

# Complete Embedded Flexibility

## SILICON STORAGE BRIDGE

### Complete Embedded Flexibility

An integrated, state-of-the-art FC to SATA bridge, the BR-2401 provides transparent canister-level emulation of FC HDDs, achieving a versatile, high-performance, low-cost storage solution that meets the demands of the enterprise storage market.

The BR-2401 enables SATA HDDs to be inserted into any FC drive slots and mixed with FC drive shelves within a modular JBOD or integrated RAID storage system.

The advantages of the BR-2401 over native FC drives are HDD vendor-independence, SATA volume economics that reduce risk and cost, improved data integrity, and faster time-to-market than 4Gb/s FC HDDs.

The RAID controller perceives the BR-2401 as an FCP target that emulates the FC HDD interface. This transparent solution requires little or no modification to storage system firmware and minimally impacts RAID controllers. The BR-2401 manages each ATA

HDD connection as an independent point-to-point link and provides state-of-the-art diagnostic and fault isolation.

Integrated data path memory eliminates the need for external SRAM or other memory.

An 8-bit parallel Flash IC, a clock source, miscellaneous caps, and power supply components are the only required external components.

The BR-2401 is a single chip in the form factor of today's A/P or A/A MUX card. It is the smallest solution footprint available!



Available to OEMs only

#### KEY FEATURES:

- Canister-level Emulation of FC Disk Drives with Serial ATA (SATA) Drives
- Port Speed Agility of 4, 2 and 1Gb/s for FC; 3.0 and 1.5 for SATA
- SATA II Compliant with Auto-speed Negotiation and NCQ
- State-of-the-art Diagnostic and Fault Isolation
- Integrated Data Path Memory and Small Form Factor (SFF)
- Advanced Data Integrity

## Specifications

### FIBRE CHANNEL PORT FEATURES

Dual FC per port speed agility  
1, 2 and 4Gb/s full-duplex operation  
L/N port  
Private/public loop support  
Class 3  
Hard and soft device addressing

### SATA-II FEATURES

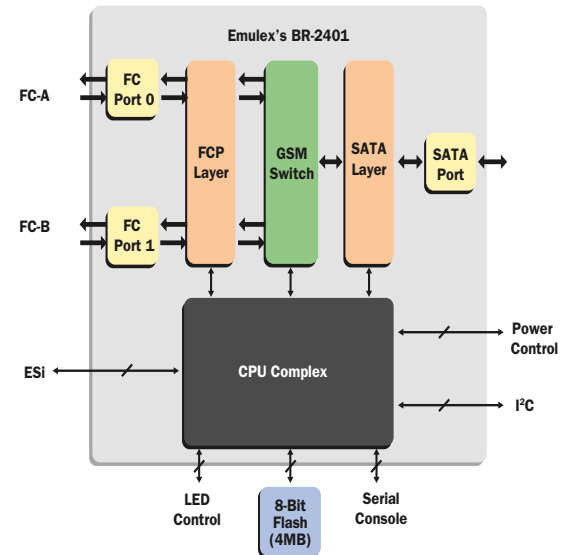
One SATA port with auto-speed negotiation for 3 and 1.5Gb/s operation  
SATA-II NCQ

### ADDITIONAL FEATURES

Embedded CPU complex (~187 MIPS)  
Advanced data integrity  
- Variable size sectors are supported  
- Data path is completely in hardware  
- ANSI data protection model (T10 SBC-2)  
Parallel ESI support (SFF-8045/8067) for SES  
Hot plug capability  
SCSI command queue space for up to 128 commands  
Configurable disk scrubbing operations  
Third party data verification (write and verify)

### GENERAL CHIP SPECIFICATIONS

0.13 micron technology  
1.6 watts maximum power dissipation in a single-drive canister application  
1.2 V and 3.3 V power supplies required  
75 MHz and 106.25 MHz reference  
196-pin mini Ball Grid Array (mBGA)  
170 MHz ARM 966 processor  
1149.1 JTAG port  
I<sup>2</sup>C interface  
8-bit flash interface (4 MB maximum)  
16 GPIOs (for power FET and LED control)



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