DATACOM PRODUCTS

VSC120

VSC120 - 2Gb/s FC-AL2 Enclosure Management Controller



SOFTWARE DEVELOPMENT KIT (SDK) FEATURES:

VITESSE

- ► Modular Architecture to Support Migration to Other I/O Technologies and Protocols
- Extensive Peripheral Device Library
- ▶ Sample Personality Module Source Code

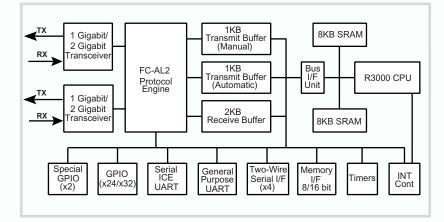
SPECIFICATIONS:

- ▶ 160-pin Thermally Enhanced PQFP Package
- External Flash and/or SRAM (60ns to 250ns)
- Internal 16KB SRAM
- ▶ 5V or 3.3V Tolerant I/O using 2.5V Core Technology

APPLICATIONS:

- JBOD Arrays
- ▶ SBOD Arrays
- Disk Arrays
- RAID Subsystems
- ▶ High Performance Switches
- Multi-processor Servers

VSC120 BLOCK DIAGRAM:



FEATURES:

- ▶ Two Integrated 1 or 2Gb/s Serial Transceivers
- Interoperates with Vitesse Fibre Channel Port Bypass Circuits (PBC) and Switches
- ▶ IPMI 1.x Compatible
- Private Loop Direct Attach/AL2 Profile
- ▶ Four I²C Serial Interface Controllers
- ▶ General Purpose UART with Modem Control
- ▶ Up to 34 Programmable General Purpose I/Os
- > 32-bit, 53Mhz RISC CPU w/Debug Port
- Eight Optional Fan Speed Monitoring Inputs
- Eight Optional PWM Control Outputs
- Operates as Initiator or Target

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GENERAL DESCRIPTION:



The VSC120 is a high performance version of the industry-leading SSC100. The VSC120 includes a 32-bit, 53Mhz RISC CPU that operates in initiator and/or target modes for diagnostic flexibility, two integrated 1 and 2 Gb/s Fibre Channel serial transceivers for backward compatibility and redundant data

paths. Four I²C bus master controllers and two UARTs assist in firmware development and out-of-band communication via the Intelligent Platform Management Interface (IPMI). To reduce board space, the VSC120 provides on-chip fan speed monitoring and Pulse Width Modulation (PWM) control outputs, and up to 34 general purpose I/O's with eight external interrupts.

The VSC120 is ideal for remote monitoring and control applications such as SBOD/JBODs, disk arrays, RAID

subsystems, switches and multiprocessor servers. The embedded firmware capabilities of the VSC120 allow storage system architects to differentiate their products via firmware. A complete Software Development Kit (SDK) is provided to accelerate the development of firmware specific to the enclosure.

Furthermore, a key strength of the VSC120 is the ease in which it interoperates with Vitesse Fibre Channel port bypass circuits (PBC) and switches, to provide a complete storage control chipset. For example, when coupled with the VSC7147 or the VSC7192, the VSC120 can disconnect a disk drive from the loop, perform diagnostics, and report status to the host without interrupting data flow to other resources within the enclosure.

Arbitrated Loop A Arbitrated Loop B UpStream DownStream DownStream UpStream Heartheat Local I/O (x26) Local I/O (x26) Two-Wire Serial I/F RS-485 xcvr RS-485 ICMB (opt.) ICMB (opt.) Vitesse Vitesse Drive 1 Enclosure Enclosure Circuits VSC7192) Controlle Drive 2 Port Bypass Circuits VSC7147 or VSC7192) Controller VSC120 VSC120 Drive 3 Drive 4 Port Bypass C VSC7147 or V Flash Flash Drive 5 (1M x 8 or (1M x 8 or 512K x16) Drive 6 512K x 16) Drive 7 2Gb/s | Vitesse 2Gb/s F /itesse \ Drive 8 Drive 9 Two-Wire Two-Wire Drive 10 Serial I/F Serial I/F GPIOs GPIOs Drive 11 Drive 12 Drive 13 Vitesse Vitesse Drive 14 Backplane Controller Backplane Controller DRIVE PRESENT and FAULT LEDS DRIVE PRESENT an FAULT LEDS VSC055 VSC055 POWER SUPPLY CONTROL FAN TACHS and PWM Power Supplies POWER SUPPLY CONTROL FAN TACHS and PWM & Fans LM75 LM75 (Temp) (Temp) X24C16 X24C16 FEPROM EEPRON

JBOD WITH DUAL LOOPS, DUAL CONTROLLERS AND FOURTEEN DRIVES

Your Partner for Success.

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



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