

StoreBox Compact 10GbE Recorder (Preliminary)

SB1C4-E10 Ultra Compact Conduction Cooled 10GbE Recorder

StoreBox 10GbE Recorder/NAS

The SB1C4-E10 10GbE 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 10Gb Ethernet optical or copper recording interfaces, as well as dual 1Gb Ethernet control/management interfaces.

The recorder uses Critical I/O's StoreEngine and StorePak boards and flexible recording software functionality to provide a dual port *full line rate* 10GbE data recording capability. The recorder provides a capability to record multiple streams of data directly from multiple 10GbE connected data sources at aggregate rates of up to 2.5 GB/s. 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.

The time-stamped recorded data may be played back to multiple 10GbE connected data destinations, or alternatively, recorded data may be accessed via 1 or 10 Gb Ethernet connections using standard file access protocols such as NFS.

Compact, High Density, Configurable

The SB1C4-E10 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 Recorder Storage Capacity

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

Hot Swap & Hot Plug

The recorder allows the user to "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.

Optional 10GbE NAS Operation

In addition to 10GbE data recording/playback, the SB1C4-E10 provides an optional high performance fully managed dual port 10GbE NAS file server capability. NAS file server operation may be used concurrently with 10GbE recording.

Recording Control

Recording operations may be controlled via the built-in recorder web management pages, or via the Recorder Network Control Protocol using a 1/10 Gb Ethernet control interface.



SB1C4-E10 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 10GbE UDP/TCP Recording
- High performance recording – up to 2.5 GByte/s
- Time-stamping of recorded data
- Controlled rate playback of recorded data
- NAS (NFS/FTP/CIFS) access to recorded data
- Dual 10GbE optical or copper interfaces
- 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-E10 Applications:

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



The SB1C4-E10 10GbE recorder utilizes up to three ultra-dense StorePak hot-swappable SSD storage modules

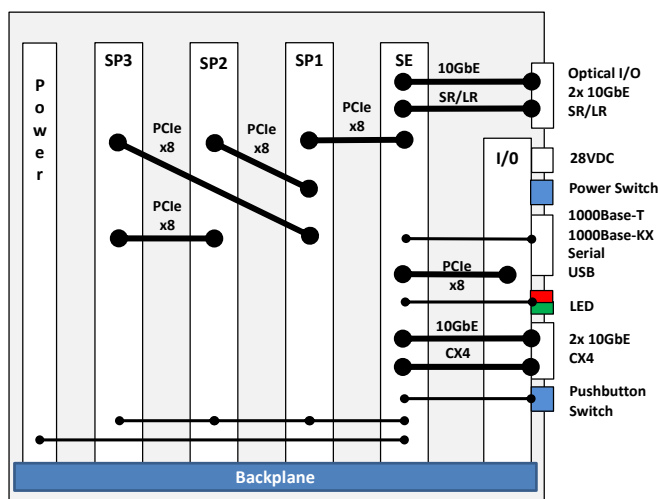
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Preliminary Technical Specifications

10GbE Data Interfaces	2x 10Gb Ethernet 10GBase-SR optical or 2x 10Gb Ethernet 10GBase-CX4 copper For 10GBase-LR optical or 10GBase-T copper contact Critical I/O
Control/Maintenance Interfaces	1x 1GbE 1000Base-T, 1x 1GbE 1000Base-KX, 1x USB2, 1x serial
Storage Capacity	Up to 18TB removable SSD storage (MLC media, with three StorePaks)
Recording Performance	Up to 2.5 GB/s sustained (with 2 or more StorePaks)
Recording Protocols	TCP, UDP, UDP Direct stream
Recording Control	Web based management interface or Recorder Network Control Protocol
NAS Performance	Up to 1.0 GB/s NFS
NAS Protocols	NFS, FTP, CIFS/SMB
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-E102 <i>w-xyzzz</i> - Four slot 3u Conduction Cooled 10GbE Recorder <i>w</i> : interface type (F = 10GBase-LR optical, C = 10GBase-CX4 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-E10 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