

PCIE-6001 Payload Card

PCI Express Card for the MaxCore™ Platform

Data Sheet

The PCIE-6001 payload card is ideal for applications where high-speed storage is critical

- Carrier for four (4) M.2 SSD modules*
- Designed specifically for MaxCore™ payload domain
- Four “M” keyed M.2/NGFF sockets
- Dedicated four-lane PCI Express 3.0 (32 Gb/s maximum throughput) interface per socket
- Wide range of supported SSD form factors:
 - 42mm to 110mm
 - Double-sided
- Supports both AHCI and NVMe protocols
- Status LEDs for each SSD are visible on the face plate

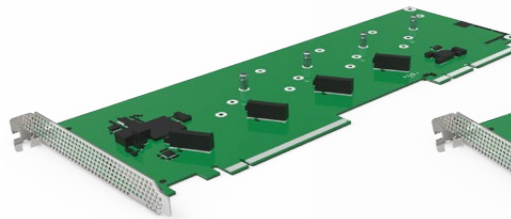
The Artesyn PCIE-6001 PCI Express payload card for the MaxCore™ platform provides up to four independent SSD modules* which can be directly attached to up to four CPUs on MaxCore server cards. The PCIE-6001 card leverages NVMe technology which is currently the fastest way to attach an SSD to a CPU. The PCIE-6001 card is a carrier for COTS SSD modules with M.2 form factor. M.2 modules are considered mainstream for data center and consumer market and deliver outstanding size/price/performance ratio.

The PCIE-6001 payload card connects four M.2 sockets, each with a dedicated four-lane PCIe Gen 3 interface to the MaxCore backplane. The backplane can then be configured to connect individual sockets to microserver CPUs.

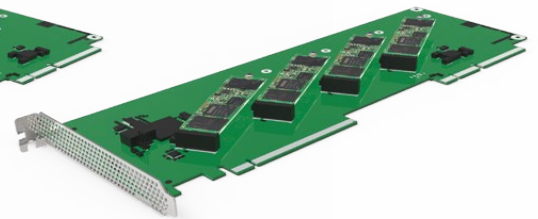
The PCIE-6001 PCI Express card is targeted for applications where high-speed storage is critical. This card is particularly suited to the following:

- Audio/video processing
- Cloud services
- High-performance computing
- Relational database systems
- Web hosting/caching/reverse proxy services

