

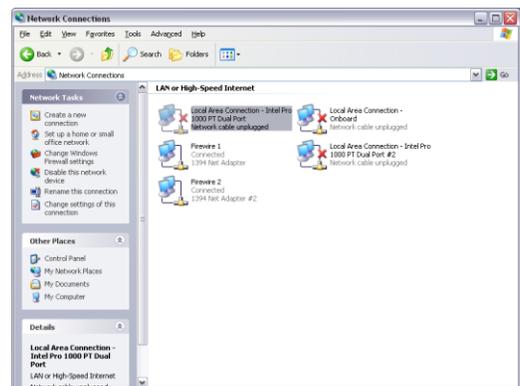
# Instructions for Installing Prosilica's GigE GX cameras - Single GigE camera on multiple ports

## Operating GigE Vision GX cameras using multiple network adaptors

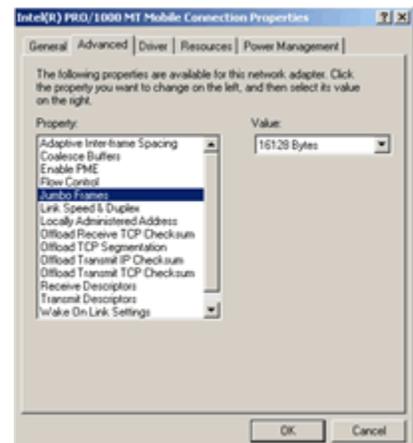
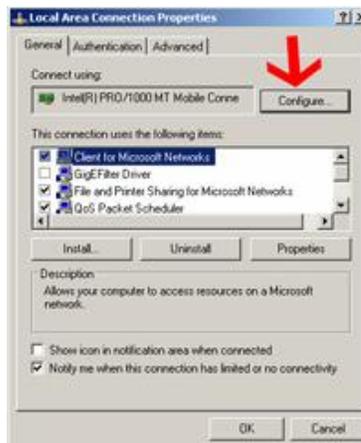
The GX series cameras offer two Gigabit Ethernet ports for image data transfer and control. Users can connect one or both ports on the GX to Ethernet adapter ports on a host computer. Connecting both ports will increase the available bandwidth to 240 MB/sec, allowing higher frame rates and resolutions than a single port connection.

GX cameras can be operated in single port and dual port configurations. The dual port approach requires the host computer to configure a Link Aggregate Group (LAG). A LAG configuration combines multiple Ethernet ports into a single data channel.

1. Install a dual port network card in the host computer. To achieve full camera performance, you should use a Gigabit Ethernet card that supports "Jumbo frames" of at least 9KB size.
2. Once installed, open your "Network Connections" (Start -> Control Panel->Network Connections) and right-click on one of the two network connection corresponding to the card that was just installed.
3. Select "Properties" from the contextual menu that appears when you right click the network connection icon. This will open the properties window.



4. In the properties window, click the "Configure" button. Select the "Advanced" tab. In the "Property" list make the following changes:
  - (a) select "Jumbo Frames" and change the value to 9014 bytes or higher.
  - (b) select "Receive Descriptors" on the same list and change the value to 512
  - (c) select "Performance Options" and set "Interrupt Moderate Rate" to "Extreme"



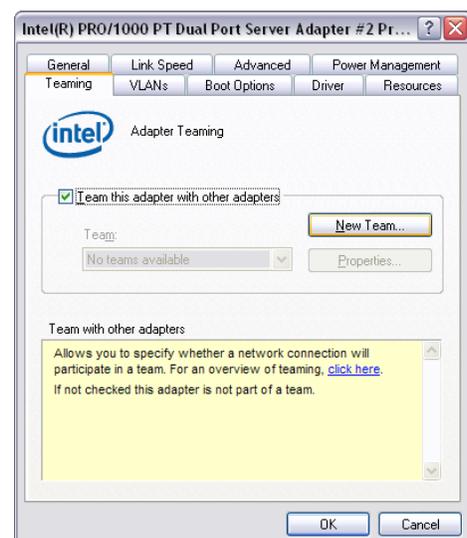
- Click on "OK" to validate your change (the "Properties" window will close). The Property list will be different between different types/brands of gigabit Ethernet interface cards. If "Jumbo Frames" does not appear in this list, then your card probably does not support it. If your card does not support Jumbo Frames, then your CPU usage will be higher.
- Re-open the "Properties" of the PRO/1000 GT adapter by right-clicking the Local Area Connection "Intel® PRO/1000 GT" network connection icon in the Network Connections window and select the "Advanced" tab at the top of the Properties dialog.

- In the "Windows Firewall" section, select "Settings". In the Settings dialog choose "Off" to turn off the Windows firewall. The camera will not work if the firewall is active. If you installed the Prosilica GigE filter driver, this step is not required.



