Networking the PathPilot® Controller

Product Identification: USB Networking Adapter (PN 38207)

Purpose: This document details use of the USB Networking Adapter with a PathPilot controller. The PathPilot controller supports network access for file transfer – a fast and convenient method to transfer G-code programs directly to the PathPilot controller from a CAD/CAM computer.

IMPORTANT! Download and install the latest version of PathPilot® before proceeding. PathPilot v1.9.7 or later is required to use these instructions. For more information, refer to tormach.com/updates.

Technical Details

Wired Networking: With a wired network, check to ensure PathPilot networking (LAN) is set to *Enabled* in the BIOS settings (for more information, refer to *Troubleshooting* section later in this document). Using a Cat5 cable, connect the PathPilot's Ethernet connector to a network switch or hub on the same network to which the CAD/CAM computer is connected.

Wireless Networking: With a wireless network, use the USB Networking Adapter (PN 38207).

By default, PathPilot exports a Windows network share file – named *gcode* – to a connected network. Refer to the network settings table:

Windows Network Domain	WORKGROUP
Default PathPilot Network Name	TORMACHPCNC

Connect to Router

1. With the PathPilot controller powered on and the USB Networking Adapter inserted into any open USB port, click the *Main* tab in the PathPilot interface (see **Figure 1**).

2. In the MDI line, type *ADMIN NETWORK* (see **Figure 1**); click *Enter* on the keyboard. The *Network Connections* dialog box opens.
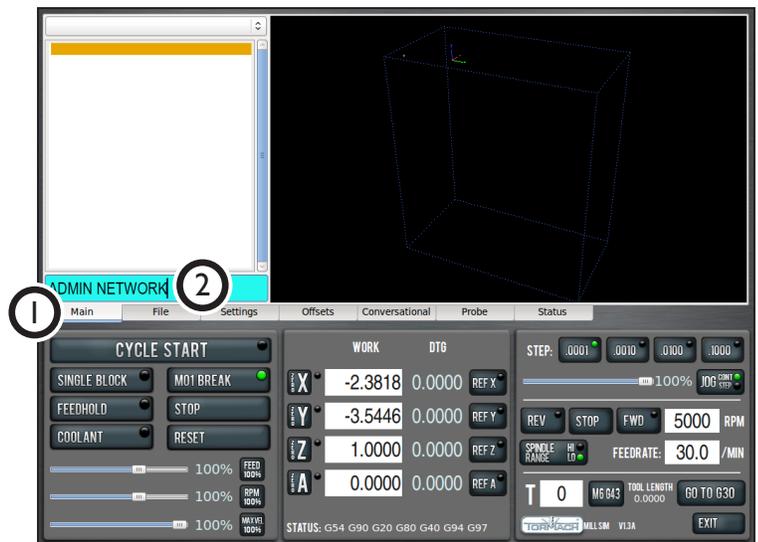

Figure 1

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3. In the *Network Connections* dialog box, click the *Wireless* tab (see **Figure 2**).

4. On the *Wireless* tab, click *Add* (see **Figure 2**). The *Editing Wireless* dialog box opens.
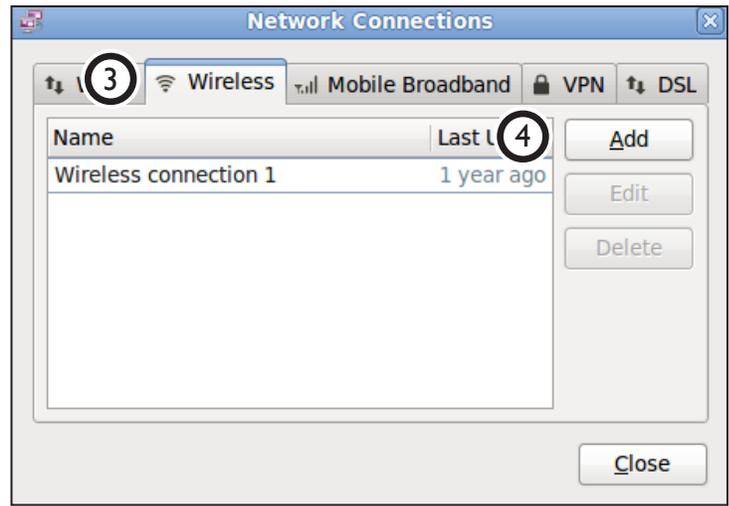
Figure 2

5. In the *Editing Wireless* dialog box, type any name in the in the *Connection name* field (see **Figure 3**).

6. Type the name of your router in the *SSID* field (see **Figure 3**).
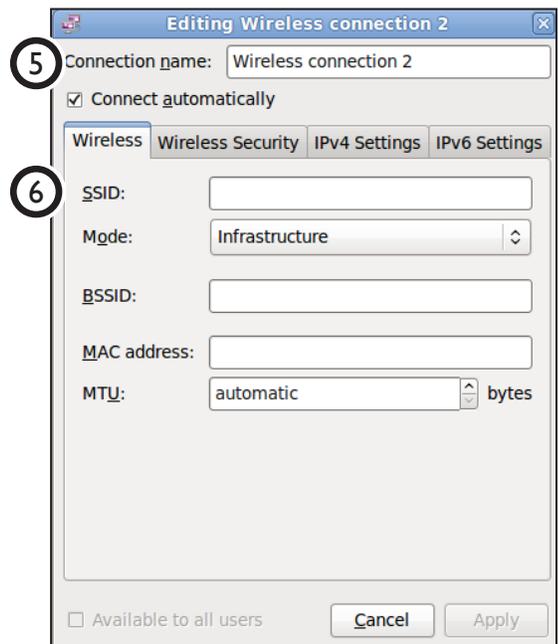
Figure 3

