

Digital High Speed



MEMRECAM

Gbit Connectivity

- **Hardware Connections**

Connect as shown in Diagrams 1 and 2 before turning the **MEMRECAM** fx power on. For proper operation ensure that the **MEMRECAM** fx DRP is configured for Gbit connectivity (shown in the **MEMRECAM** fx **DRP Gbit connectivity setup** section).

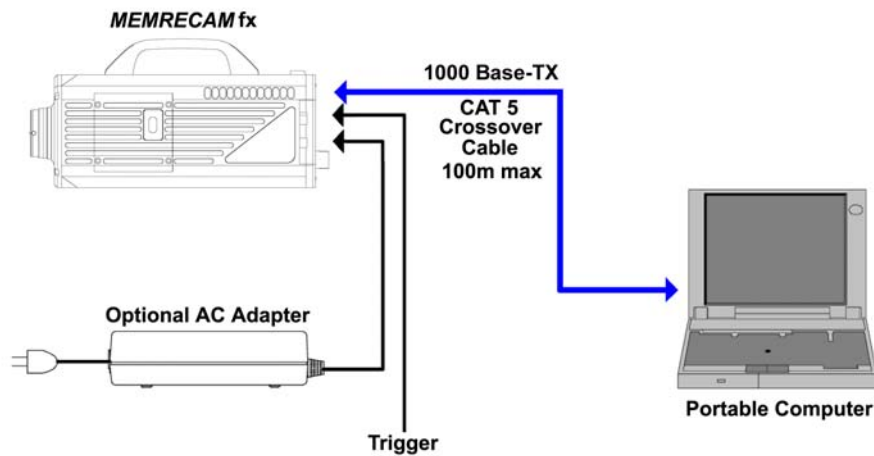


Diagram 1 Direct Gbit connection to a single **MEMRECAM** fx DRP

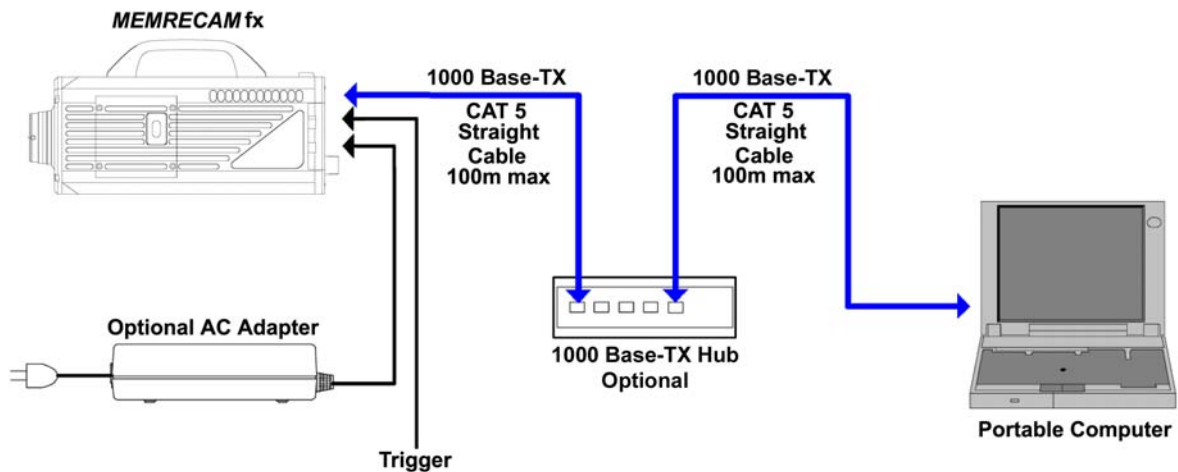


Diagram 2 Gbit connection via optional 1000 Base-TX (Gbit) Hub to a single **MEMRECAM** fx DRP

MEMRECAM fx cameras that support 1000 Base-TX (Gbit) can be connected direct to a control computer or with an optional Gbit Ethernet Hub. The control computer must have Microsoft's iSCSI Initiator & fx Link software installed to operate the DRP remotely. For direct connectivity a CAT 5 crossover cable is necessary. When the optional Gbit Hub is used, straight CAT 5 cables are required. While connected to the control computer, the **MEMRECAM** fx can also be operated using the Rear Camera Control Touch Pad or the J-PAD 2 remote control (not shown).

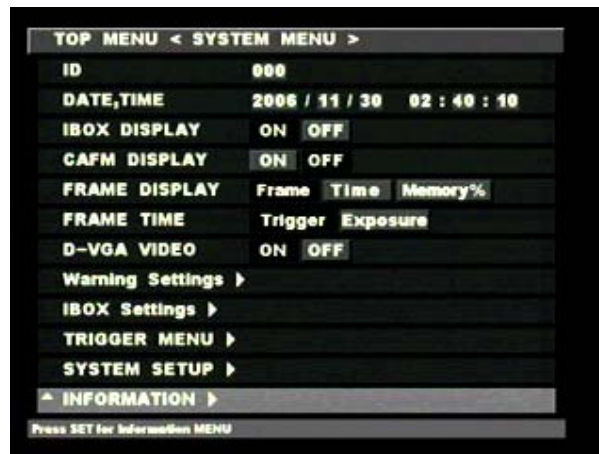
- **MEMRECAM fx DRP Gbit connectivity setup**

- 1) Enter the **TOP MENU** by pressing the **MENU** button while in **READY** mode. Use the **UP/DOWN** keys to select the **SYSTEM MENU** row and press the **RIGHT** key.



TOP MENU

- 2) In the **SYSTEM MENU**, use the **UP/DOWN** keys to select the **INFORMATION** row and press the **RIGHT** key to enter the **INFORMATION** sub menu.



SYSTEM MENU – INFORMATION

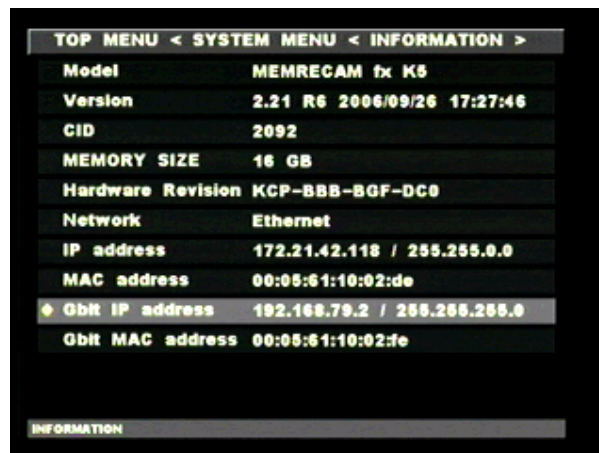
- 3) Make a note of the CID, Gbit IP address and Subnet Mask of your particular **MEMRECAM** fx DRP from the **INFORMATION** sub menu. This information is needed to set the IP address of the Control Computer. In this example the **MEMRECAM** fx DRP CID was **2092**, the Gbit IP address is **192.168.79.2** and the subnet mask is **255.255.255.0**. Press the **STOP** button to return to **READY** mode.



The screenshot shows a terminal window with a black background and white text. At the top, a navigation bar reads 'TOP MENU < SYSTEM MENU < INFORMATION >'. Below this, a list of system parameters is displayed. The 'CID' parameter is highlighted with a yellow diamond icon and a yellow background. At the bottom of the screen, a status bar shows 'INFORMATION'.

