SBODs
 - Disk Arrays
 - RAID Subsystems
 - Servers
 - Telecommunication Equipment

FEATURES:

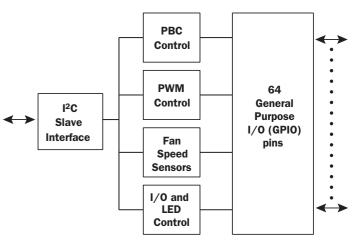
- Up to 64 Bits of 5 Volt Tolerant, User-definable, Bi-directional General Purpose I/O
- ▶ Slave mode I²C serial interface
- Integrated Port Bypass, Clock Recovery and Signal Detect Support for up to 16 Drive Ports
- ▶ Eight Programmable Fan Speed Monitoring Inputs
- ▶ Eight Programmable Pulse Width Modulated Fan Control Outputs
- ▶ Pairing of GPI/O Pins for Direct Input/Output Signal Routing/Buffering
- ▶ Selectable Direct LED Drive Flashing Capability
- ▶ Pin-programmable Addressing for up to 16 Devices on a Single Serial Bus

SPECIFICATIONS:

- ▶ 100-pin PQFP Package
- Two Clock Input Ranges: 8 to 10MHz (crystal) or 8.0 to 53.125MHz (Oscillator)

VITESSE

VSC055 BLOCK DIAGRAM:



VSC055

10-10-5

The VSC055 Enhanced I²C Backplane Controller is an integrated CMOS circuit that significantly reduces system cost by integrating all of the digital logic typically required to monitor a storage enclosure.

Enhanced I²C Backplane Controller

The VSC055 may be used in any embedded control application including parallel SCSI, Fibre Channel or any other application where the monitoring and control of a large number of digital I/O signals is required. Programming the VSC055 is easy through a

convenient programming model, which reduces the overall duration of the design-in cycle. Data is read from and written to the device over an addressable I²C serial interface, allowing multiple VSC055 devices on a single two-wire bus.

Furthermore, a key strength of the VSC055 is the ease in which it interoperates with Vitesse Fibre Channel port bypass circuits (PBC) and Enclosure Management Controllers, to provide a complete storage control chipset.

Arbitrated Loop A Arbitrated Loop B UpStream UpStream DownStream DownStream Heartbeat Local I/O (x26) Local I/O (x26) I2C I/F RS-485 xcvr RS-485 xcvr ICMB (opt.) Vitesse Vitesse ICMB (opt.) Drive 1 Enclosure Enclosure Port Bypass Circuits /SC7147 or VSC7197) Controlle Drive 2 Controller 2 Gb/s Port Bypass Circuits Vitesse VSC7147 or VSC7197) VSC120 VSC120 Drive 3 Drive 4 Flash Flash Drive 5 (1M x 8 or 512K x 16) (1M x 8 or 512K x16) Drive 6 Drive 7 2 Gb/s | Vitesse \ Drive 8 Drive 9 I2C I/F I2C I/F Drive 10 GPIO Drive 11 GPIOs Drive 12 Drive 13 Vitesse Vitesse Drive 14 Backplane Backplan Controller Controlle IVE PRESENT a FAULT LEDS DRIVE PRESENT and FAULT LEDS VSC055 VSC055 POWER SUPPLY CONTROL FAN TACHS and PWM Power Supplies POWER SUPPLY CONTRO FAN TACHS and PWM & Fans LM75 (Temp) LM75 (Temp) X24C16 X24C16 EEPROM EEPROM

VSC055 APPLICATION DIAGRAM:

For more information on Vitesse Products visit the Vitesse web site at www.vitesse.com or contact Vitesse Sales at (800) VITESSE or sales@vitesse.com 741 Calle Plano Camarillo, CA 930 Tel: +1 805.388.37



GENERAL DESCRIPTION: The VSC05 Controller is that signific integrating a