*SSD modules sold separately

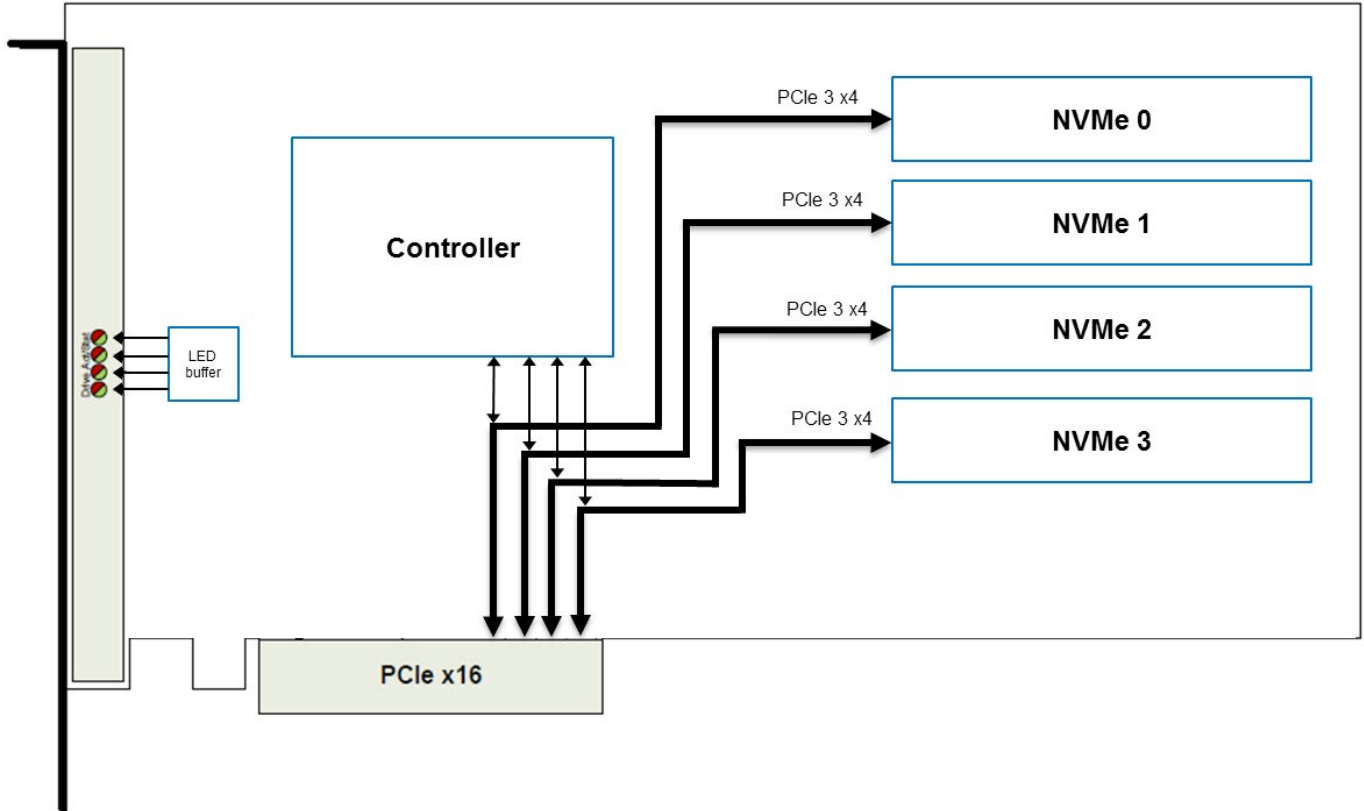


PCIE-6001 Payload Card

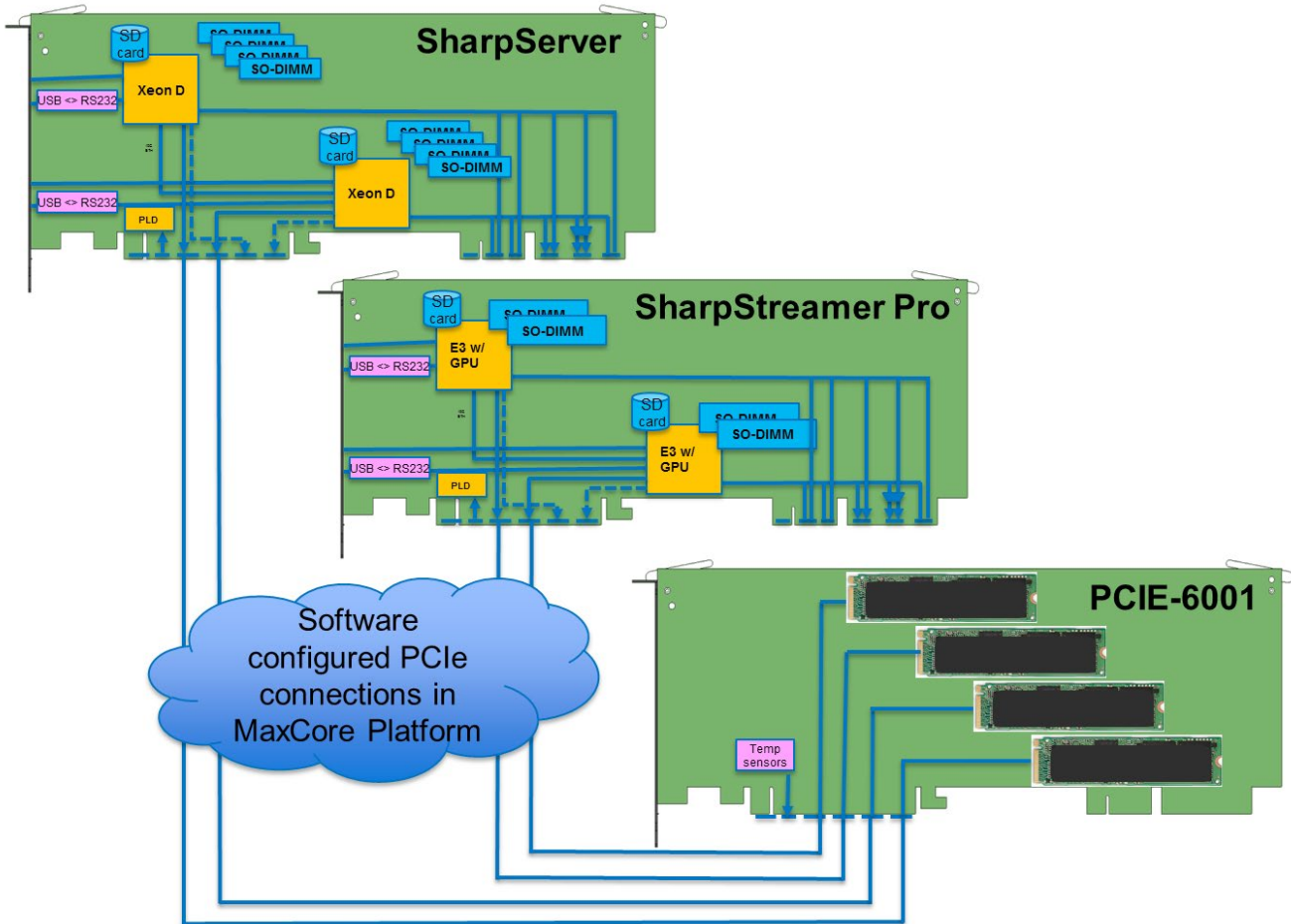


PCIE-6001 Payload Card with SSDs installed
(SSD modules sold separately)

Block Diagram



Configuration Example



Hardware Overview

Card Integration

The System Services Framework (SSF) management system provides the MaxCore operator console which enables the user to connect each SSD on a PCIE-6001 card to any CPU on a SharpServer card or SharpStreamerPro card in the same box.

The PCIE-6001 SSD will show up in the CPUs PCIe device tree after booting the CPUs, along with many other PCIe devices which were connected by SSF to a CPU. This SSD can be mounted at run time but can also be used as boot device.

All four module slots are accessible in a 16-lane MaxCore slot. If plugged into an 8-lane slot, two module slots available. The amount and location of 16-lane slots differs depending on the MaxCore platform being used.

Module Environment

The PCIE-6001 payload card accepts single and double-sided modules up to a power consumption of 10W per module. The module interface must comply with the NVMe (NVM Express) standard.

The MaxCore platform reads the thermal sensors and takes care of providing sufficient cooling.

Environmental Compliance*		
Requirement	Operating	Non-Operating
Temperature	+5 °C to +50 °C (normal operation), +5 °C to +55 °C (exceptional operation), according to NEBS Standard GR-63-CORE	-40 °C to +70 °C
Forced air flow, air volume, pressure loss (reference to sea level)	5 CFM @ 20 °C host system ambient, 12.5 CFM @ 35 °C host system ambient, and 20 CFM @ 55 °C host system ambient	
Temperature change	+/- 0.5 °C/min	+/- 1 °C/min
Relative humidity	5% to 95% non-condensing at +40 °C	5% to 95% non-condensing at +40 °C
Shock and vibration	Sinusoidal vibration 0.01Gs, 5 to 200Hz, 10 minute/axis	5g (RMS) random
Free fall		1200 mm/all edges and corners (packed state) 100 mm/3 axis (unpacked)

*Consider that the SSD module being used may have more stringent environmental requirements.

Ordering Information		
Product Family	Part Number	Description
PCI Express	PCIE-6001	MaxCore carrier card for four (4) M.2 NVMe modules

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