

Memory Products Guide - Features/Capabilities

MODEL	INTERFACE	THRUPUT	CAPACITY	MEMORY SLOTS	POWER
9410	HV Differential SCSI	500 KB/s	Up to 64GB	Sentinel PC Card x 2	+28VDC
9450	Dual Redundant MIL-STD-1553	40 KB/s	Up to 4GB	Sentinel PC Card x 2	+28VDC
9515	LV Differential/SE SCSI	1.5 MB/s	Up to 64GB	Sentinel PC Card x 2	+5VDC
9620	100Mbps Ethernet x 2 Dual Redundant MIL-STD-1553	7 MB/s <sup>1</sup>	Up to 64GB	Sentinel PC Card x 2	+28VDC
9415	SE SCSI	7 MB/s	Up to 64GB	Sentinel PC Card x 2	+28VDC
9422	RS-422	1 KB/s	Up to 256MB	Sentinel PC Card x 2	+28VDC
Kaman DTD	SATA II	100 MB/s	Up to 128GB	N/A	+5VDC
9650	1Gbps Ethernet x 3	20 MB/s	Up to 384GB	Kaman DTD x 3	+28VDC
9660	1Gbps Ethernet x 3	20 MB/s	Up to 192GB	Kaman DTD x 1 Sentinel PC Card x 2	+28VDC
9740	1Gbps Ethernet x 4	50 MB/s	Up to 2TB	Kaman SATA Card x 4	+28VDC
9720	1Gbps Ethernet x 2	50 MB/s	Up to 1TB	Kaman SATA Card x 2	+12VDC
Ground Station Adapter for SATA	USB	30 MB/s	Up to 512GB	Kaman SATA Card x 1	+5VDC (USB)
Ground Station Adapter for DTD	USB	30 MB/s	Up to 128GB	Kaman DTD x 1	+5VDC (USB)
Kaman SATA Card	SATA 2.0 (3Gbps)	250 MB/s	Up to 512GB	N/A	+3.3VDC
Sentinel PC Card	PC CARD	20 MB/s	Up to 32GB	N/A	+3.3 or 5VDC

<sup>1</sup> Over 100Mbps Ethernet net only

**Technology**

Staying at the forefront of technology, Kaman Precision Products (KPP) developed its Model 9700 Sentinel Series of Solid State memory products. Based on previously developed hermetic, severe environment technology for its Sentinel PC card, KPP has developed its Kaman SATA Card, high performance, SATA technology into a card similar in size to the Sentinel PC card. Features include a 256 AES "at rest" data encryption engine built into the card. The Model 9740 has (4) removable Kaman SATA cards for a total capacity of 2 TB and (4) 1GB/ sec Ethernet ports to connect to the customer interface. The Model 9740 is a complete system and encompasses a Ground Station Adapter (USB interface) and Encryption Key programmer.

**Capabilities**

Kaman Precision Products works in concert with customer engineering groups to identify the best technology for an application and subsequently create a data transfer unit for that specific application. This begins the engineering design utilizing analytical modeling programs as well as CAD and software development models. Our Rapid Prototyping Shop produces demonstration units to be tested in customer laboratories and our engineering test group performs extensive EMI, vibration and environmental tests to assure specification adherence.

**Facilities**

Memory products are designed and produced at the Middletown, Connecticut facility which is qualified to AS9100/B and ISO 9001:2000, Quality Management System requirements. In Middletown, we operate a modern, air-conditioned facility of engineering, quality and administration offices along with memory products manufacturing & Maintenance, Repair and Overhaul (MRO) center and full spectrum environmental laboratory.



ISO 9001:2008 | AS9100/B  
860-632-4634 | memory@kaman.com



Memory Products

High performance ruggedized digital storage systems and media for military and aerospace applications



860-632-4634  
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# Ruggedized Memory Solutions. Let us help you choose the best digital storage system for your application

## PC Card Interface



**Model 9410**  
**Interface:** HV Differential SCSI  
**Thruput:** 500 KB/s  
**Capacity:** Up to 64GB  
**Memory/Slots:** Sentinel PC Card x 2  
**Power:** +28VDC



**Model 9515**  
**Interface:** LV Differential/SE SCSI  
**Thruput:** 1.5 MB/s  
**Capacity:** Up to 64GB  
**Memory/Slots:** Sentinel PC Card x 2  
**Power:** +5VDC



