

Phantom CineStation® 10Gb Ethernet Installation Recommendations

The 10Gb Ethernet option for the Phantom CineStation allows for greatly increased Cine playback and save speeds. It is important to note that to maximize your save time, in addition to installing the 10 Gb link on the PC end, the entire system must be considered. For example, if you are using the 10Gb connection on a very powerful PC to save Cine files to a USB drive, you will see no increase of speed because of the limitations of that USB connection.

Included in the purchase of the 10 Gb Ethernet CineStation or upgrade is a Myricom PCI Express card, 10Gb XFP-SR transceiver, and 10 meters of multimode fiberoptic cable. These items have been tested and qualified for use at Vision Research, using dedicated computers and RAID systems.

Installation procedure for Myricom card:

1. **Download the latest driver for the Myricom network card, located here:**
<http://www.myri.com/scs/download-Myri10GE.html>
2. **Install Myricom card to the computer's PCIe (x16) slot**
3. **For optimal performance, also install the latest 'winpcap' driver, which is provided on the phantom software CD, or available from:** <http://www.winpcap.org/install/default.htm>
4. **Continue to follow CineStation installation instructions as provided**

For recommendation purposes only, here are the components of the fastest storage solution we have tested at Vision Research:

PC: Dell Precision T3400 Intel Duo Core, E6550 @2.33Ghz, 4GB memory
OS: Windows Server 2003 (this is to allow the drivers for the RAID)

Network: Myricom Myri-10G PCI-e Ethernet Card (installed in PCIe x16 port)
Connected with Multimode SC-LC fiber

RAID: Dell Powervault MD1120, with 15 300GB striped drives
formatted as RAID 0 or RAID 50

Connection: SAS RAID Controller: Dell PERC 6/E adapter,
Connected w standard SAS (Serial Attached SCSI)

While you do not have to use this exact system, we do recommend the use of a striped RAID storage system, with SAS or Ultra 320 SCSI for the fastest speeds.

Another option would be to use a computer with built-in RAID system that supports at least 4 SATA Drives. Install Windows OS on one drive and use the remaining 3 as an on-board striped RAID, which can write to removable SATA drives.

There are many possibilities, and the point is that the 10GbE CineStation is the first step. Be aware of every component in the save process to avoid potential bottlenecks in your system and to achieve the maximum results.



Phantom 10Gb Ethernet CineStation Installation Procedures Step-by-Step Processes

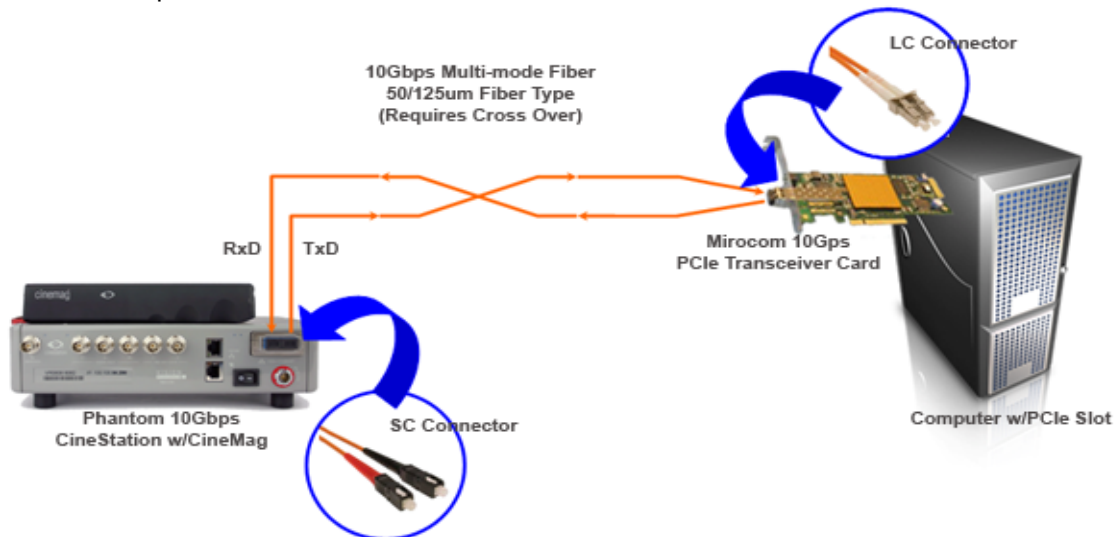
NOTE

As of this writing the Phantom CineStation as been tested with the following Operating Systems only:

1. Windows XP Pro with SP3, (Service Pack 3)
2. Windows Server 2003 Standard Edition with SP2, (Service Pack 2)

Phantom 10Gb CineStation

1. Load the Myricom 1.0.4.2 (8-2508) Driver and Firmware
 - a. Obtain the required driver installation software by:
 - 1) Contacting Vision Research Technical Support
 - 2) Downloading directly from the Myricom website at:
<http://www.myri.com/scs/download-Myri10GE.html>
 - b. Extract the download folder onto the hard-drive of the computer the Myricom 10-Gigabit PCIe Module is to be installed in and install
2. Remove power from both the computer and the Phantom CineStation
3. Install the Myricom 10Gbps PCIe NIC, into an available PCIe x16 slot in the computer
4. Apply power to both the computer and the Phantom CineStation
5. Windows should automatically detect the new hardware. If Window fails to detect the new hardware start the Add Hardware process from the Windows Control Panel
6. Assign an IP Address to computer as follows:
 - a. IP Address: 172.16.0.1
 - b. Subnetwork Mask: 255.255.0.0
7. Attach all required cables:



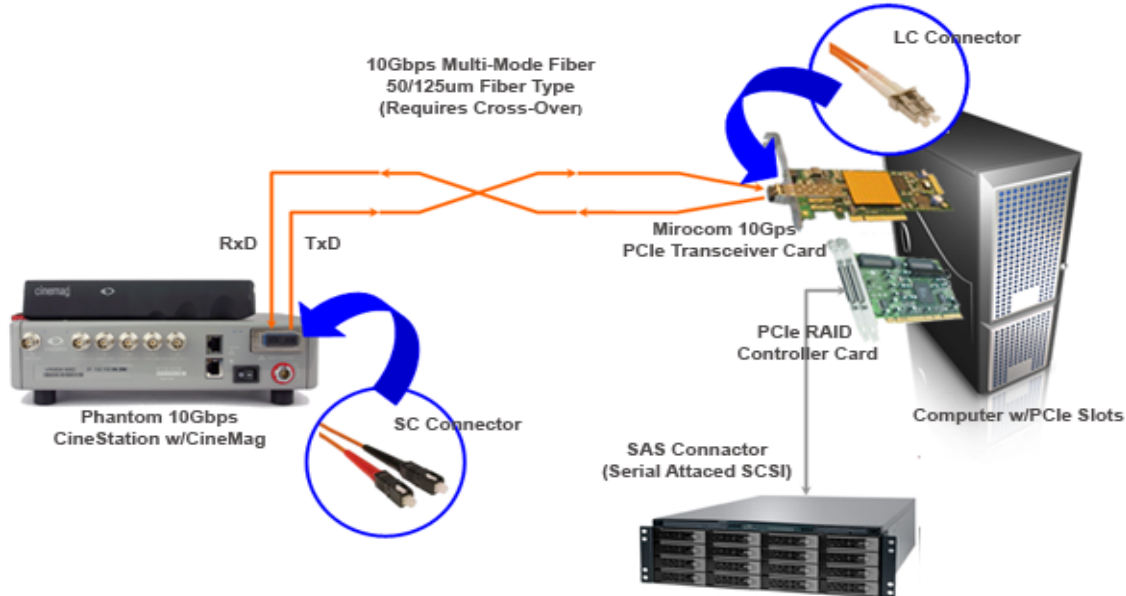
- a. Connect the Receive, (RxD), SC Connector to the CineStation transceivers left interface
- b. Connect the opposite end, (the LC Connector), of the multi-mode fiber cable to the Myricom 10-Gbps PCIe transceiver's Transmit, (TxD), interface
- c. Connect the Transmit, (TxD), SC Connector to the CineStation transceivers right interface
- d. Connect the opposite end, (the LC Connector), of the multi-mode fiber cable to the Myricom 10-Gbps PCIe transceiver's Receive, (RxD), interface

NOTE

Do not lose or misplace the fiber optic cable or transceiver dust caps. Do not handle the ends of the fiber cable as oil in the skin may cause errors.

Phantom 10Gb Ethernet CineStation Installation Procedures Step-by-Step Processes (continued)

Optional RAID System Installation



Phantom 10G CineStation w/RAID System

Although the process to install a RAID System into a computer has some common steps each manufacturer may require specific parameters and variables during the installation process. For proper installation carefully follow the card manufacturer's Installation Guide.

NOTE:

Playback speed is mostly dependent on:

Link, Resolution, Image processing algorithm, Processor, software version

Download time is mostly dependent on:

Link, Processor, File format, Storage type & connection

Additionally, The Phantom CineStation will also work on the computer's 1GB Network, as configured for a Phantom camera, using the provided Cat5e Ethernet cable.

The default Phantom camera network is: 100.100.100.1, Subnet 255.255.0.0

For more information or technical support, please visit and subscribe to the Phantom Zone, a valuable tool where you can post questions and learn from the phantom community & support team:

<http://www.visionresearch.com/phantomzone>