

## APPLICATION NOTE

Installing Prosilica GX cameras:  
Single GigE camera on multiple ports

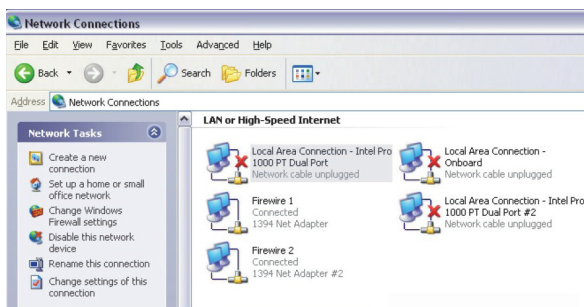
2016-Mar-21

## Operating GigE Vision GX cameras using multiple network adapters

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.

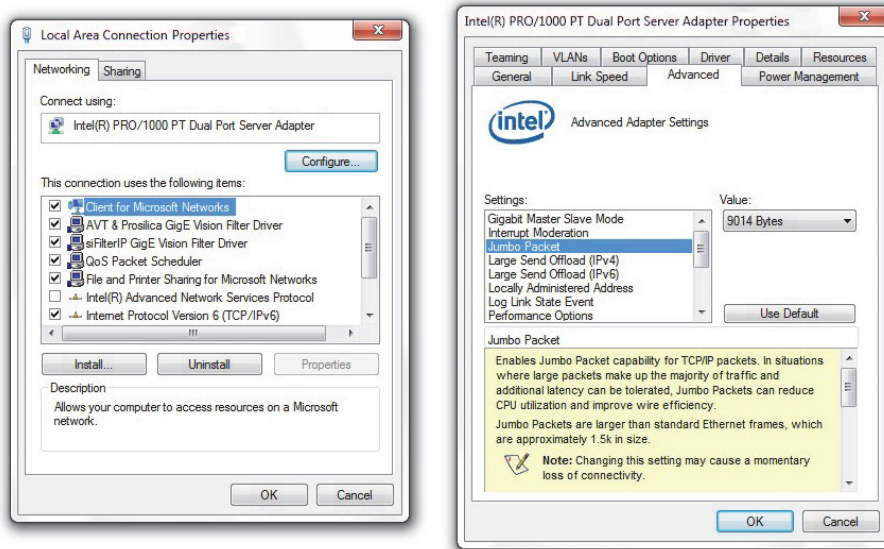
GX cameras can be operated in single port and dual port configurations. The dual port approach requires the host computer to configure a Link Aggregation Group (LAG). A LAG configuration combines multiple Ethernet ports into a single data channel.

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.

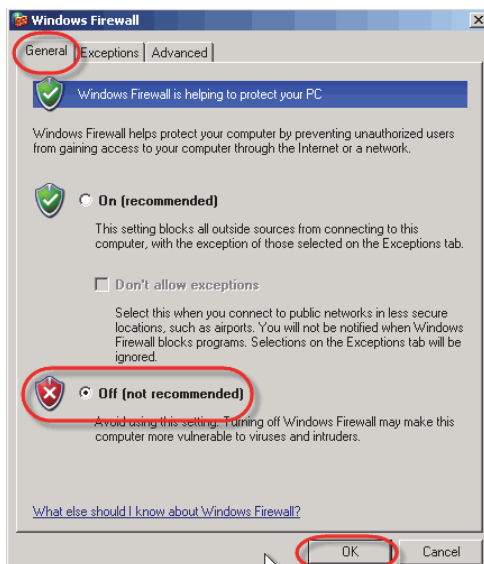


3. Select **Properties** from the contextual menu that appears when you right click the network connection icon. This will open the properties window.
4. In the properties window, click the **Configure** button. Select the **Advanced** tab. In the **Property** list make the following changes:
  - a. 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*.

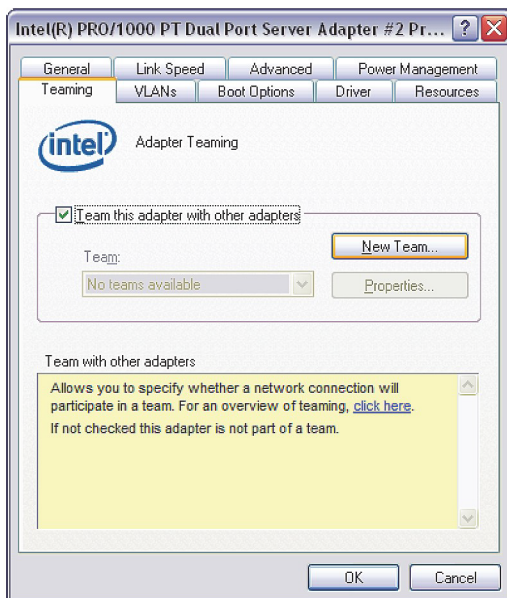


4. Click **OK** to validate your change (the properties window will close). The **Property** list will be different between different types/brands of Gigabit Ethernet interface cards. If **Jumbo Frames** does not appear in this list, then your card probably does not support it. If your card does not support Jumbo Frames, then your CPU usage will be higher.
5. 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.