TOP MENU < SYSTEM MENU < INFORMATION >	
Model	MEMRECAM fx K5
Version	2.21 R6 2006/09/26 17:27:46
◆ CID	2092
MEMORY SIZE	16 GB
Hardware Revision	KCP-BBB-BGF-DC0
Network	Ethernet
IP address	172.21.42.118 / 255.255.0.0
MAC address	00:05:61:10:02:de
Gbit IP address	192.168.79.2 / 255.255.255.0
Gbit MAC address	00:05:61:10:02:fe
INFORMATION	

INFORMATION Sub Menu – CID

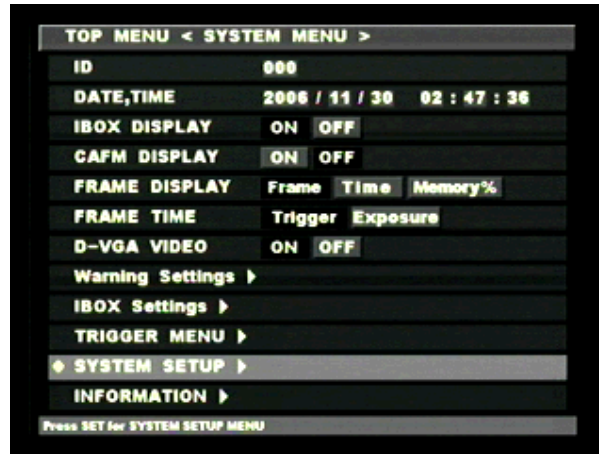


The screenshot shows a terminal window with a black background and white text. At the top, a navigation bar reads 'TOP MENU < SYSTEM MENU < INFORMATION >'. Below this, a list of system parameters is displayed. The 'Gbit IP address' parameter is highlighted with a yellow diamond icon and a yellow background. At the bottom of the screen, a status bar shows 'INFORMATION'.

TOP MENU < SYSTEM MENU < INFORMATION >	
Model	MEMRECAM fx K5
Version	2.21 R6 2006/09/26 17:27:46
CID	2092
MEMORY SIZE	16 GB
Hardware Revision	KCP-BBB-BGF-DC0
Network	Ethernet
IP address	172.21.42.118 / 255.255.0.0
MAC address	00:05:61:10:02:de
◆ Gbit IP address	192.168.79.2 / 255.255.255.0
Gbit MAC address	00:05:61:10:02:fe
INFORMATION	

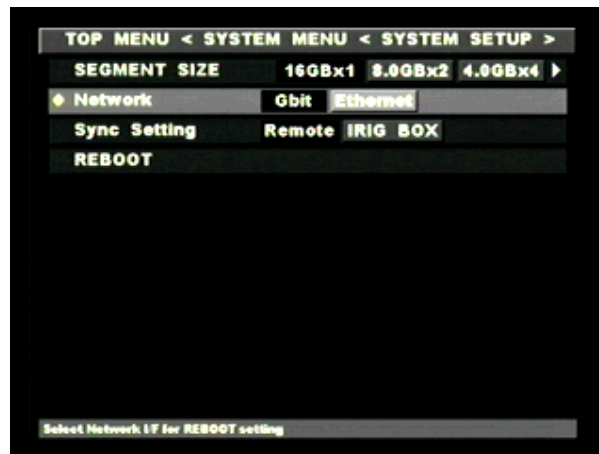
INFORMATION Sub Menu – Gbit IP Address

- 4) Enter the **TOP MENU** by pressing the **MENU** button while in **READY** mode. Use the **UP/DOWN** keys to select the **SYSTEM MENU** row and press the **RIGHT** key. In the **SYSTEM MENU**, use the **UP/DOWN** keys to select the **SYSTEM SETUP** row and press the **RIGHT** key to enter the **SYSTEM SETUP** sub menu.



SYSTEM MENU – SYSTEM SETUP

- 5) In the **SYSTEM SETUP** sub menu, use the **UP/DOWN** keys to select the **Network** row and press the **SET** key to enable editing. Use the **LEFT/RIGHT** keys to select **Gbit** (a black box highlights the selection). Press the **SET** key to confirm the setting. Use the **UP/DOWN** keys to select the **REBOOT** row and press the **SET** key to reboot and apply changes.



Network Connection Sub Menu

- **Minimum PC Hardware requirements to operate fxLink software**

PC	IBM PC compatible (DOS/V), single processor
CPU	Pentium III 750 MHz or higher (with MMX) (Recommended Pentium IV 2.5GHz or higher, compression and display processing speed depends on CPU capability)
Memory	256MB RAM or higher (recommended 512MB or higher)
Graphics	Full color, 1024×768 resolution or higher (recommended 1280×1024 or higher)
OS	Windows NT 4.0 Service Pack 5 or higher, Windows 2000 Professional, Windows XP Professional, Internet Explorer 5.0 Service Pack 2 or higher
Hard Disk	Minimum 42MB of disk space for program, 512MB or higher. Smart Capture requires an NTFS volume for data storage. Depending on the number of cameras, frames saved and number of projects 120GB of disk space or higher is recommended.
Network	Ethernet (IEEE8023u 100BASE-TX)
CD Drive	1 (for installation)

Compression and display processing speeds depend on CPU capability. There should be sufficient free disk space to store the image data. Depending on the PC configuration and hardware version, fxLink may not operate well under conditions as listed above. (Consult your retail outlet for recommended PC systems).

Note: Refer to the fxLink software Operation Manuals for handling and operation of the control computer.

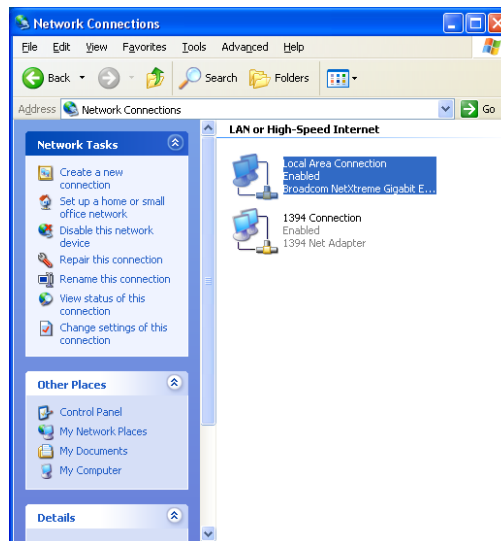
- **Network Interface Card (NIC) Setup**

NOTE: The control computer NIC setup, Microsoft iSCSI Initiator, fxLink and device driver installation must be performed as an authorized user of the Windows “Administrators” group. Once the system has been properly configured, other user accounts will be able to operate the system.

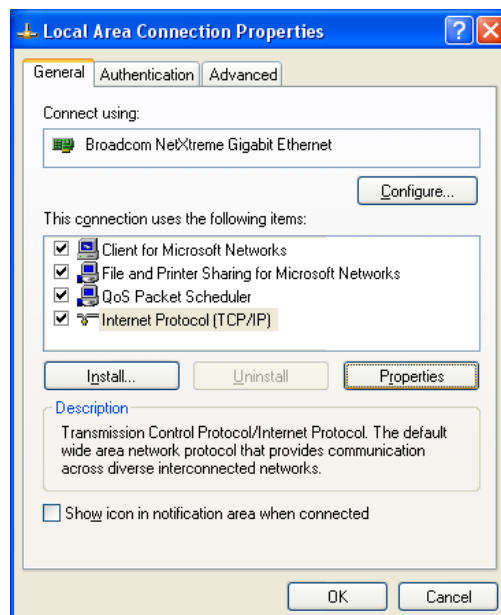
- 1) If using Windows XP enter the **START** menu and click on **Control Panel**. Click on **Network and Internet Connections** and then **Network Connections**.

