

High Speed Ultra-Deep SSD RAID for Spectrum Recording

The **SigPro-HyperVault** is an optional element for the **SigPro-4000B** Enterprise-class broadband multi-Channel digital RF **recorder, analysis, signal creation, and playback system**. The **SigPro-4000B** system was designed by Electronic Warfare (EW) experts for EW experts who are tasked with solving today's most difficult EW and spectrum dominance challenges.

The **SigPro-HyperVault** increased the high-speed recording and playback signal storage capability, makes it possible to simultaneously record and playback, and provides either RAID 0 (for maximum storage capacity) or RAID 1 (redundant recording for critical applications). Multiple **SigPro-HyperVaults** can be added to the **SigPro-4000B** system.

Some of the capabilities HyperVault adds to the **SigPro-4000B** system include:

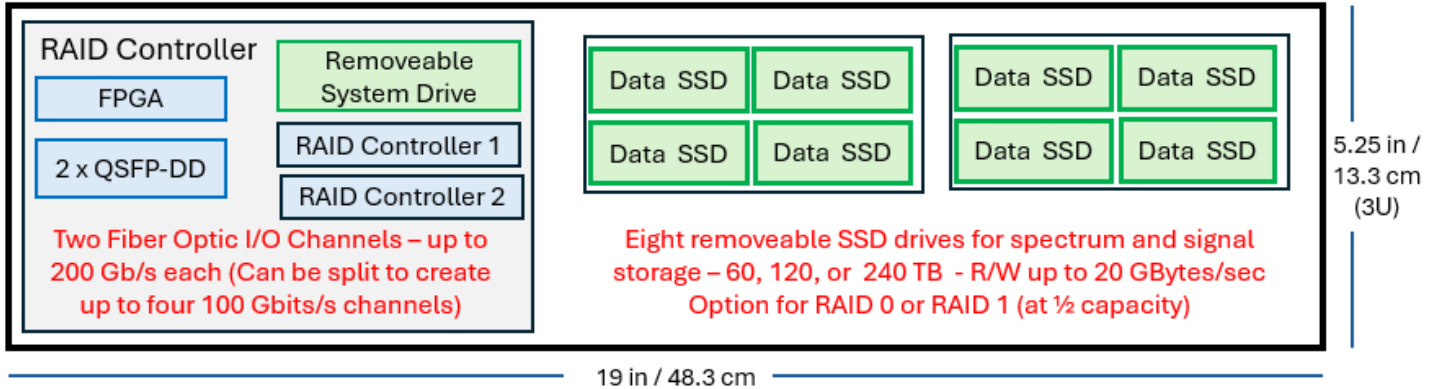
- ❖ **Additional Signal and Spectrum Storage** – The **SigPro-HyperVault** contains eight removeable SSD modules which each can have up to 30 TB of signal storage capacity for a total of up to 240 TB of capacity.
- ❖ **RAID Options** – The **SigPro-HyperVault** can be configured to store data in either RAID 0 or RAID 1 format. RAID 0 can have up to 240 TB of storage capacity but does not provide redundancy to prevent loss of data in the remote chance of an SSD drive failure. RAID 1 provides 100% data storage redundancy and can be used for applications where it is critical that loss of data not occur.
- ❖ **Store and Playback Multiple Broadband Channels** – The **SigPro-HyperVault** can read and write up to 20 GBytes per second. This allows the SigPro-System to simultaneously record or playback multiple channels of up to 1.2 GHz IBW spectrum information. This is sufficient to record or playback up to four 1.2 GHz IBW channels simultaneously.
- ❖ **Removeable Memory** – The SSD signal storage modules are removable and easily transportable to provide secure transport and storage of classified information. Once the SSD drives are removed the system does not contain any sensitive information.