**Model 9415**  
**Interface:** SE SCSI  
**Thruput:** 7 MB/s  
**Capacity:** Up to 64GB  
**Memory/Slots:** Sentinel PC Card x 2  
**Power:** +28VDC



**Model 9450**  
**Interface:** Dual Redundant MIL-STD-1553  
**Thruput:** 40 KB/s  
**Capacity:** Up to 4GB  
**Memory/Slots:** Sentinel PC Card x 2  
**Power:** +28VDC



**Model 9620**  
**Interface:** 100Mbps Ethernet x 2  
Dual Redundant MIL-STD-1553  
**Thruput:** 7 MB/s  
**Capacity:** Up to 64GB  
**Memory/Slots:** MIL-STD-1553  
**Power:** +28VDC



**Model 9422**  
**Interface:** RS-422  
**Thruput:** 1 KB/s  
**Capacity:** Up to 256MB  
**Memory/Slots:** Sentinel PC Card x 2  
**Power:** +28VDC

## Precision, ruggedized memory recording and playback systems

Kaman Precision Memory Products has provided high-performance digital storage systems and media for military and aerospace applications for over 40 years. Kaman's dedicated project team establishes a unique working relationship with our customers to identify requirements and works to ensure that products meet or exceed all expectations.

### Experience

Precision Products participation on hundreds of programs over four decades is indicative of the company commitment made to the memory systems marketplace. The result of being able to provide continuous high reliability and performance of such product has been the fielding of more than 50,000 memory units for more than 140 airborne, shipboard and ground tactical systems, such as the F-117, C-130AMP, C-130J, LM-100J, MH-60R, MH-60S, Blackhawk Programs, C-27, B-1A, B-1B, B-52, E-2C, AFTI-F16, F-14, F-18, EA-6B, LAMPS MK III, SH-2G, ASDS, USAV, Space Shuttle and the International Space Station.

## Proven Reliability and Performance

ISO 9001:2008 | AS9100/B | 860-632-4634 | memory@kaman.com

## DTD Interface & Memory Cards



**Model 9650**  
**Interface:** 1Gbps Ethernet x 3  
**Thruput:** 20 MB/s  
**Capacity:** Up to 384GB  
**Memory/Slots:** Kaman DTD x 3  
**Power:** +28VDC



**Model 9660**  
**Interface:** 1Gbps Ethernet x 3  
**Thruput:** 20 MB/s  
**Capacity:** Up to 192GB  
**Memory/Slots:** Kaman DTD x 1  
Sentinel PC Card x 2  
**Power:** +28VDC



**Ground Station Adapter**  
for Kaman DTDs  
**Interface:** USB  
**Thruput:** 30MB/s  
**Capacity:** Up to 128 GB  
**Memory/Slots:** Kaman DTD x 1  
**Power:** +5VDC (USB)



**KAMAN SATA Card**  
**Interface:** SATA 2.0 (3Gbps)  
**Thruput:** 250 MB/s  
**Capacity:** Up to 512GB  
**Memory/Slots:** N/A  
**Power:** +3.3VDC



**Sentinel PC Card**  
**Thruput:** 20 MB/s  
**Capacity:** Up to 32GB  
**Power:** +3.3 or 5VDC



**Kaman DTD SATA II:**  
**Capacity:** Up to 128GB storage  
Used with Model 9650, 9660 or  
USB Ground Station Adapter

## BEYOND DATA STORAGE • SATA PC Card Interface • Multi-Port Data Systems



**Model 9740**  
**Interface:** 1Gbps Ethernet x 4  
Dual-Redundant 1553 (RT), USB,  
RS232/422, Fire Wire  
• Dual Core Processor  
• Multi processing for high performance thruput  
• Utilizes microprocessor with a Linux based processor  
**Thruput:** 50 MB/s  
**Capacity:** Up to 2TB  
**Memory/Slots:** Kaman SATA Card x 4  
**Power:** +28VDC



**Model 9720**  
**Interface:** 1Gbps Ethernet x 2  
**Thruput:** 50 MB/s  
**Capacity:** Up to 1TB  
**Memory/Slots:** Kaman SATA Card x 2  
**Power:** +12VDC



**Ground Station Adapter**  
for Kaman SATA Cards  
**Interface:** USB  
**Thruput:** 30 MB/s  
**Capacity:** Up to 512GB  
**Memory/Slots:** Kaman SATA Card x 1  
**Power:** +5VDC (USB)



**Encryption Key Programmer**  
**Interface:** USB  
**Power:** +5VDC (USB)