If using Windows 2000 or Windows XP classic desktop, right click **My Network Places** icon found on the Desktop. Click **Properties**.

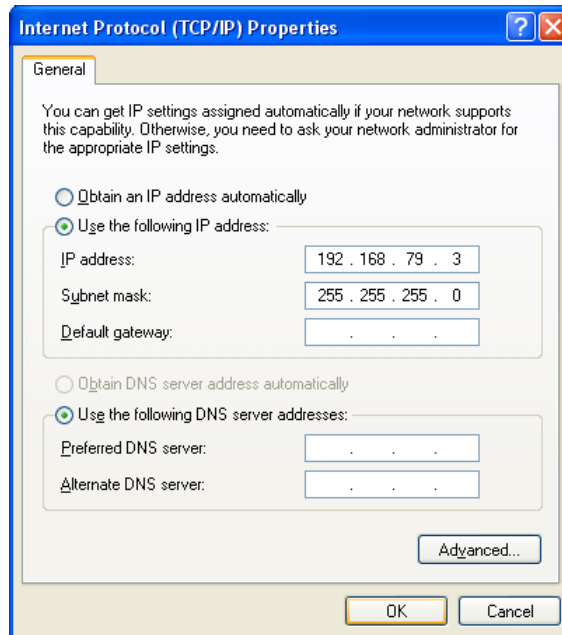
- 2) Right click the **Local Area Connection** icon and click **Properties**.



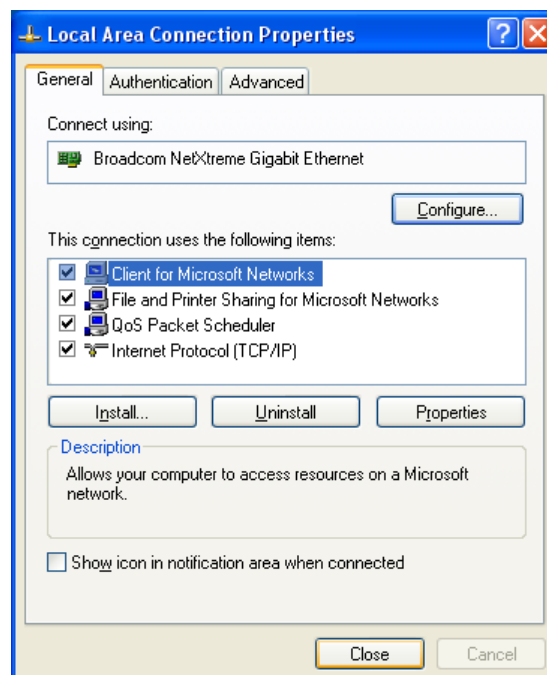
- 3) In the General tab, select **Internet Protocol (TCP/IP)** and click the **[Properties]** button.



- 4) In the **Internet Protocol (TCP/IP) Properties** window click the **Use the following IP address** radio button. Enter an IP Address using the same Network ID and Subnet Mask as the **MEMRECAM** fx DRP. The host portion must be different than the **MEMRECAM** fx address and could be any number from 1 to 254. In this example we set the computer IP address to **192.168.79.3** (**Network ID 192.168.79.0 & Host ID 0.0.0.3**) and the Subnet Mask was **255.255.255.0**. Click the **[OK]** button.

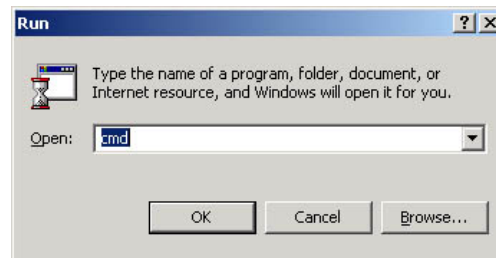
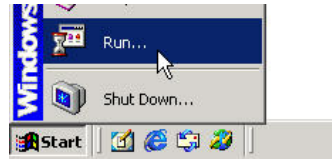


- 5) To finish the NIC setup, click the **[Close]** button.

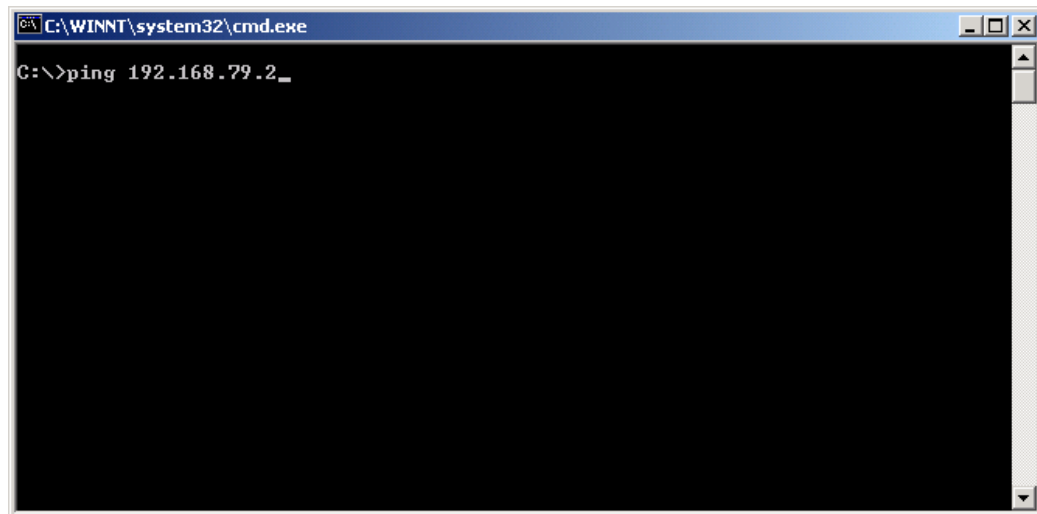


- **Connectivity test**

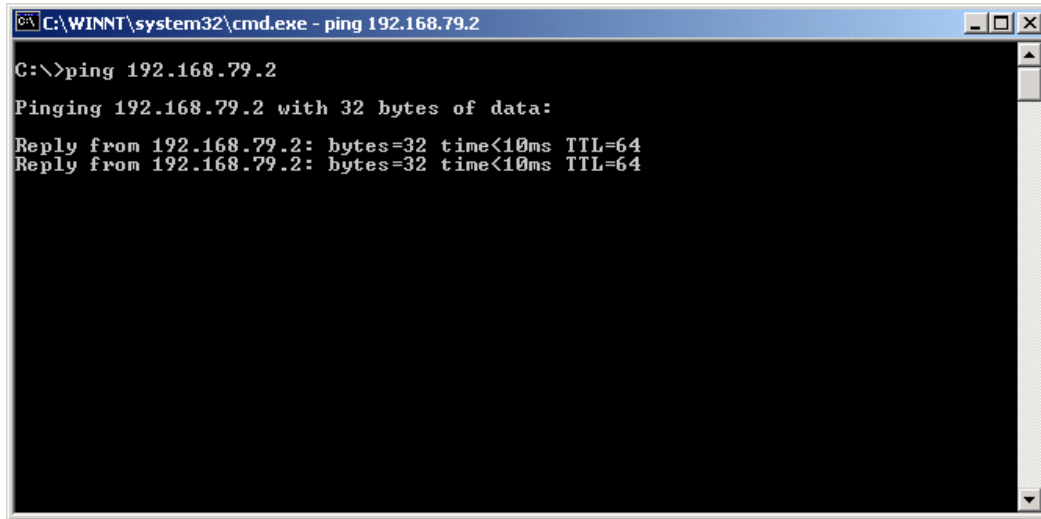
- 1) Execute the Ping command to test connectivity to the **MEMRECAM** fx. From the **START** menu click **Run...** In the **Run** window type **cmd**.