Data Sheet

SigPro-HyperVault

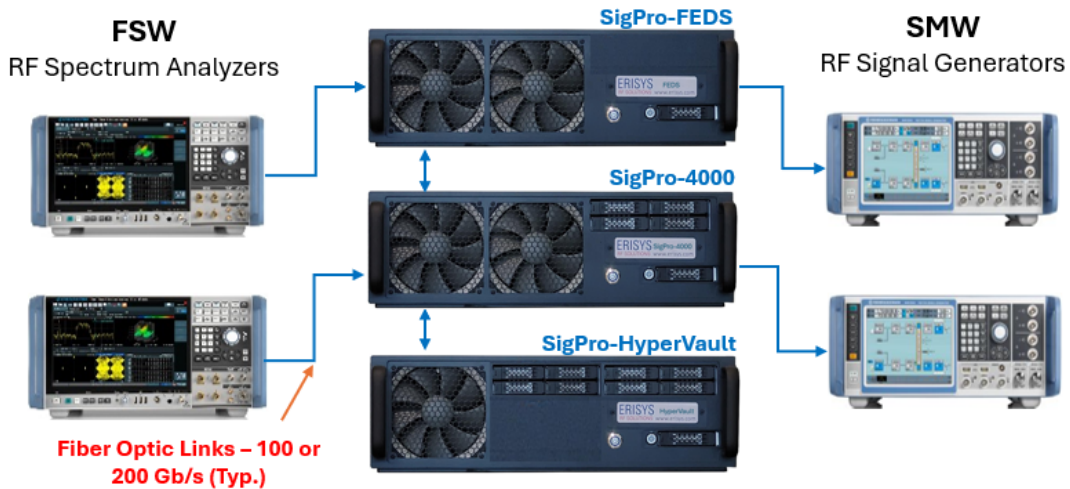
Simplified Block Diagram

HyperVault



The SigPro-HyperVault attaches to a SigPro-4000B system using one or two 200 Gb/s fiber optic links depending on the maximum data rate needed. A system controller and FPGA route this information to the RAID controllers which write the information on the two sets of quad SSD data packs and implement the desired RAID configuration.

Typical Configuration



The **SigPro-HyperVault** operates as an extended very deep, very fast SSD memory for the SigPro-4000B system. For example, it can **simultaneously** store or playback up to **four** 1.2 GHz IBW segments of RF spectrum. The combination of a **SigPro-4000B**, with **SigPro-FEDS** and **SigPro-Hypervault** can provide a previously unachievable degree of RF spectrum and signal processing that can include numerous receiver channels and numerous output channels, all controlled from a single point using RS Control software and the **SigPro** software suite.

Data Sheet

SigPro-HyperVault

Hyper Vault Key Specifications

I/O Channels	One QSFP-DD Fiber Optic port (with option for two)	One or Two Fiber Optic links with up to 200 Gb/s each; Can be split into two or four 100 Gb/s links
Signal Storage	Up to 240 TB (RAID 0); 120 TB (RAID 1)	8 Removable hot-swappable SSD Modules, up to 30 TB each
Signal Storage Options	30, 60, 120 or 240 TB (RAID 0)	Can also Record RAID 1 with capacity of 15, 30, 60 or 120 TB
RAID Controllers	2	Up to 10 GB/s per controller
Monitor Ports	2	
Offloading	Not required for analysis or playback	Removeable SSD modules; QSFP FO up to 200 Gb/s; 10/100G Ethernet

Security	<i>Nothing stored on non-volatile memory</i>	<i>All sensitive information is stored on removeable SSD drives</i>
Size	<i>19" Rack 3U (5.25") H 17.25" deep</i>	<i>Packaging options include 19" rack, transport case or tabletop.</i>
Weight	<i>20 lbs</i>	<i>Readily transportable</i>
Power	<i>400W max</i>	<i>Suitable for lab or field use</i>
Source	<i>US designed and built</i>	<i>US sourced components</i>

We help you solve your previously unsolvable RF spectrum challenges.

For more information, please contact ERISYS RF Solutions for consultation and on-site demonstration. We have decades of experience with EW oriented RF Spectrum Analysis and signal generation. You can reach us on the web at www.erisys.com or via email at info@erisys.com.