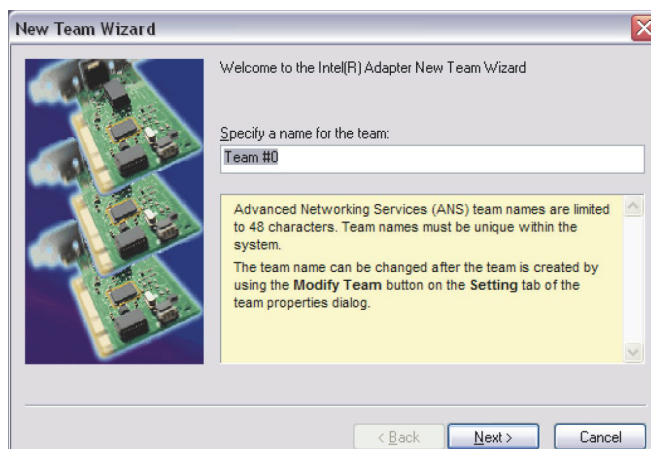


6. In the **Windows Firewall** section, select **Settings**. In the **Settings** dialog select **Off** to turn off the Windows firewall. The camera will not work if the firewall is enabled. If you installed the Prosilica GigE filter driver, this step is not required.

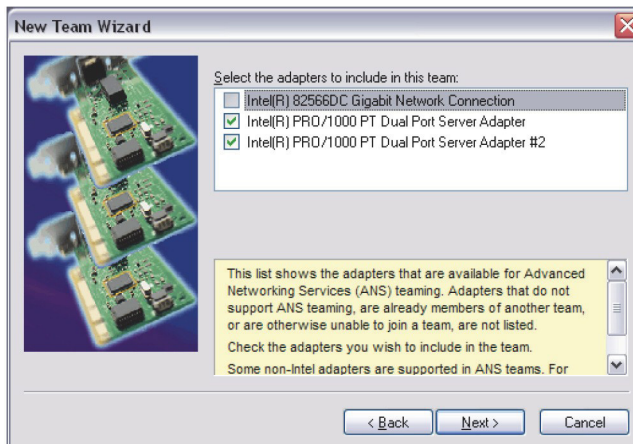
7. Perform Steps 1 to 8 for the other Ethernet adapter port that will be dedicated to the GX camera network.
8. The next section will provide instructions for configuring the LAG to combine the two ports dedicated to the GX network. Open **Network Connections** (*Start > Control Panel > Network Connections*) and right-click on one of the two network connections 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.
9. In the properties window, click the **Configure** button in order to create a LAG between the two ports.
10. Select the **Teaming** tab (analogous to LAG), enable **Team this adapter with other adapters** and click the *New Team* button.



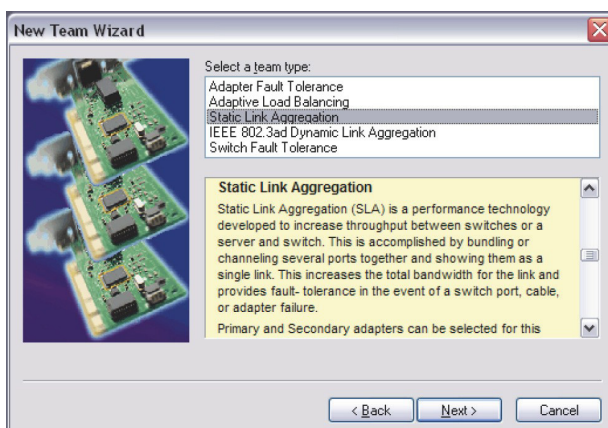
11. Specify a name for the Team (LAG). This should be something that will distinguish this adapter from others in your system. Click **Next** to continue.



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



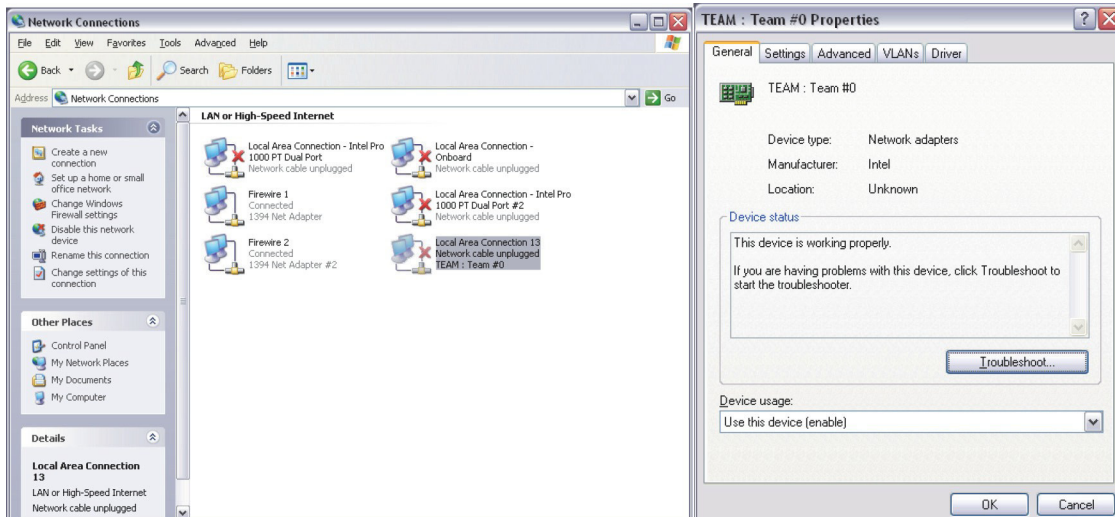
13. Choose **Static Link Aggregation**. Click **Next** to continue.



14. The LAG group will now be configured. You may be asked to permit the Allied Vision Prosilica GigE Vision Filter Miniport installation on the new LAG adapter. Click **Continue Anyway**.



- 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 LAG configuration.



- Reboot the system.
- Install the latest Prosilica filter driver and dynamic link library (DLL) to use GX cameras

## Additional References

Technical manuals and GigE feature reference

<https://www.alliedvision.com/en/support/technical-documentation>

For technical support, please contact [support@alliedvision.com](mailto:support@alliedvision.com).

For comments or suggestions regarding this document, please contact [info@alliedvision.com](mailto:info@alliedvision.com).

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