- 2) To run the PING command type **ping X.X.X.Y**, where **X.X.X.** represents the Network ID and **Y** the Host ID of your particular **MEMRECAM** fx DRP. In this example we entered **ping 192.168.49.2** and pressed the **[ENTER]** key.



- 3) The connection test has been successful when the **MEMRECAM** fx DRP sends **Reply** messages.



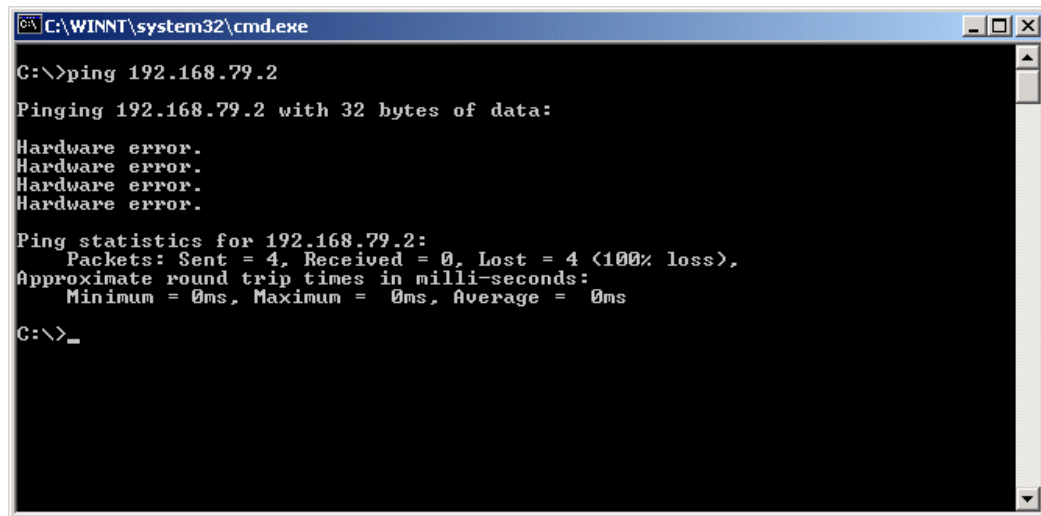
```
C:\WINNT\system32\cmd.exe - ping 192.168.79.2

C:\>ping 192.168.79.2

Pinging 192.168.79.2 with 32 bytes of data:

Reply from 192.168.79.2: bytes=32 time<10ms TTL=64
Reply from 192.168.79.2: bytes=32 time<10ms TTL=64
```

- 4) A failure of the test is indicated by a **Hardware error**. Check the Control Computer's IP address has a common Network ID with the **MEMRECAM** fx. In addition ensure that the IP addresses are NOT identical, this would create a conflict.



```
C:\WINNT\system32\cmd.exe

C:\>ping 192.168.79.2

Pinging 192.168.79.2 with 32 bytes of data:

Hardware error.
Hardware error.
Hardware error.
Hardware error.

Ping statistics for 192.168.79.2:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

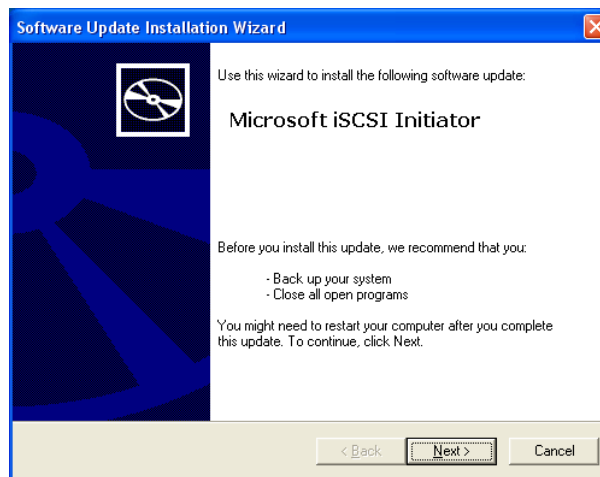
C:\>_
```

- **Microsoft iSCSI Initiator Installation**

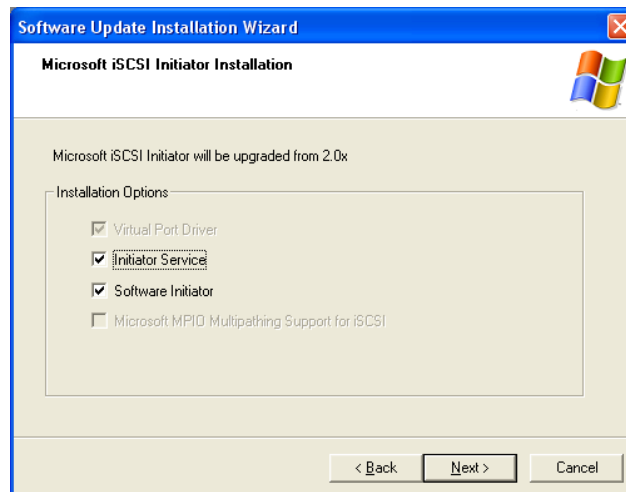
- 1) If the fxLink Installation CD is not available, download the **Microsoft iSCSI Initiator Software Installer Version 2.02 (Initiator-2.02-QFE-bld1895-x86fre.exe)** from Microsoft's web address below.

<http://www.microsoft.com/downloads/results.aspx?poclid=&fretext=Microsoft%20iSCSI%20Software%20Initiator&DisplayLang=en>

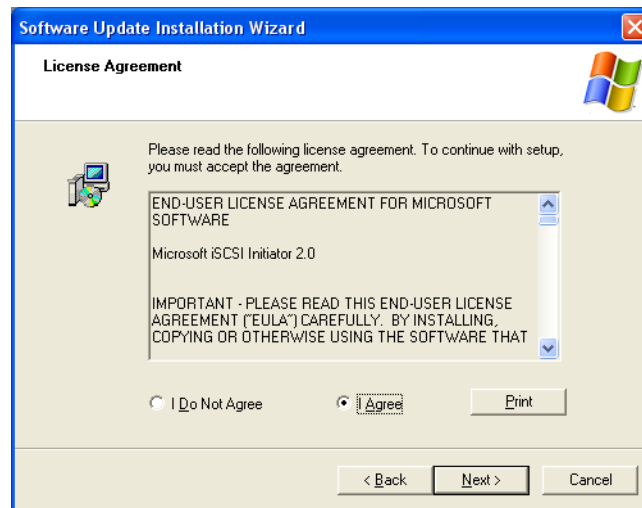
- 2) From your local hard drive run the **Microsoft iSCSI Initiator Software Installer** and click the **[Next>]** button.



