

StoreBox Compact Fibre Channel RAID/Recorder

SB1C4-F08 Ultra Compact Conduction Cooled FC RAID/Recorder (preliminary)

StoreBox 8 Gb FC RAID/Recorder

The SB1C4-F08 Fibre Channel RAID/Recorder consists of an ultra-compact conduction cooled chassis that hosts up to 18TB of hot swappable solid state recording media. Recorder I/O includes dual 1/2/4/8 Gb Fibre Channel interfaces, as well as dual 1Gb Ethernet control/management interfaces.

StoreBox uses Critical I/O's StoreEngine and StorePak boards and flexible storage and recording software functionality to provide a dual port *full line rate* 8 GB Fibre Channel RAID and/or recording capability. StorePak modules can be seamlessly added to increase storage capacity. The four slot chassis accommodates a StoreEngine module and from one to three StorePak modules.

Fibre Channel RAID Operation

The SB1C4-F08 can operate as a standard dual port Fibre Channel RAID, supporting multiple RAID 0/1/5/10/1E LUNs that may be accessed at an aggregate data rate of up to 1.5GB/s.

Fibre Channel Recording Operation

The SB1C4-F08 provides a capability to record multiple streams of data directly from multiple Fibre Channel connected data sources at rates of up to 1.5 GB/s with very low host overhead. Recorded data may be played back to Fibre Channel destination devices, or the recorded data may be accessed via Ethernet connections using standard file access protocols such as NFS.

Compact, High Density, Configurable

The four-slot SB1C4-F08 provides up to 18 TeraBytes (18TB) of solid state storage in a compact conduction cooled chassis. Configurations are available which feature various storage capacities, performance capabilities, and I/O interface options.

Scalable Storage Capacity

StoreBox capacity and performance can be easily scaled in the field by populating empty slots with additional StorePaks.

Recording Hot Swap & Hot Plug

In recording applications, the user may "hot-plug" and "hot-swap" StorePak storage without the need to power-down the recorder. This is ideal for applications where it is not feasible or desired to power down the system in order to remove/replace the StorePak SSD storage modules. Individual StorePak modules can be hot swapped while actively recording to other StorePaks.

Recording Control

RAID and recording operations may be managed via the built-in web management interface, or via the Recorder Network Control Protocol using a 1 Gb Ethernet control interface.



SB1C4-F08 Features:

- Rugged compact conduction cooled design
- Small SWaP (size, weight and power) footprint
- Compact: 8"H x 6"W x 7"D, 20 lbs.
- Low power - 140W (with three StorePaks)
- High capacity – up to 18 TB
- Optional AES-256 hardware based encryption
- Two channels of 1/2/4/8 Gb Fiber Channel
- High performance FC RAID – up to 1.5 GByte/s
- High performance FC recording – up to 1.5 GByte/s
- Time-stamping of recorded data
- Controlled rate playback of recorded data
- NAS (NFS/FTP/CIFS) access to recorded data
- 1GbE management/control interface
- Removable StorePak solid state storage modules
- Scalable & expandable (by adding StorePaks)
- Quick-access door for tool-less StorePak removal
- StorePak modules rated for 100,000 insertion cycles

SB1C4-F08 Applications:

- UAV platforms
- Surveillance platforms
- Signal Intelligence
- Communication Intelligence
- Radar, Sonar, EW



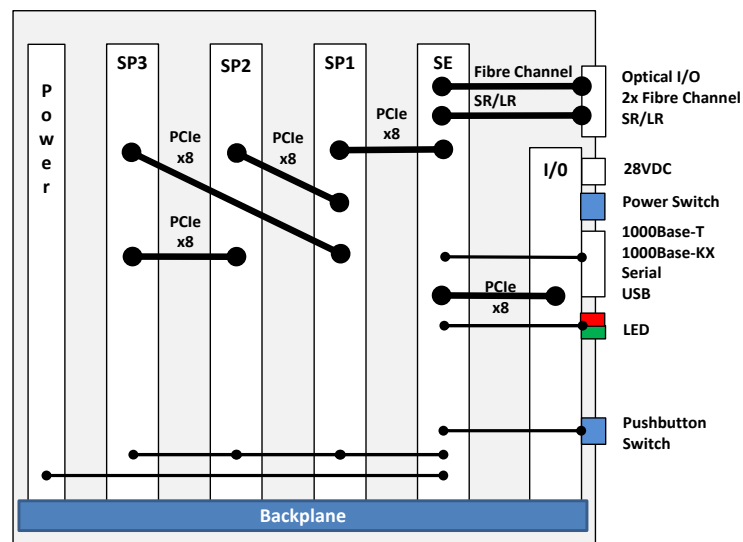
The SB1C4-F08 Fiber Channel RAID/recorder utilizes up to three ultra-dense StorePak hot-swappable SSD storage modules

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Preliminary Technical Specifications

Fibre Channel Data Interfaces	2x 1/2/4/8 Gb Fibre Channel SR optical For copper or LR optical interfaces please contact Critical I/O
Control/Maintenance Interfaces	1x 1GbE 1000Base-T, 1x 1GbE 1000Base-KX, 1x USB2, 1x serial
Storage Capacity	Up to 8TB removable SSD storage (MLC media, with three StorePaks)
RAID Performance	Up to 1.5 GB/s RAID 0
Recording Performance	Up to 1.5 GB/s sustained (with 2 or more StorePaks)
RAID/Recording Protocols	SCSI-FCP
RAID/Recording Management	Web based management interface or Recorder Network Control Protocol
NAS Data Offload Protocols	NFS, FTP, CIFS/SMB (data offload for recording mode only)
Size	8" H x 6" W x 7" D (4 slots, accommodates StoreEngine and up to 3 StorePaks)
Weight	20 lbs. (with 3 StorePaks)
Input Voltage	18 to 38 VDC (other voltages also available. Contact Critical I/O)
Power (typical)	140W (with 3 StorePaks)
Operating Temperature	-40 to +71C measured at thermal interface (optional commercial temp 0 to +45C)
Storage Temperature	-40C to +85C
Humidity	0 to 95% non-condensing
Shock	TBD
Vibration	TBD
EMI	MIL-STD-461E
Base Model Number	SB1C4-F082 <i>w-xyzzz</i> - Four slot 3u Conduction Cooled 8 Gb FC RAID/Recorder <i>w</i> : interface type (F = SR optical, L = LR optical, C = copper) <i>x</i> : StorePak qty (1 to 3) <i>y</i> : StorePak flash media type (M = MLC, T = TLC, E = EMLC, S = SLC) <i>zzz</i> : total storage capacity (TB) Models with 2, 3, 6, or 8 slots are also available. Contact Critical I/O



The SB1C4-F08 RAID/recorder architecture combines StoreEngine's high-performance recording and storage management software with up to three hot-swappable StorePak modules to provide up to 18TB of solid state storage in a compact, lightweight, rugged conduction cooled chassis