- Perform Steps 1 – 8 for the other Ethernet adapter port that will be dedicated to the GX camera network.
- The next section will provide instructions for configuring the Link Aggregate Group (LAG) to combine the two ports dedicated to the GX network. Open your "Network Connections" (Start -> Control Panel->Network Connections) and right-click on one of the two network connection corresponding to the card that was just installed. Select "Properties" from the contextual menu that appears when you right click the network connection icon. This will open the properties window. In the properties window, click on "Configure" button in order to create a Link Aggregate Group (LAG) between the two ports.

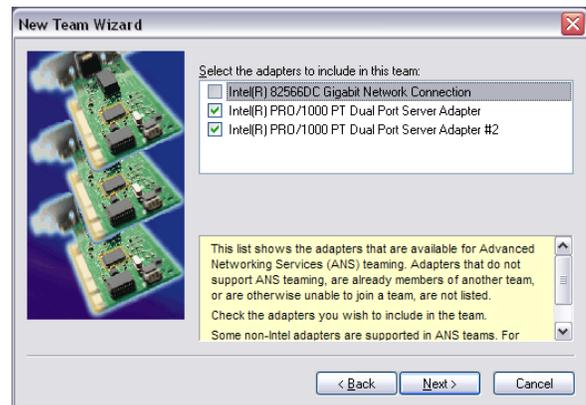
- Select the "Teaming" tab (analogous to LAG), enable "Team this adapter with other adapters" and click on the "New Team" button.



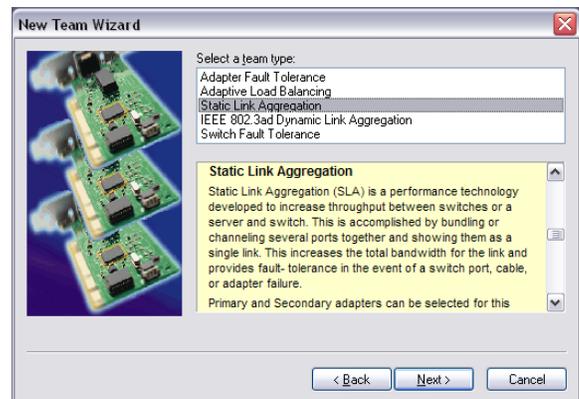
11. Specify a name for the Team (Link Aggregate Group). This should be something that will distinguish this adapter from others in your system. Click “Next” to continue.



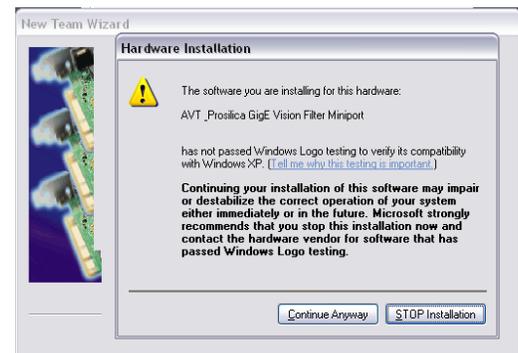
12. Select the two Ethernet ports to which the GX camera will be connected. These ports will form our LAG or TEAM. Click “Next” to continue.



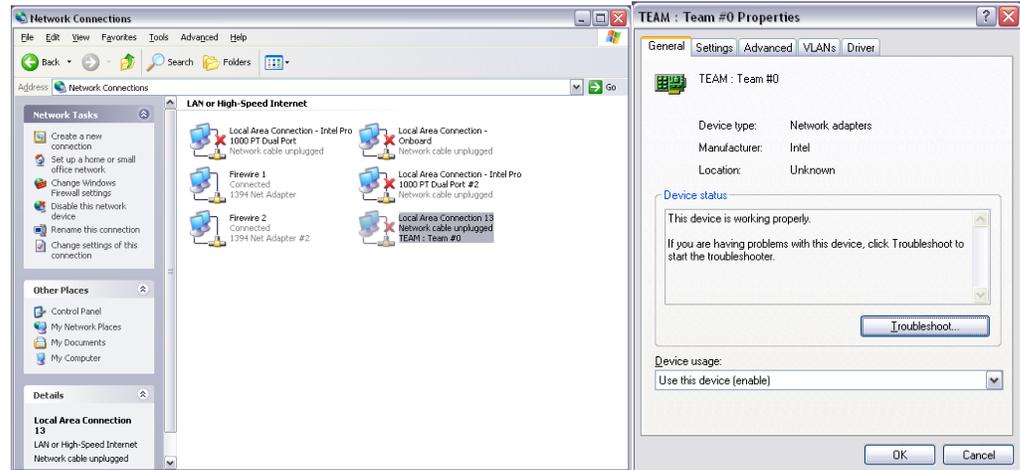
13. Choose “Static Link Aggregation”. Click “Next” to continue.



14. The LAG group will now be configured. You may be asked to permit the “AVT\_Prosilica GigE Vision Filter Miniport” installation on the new LAG adapter. Click “Continue Anyway”.



15. Once completed the properties of the TEAM (LAG) that has just been created will appear. A new Network Connections Icon corresponding to the LAG group is created. You have now completed the Link Aggregate Group configuration.



16. Reboot the system

17. Install the latest Prosilica filter driver and dll to use GX cameras.