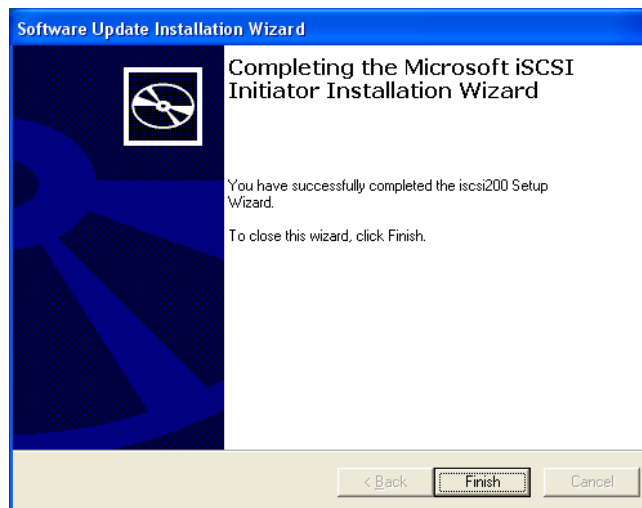
- 3) Confirm that **Initiator Service** and **Software Initiator** are checked. Click the **[Next>]** button.



- 4) Read the License Agreement, select the **I Agree** radio button and click the **[Next>]** button.



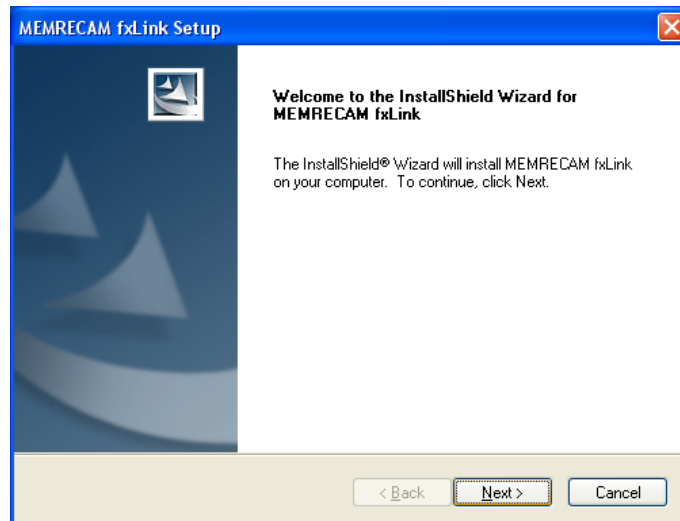
- 5) After the software has been loaded, click the **[Finish]** button to complete the Microsoft iSCSI Initiator installation.



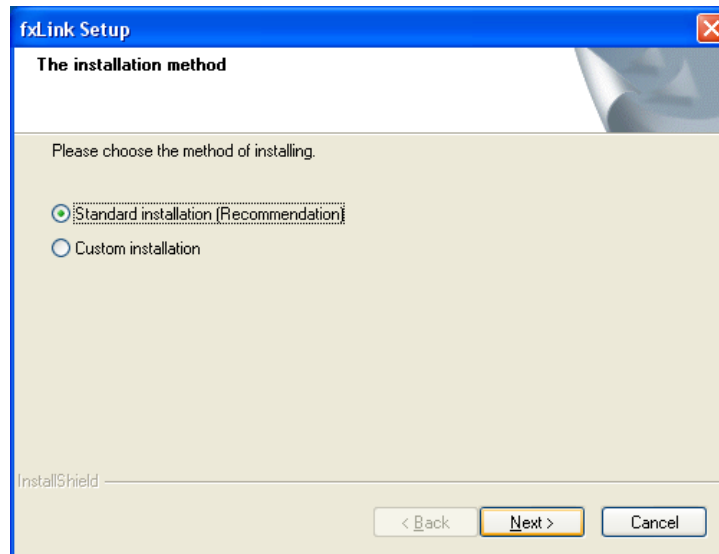
- **fxLink Software Installation**

IMPORTANT: Before installing fxLink, turn **MEMRECAM** fx power **OFF**.

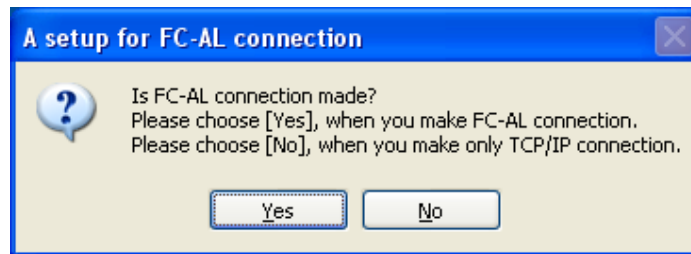
- 1) Insert the fxLink installation CD to run the setup utility. Click the **[Next>]** button.



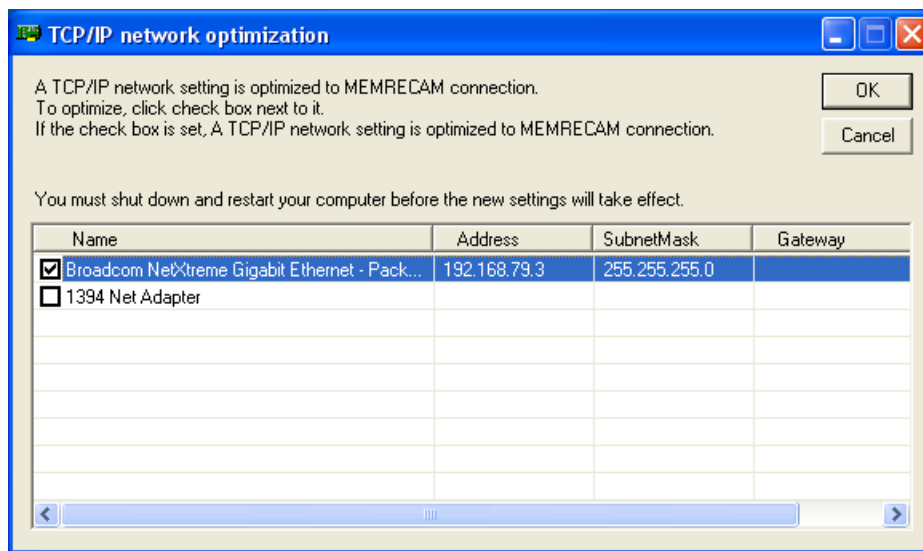
- 2) Select the **Standard Installation (Recommended)** radio button and click the **[Next>]** button.



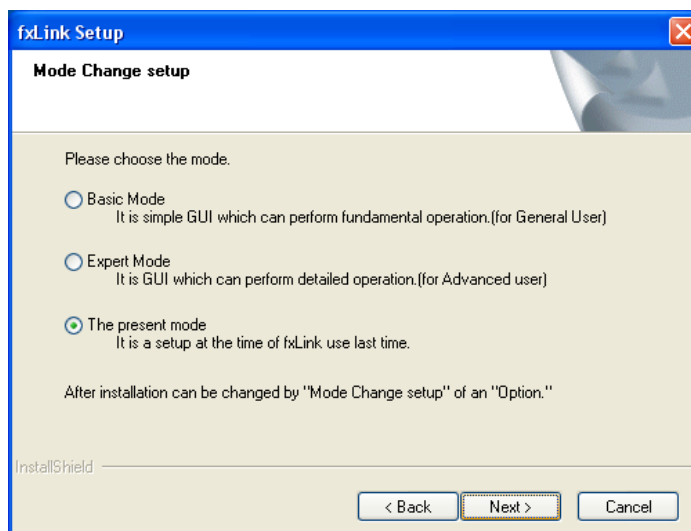
- 3) Click the **[No]** button since the connection will be made using Gbit Ethernet.



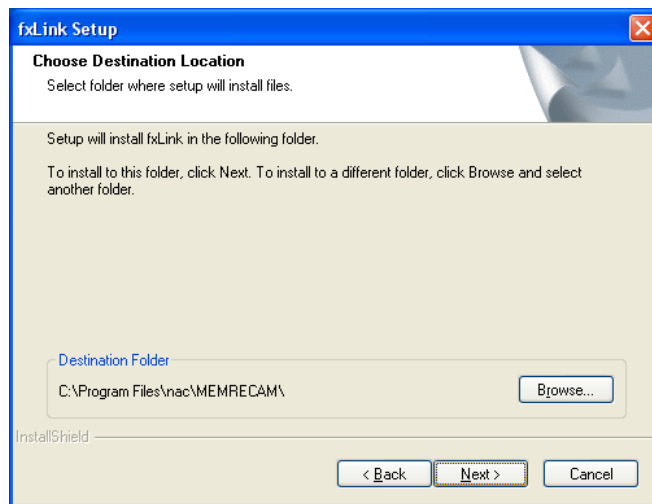
- 4) Check the appropriate box for the NIC being used to connect to the **MEMRECAM** fx and click the **[OK]** button.



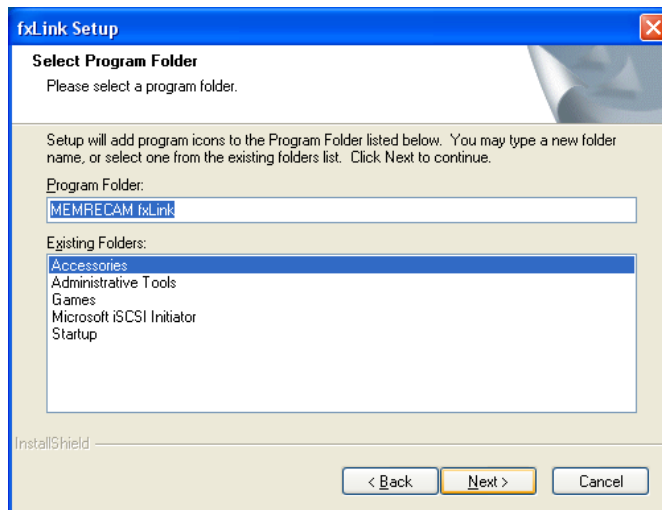
- 5) Select the GUI mode desired and click the **[Next>]** button.



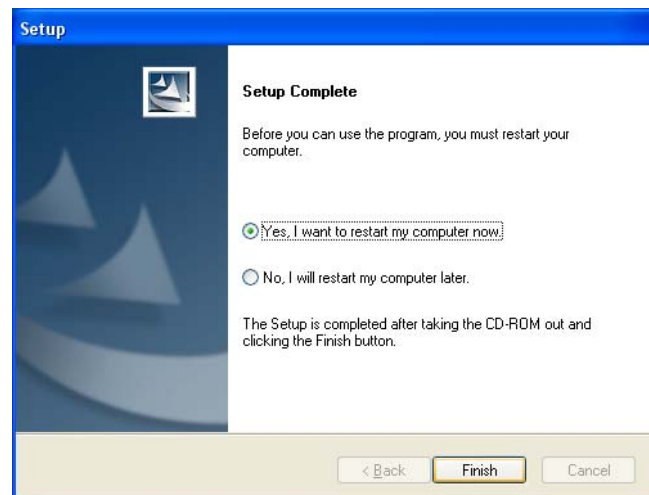
- 6) To accept the default **Destination Location** where the software will be installed click the **[Next>]** button.



- 7) To accept the default **Program Folder** for the **START** menu click the **[Next>]** button.



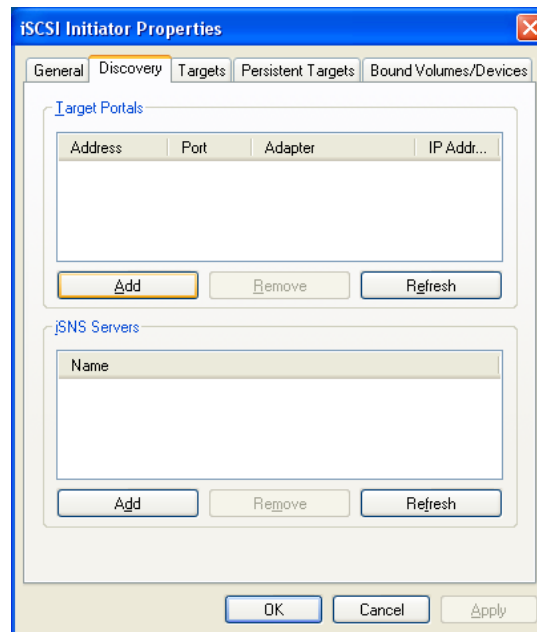
- 8) After the software has been loaded, click the **[Finish]** button to reboot the PC and complete the fxLink installation.



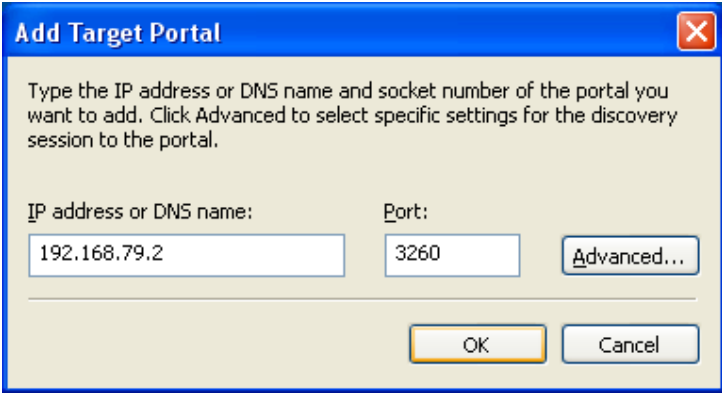
- **Microsoft iSCSI Initiator Setup**

IMPORTANT: Turn *MEMRECAM* fx power **ON**.

- 1) From the **START** menu, **Programs**, run **Microsoft iSCSI Initiator**.
- 2) In the **iSCSI Initiator Properties** window select the **Discovery** tab. Click the **[Add]** button to enter a Target Portal.



- 3) In the **Add Target Portal** window enter the Gbit IP address of the **MEMRECAM** fx. In our example the Gbit IP address was 192.168.79.2. Click the **[OK]** button.



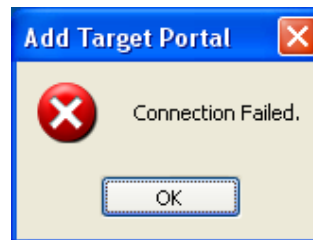
The 'Add Target Portal' dialog box has a blue title bar with a close button. The main area is light beige. It contains a text box for 'IP address or DNS name' with '192.168.79.2' entered, and a text box for 'Port' with '3260' entered. There is an 'Advanced...' button to the right of the port field. At the bottom are 'OK' and 'Cancel' buttons.

Type the IP address or DNS name and socket number of the portal you want to add. Click Advanced to select specific settings for the discovery session to the portal.

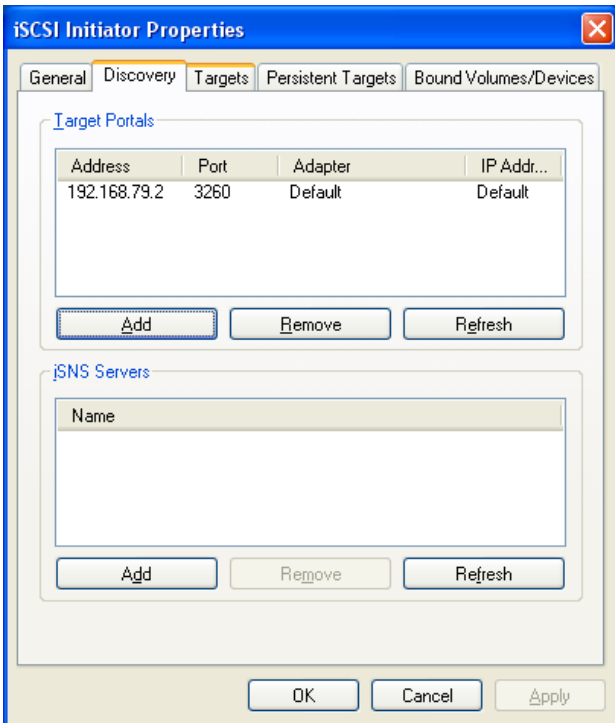
IP address or DNS name: 192.168.79.2 Port: 3260 Advanced...

OK Cancel

NOTE: If the configuration is not correct the *Connection Failed* error will appear. Double-check the MEMRECAM fx IP address and the PC's IP Address and Subnet Mask. Also ensure the MEMRECAM fx power is ON.



- 4) Confirm that the **MEMRECAM** fx IP address is displayed in the Target Portals table.



The 'iSCSI Initiator Properties' dialog box has a blue title bar. It has five tabs: 'General', 'Discovery', 'Targets', 'Persistent Targets', and 'Bound Volumes/Devices'. The 'Targets' tab is selected. It contains a 'Target Portals' section with a table showing one entry: 192.168.79.2 on port 3260 using the Default adapter. Below the table are 'Add', 'Remove', and 'Refresh' buttons. There is also an 'iSNS Servers' section with a 'Name' text box and 'Add', 'Remove', and 'Refresh' buttons. At the bottom are 'OK', 'Cancel', and 'Apply' buttons.

iSCSI Initiator Properties

General Discovery **Targets** Persistent Targets Bound Volumes/Devices

Target Portals

Address	Port	Adapter	IP Addr...
192.168.79.2	3260	Default	Default

Add Remove Refresh

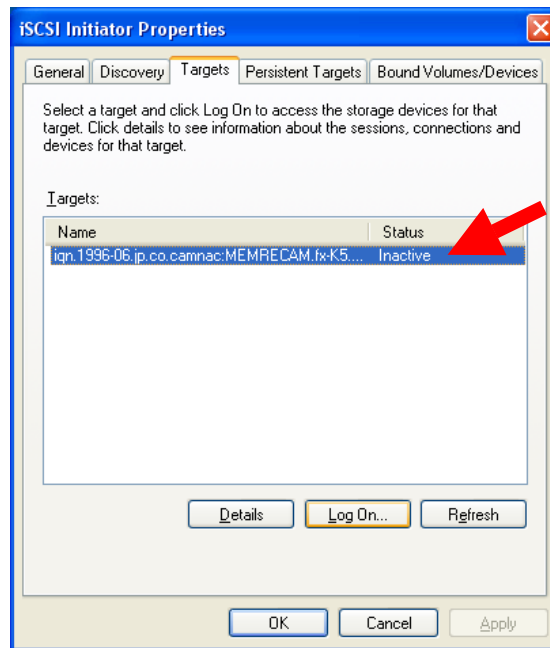
iSNS Servers

Name

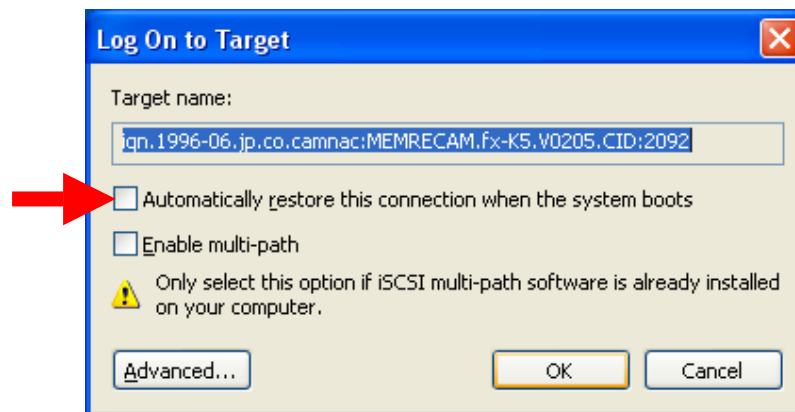
Add Remove Refresh

OK Cancel Apply

- 5) Click the **Targets** tab. Select the **MEMRECAM** fx desired and click the **[Log On]** button. Notice that the status appears as **Inactive**.

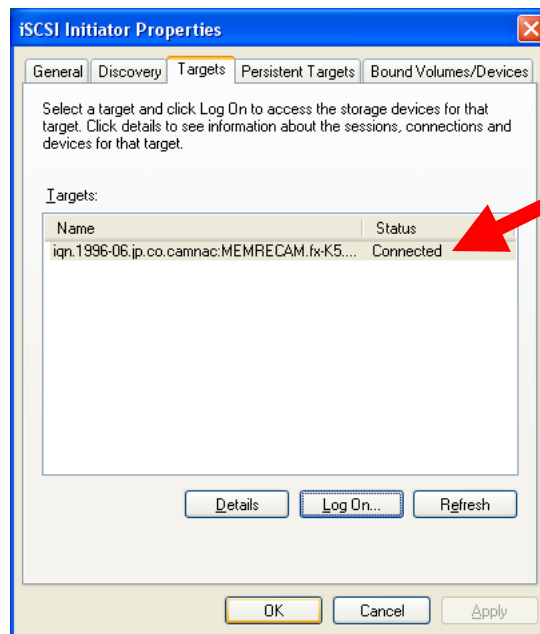


- 6) Ensure that the **Automatically restore this connection when the system boots** box is checked. Click the **[OK]** button.



NOTE: If the box were NOT checked it would prevent other users from successfully operating the system. The logon procedure can only be performed as an authorized user of the Windows “Administrators” group.

7) Confirm that the status now appears as **Connected**.

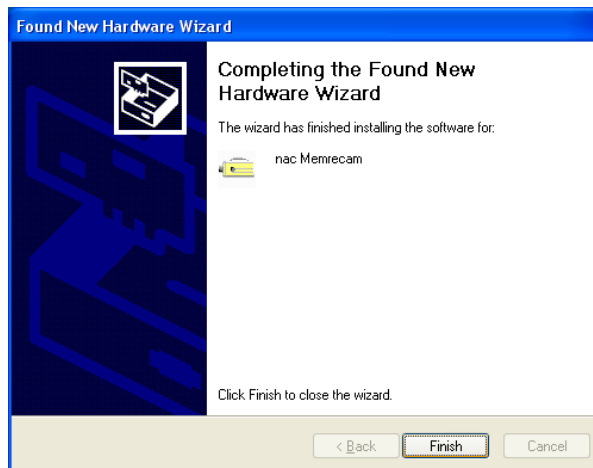


8) If connecting to multiple **MEMRECAM** fx repeat steps 2 thru 7. To complete the Microsoft iSCSI Initiator setup click the **[OK]** button.

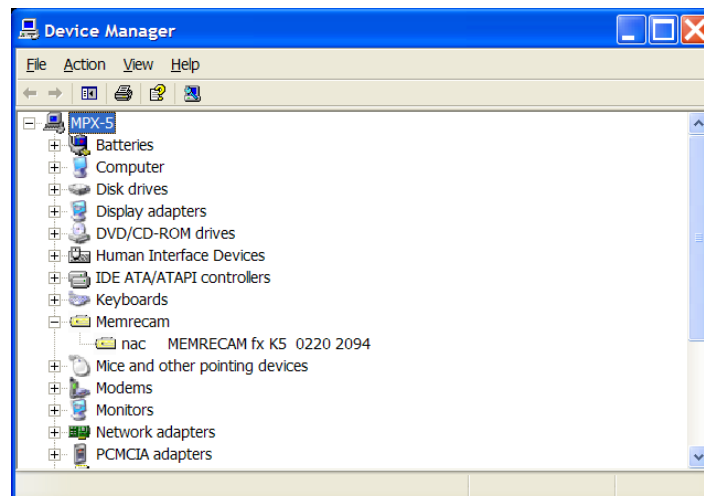
- 9) When connecting to the MEMRECAM fx for the first time the **Found New Hardware Wizard** will appear. Select the **Install the software automatically (Recommended)** radio button and click the **[Next>]** button. If asked to check with Microsoft for the latest software, select **Not at this time**.



- 10) After the **MEMRECAM** fx device driver has been loaded, click the **[Finish]** button.



- 11) Check for a **MEMRECAM** entry in **Device manager** to confirm successful installation of the **MEMRECAM** fx device driver and that the camera is connected.

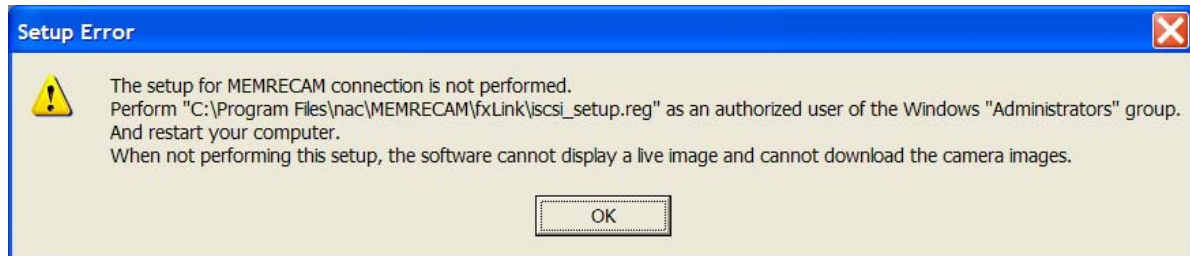


- 4) Click the camera button to start the connection.

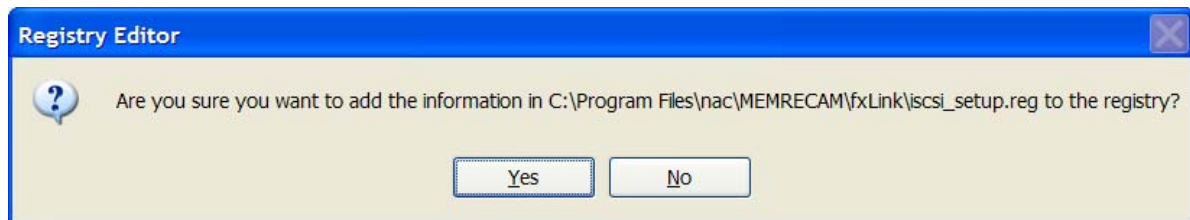


NOTE: Some computers may require additional entries made to the registry. If prompted, browse for and double click for the [iscsi_setup.reg](#) file.

[C:\Program Files\nac\MEMRECAM\fxLink\iscsi_setup.reg](#)

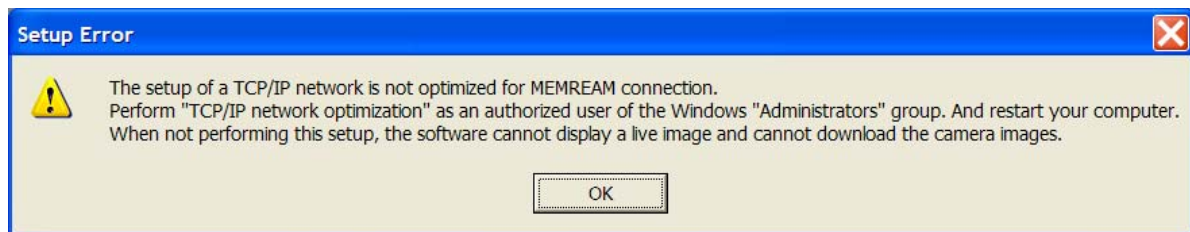


Click the **[Yes]** button to add the information to the registry.



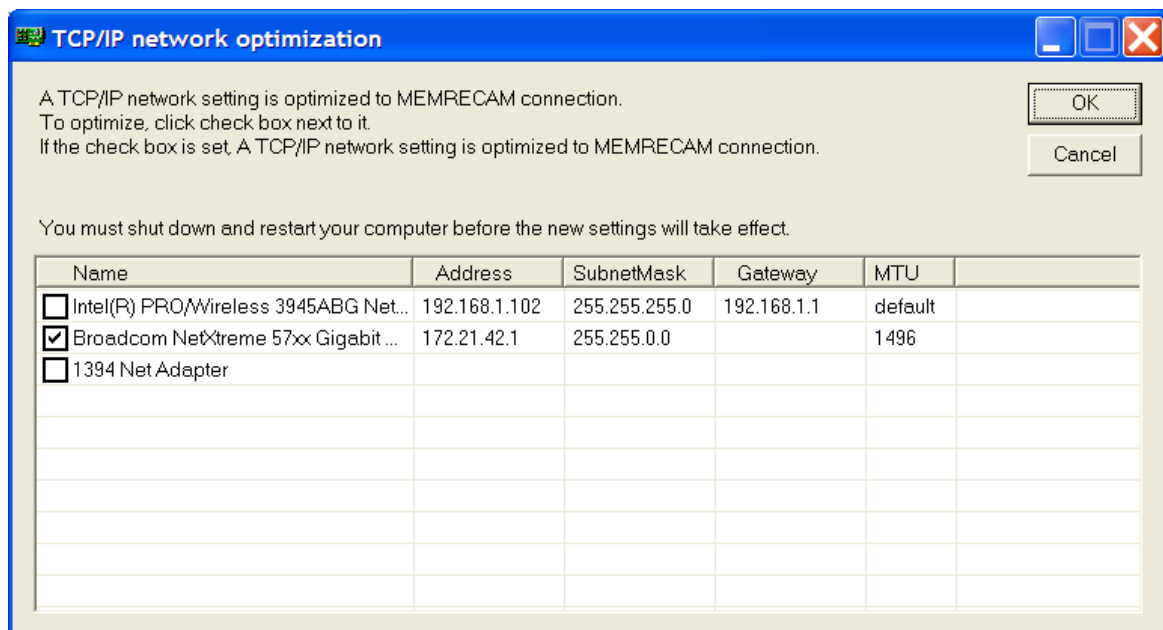
This procedure needs to be performed only once as an authorized user of the Windows "Administrators" group

NOTE: If additional entries had to be made to the registry, run the TCP/IP Network Optimization utility again. The following message would appear if Optimization is required.



Browse for and double click for the [NicConfig.exe](#) file. Check the appropriate box for the NIC being used to connect to the **MEMRECAM** fx and click the [OK] button and Reboot the PC.

[C:\Program Files\nac\MEMRECAM\tools\NicConfig.exe](#)



This procedure needs to be performed only once as an authorized user of the Windows "Administrators" group.