7. If a password is required for your wireless network, click the *Wireless Security* tab (see **Figure 4**).

8. From the *Security* drop-down menu, select *WPA & WPA2 Personal* (see **Figure 4**). The *Password* field appears.

9. Type the password of your wireless network in the *Password* field (see **Figure 4**).

10. Click *Apply* (see **Figure 4**). The *Editing Wireless* dialog box closes.

NOTE: *The Apply button is not available until the password is entered in the Password field.*

11. If the USB Networking Adapter is plugged in and the network name and password are correct, the controller automatically connects to the wireless network.
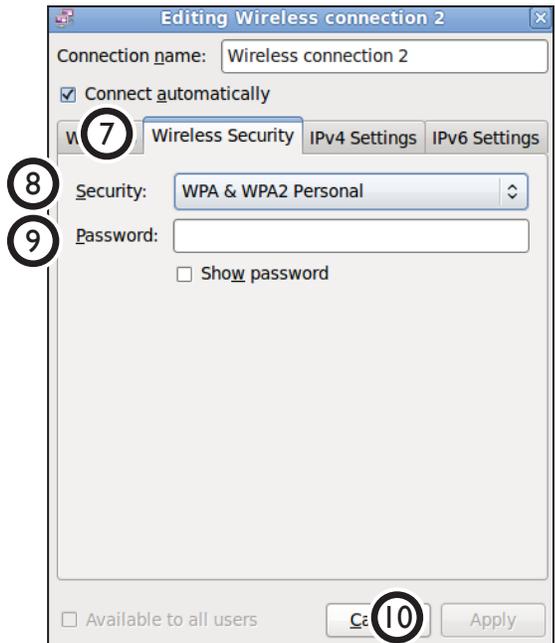

Figure 4

Map to G-code Folder

Before files can be shared, map the PathPilot controller to a PathPilot share folder on the CAD/CAM computer.

1. On the PathPilot controller, click the *Settings* tab and make note of the entry in the *Network Name* field (see **Figure 5**). This is used to specify the path from the CAD/CAM computer to the PathPilot controller in Step 5.

NOTE: *If you are mapping two or more PathPilot controllers to a CAD/CAM computer, ensure each has a unique Network Name (see **Figure 5**). Restart the PathPilot controller for any Network Name field changes to take effect.*

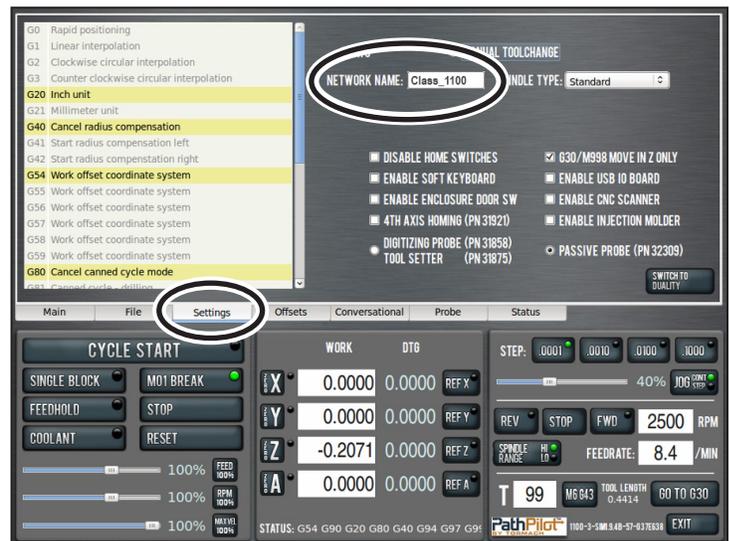2. On the CAD/CAM computer, disable the antivirus software and turn off the firewall.

Figure 5

3. Launch the *Map Network Drive* dialog box (see **Figure 6**).

NOTE: *If a message appears warning that network discovery and file sharing are turned off, enable network discovery settings.*

4. Select an unused network drive letter.

5. Determine the path to the network share:

   • Use the *Network Name* determined in Step 1

   • Use the shared folder name *gcode*

   Example: *\\Class_1100\gcode*

6. In the *Folder* field, enter the full path to the network share determined in Step 5 (see **Figure 5**).

7. Select the *Reconnect at logon* check box (see **Figure 5**).

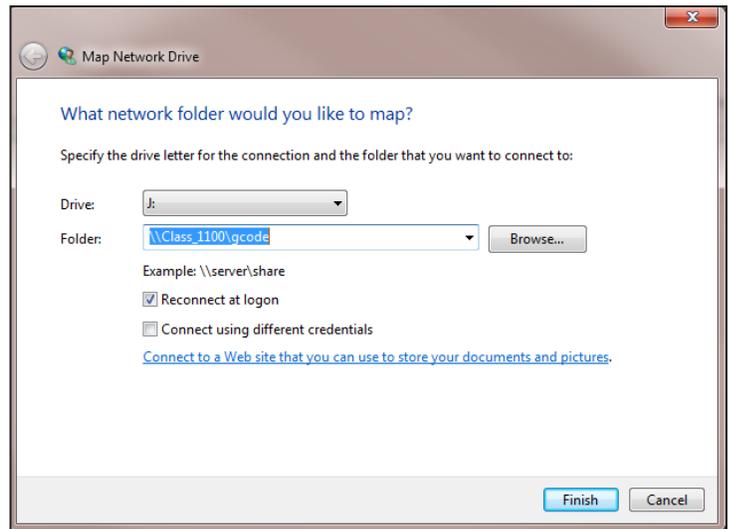8. Re-enable the CAD/CAM computer's antivirus software and turn on the firewall.

Figure 6

Troubleshooting

Problem	Possible Cause	Discussion
PathPilot is not visible on Windows network	PathPilot network adapter is disabled in BIOS settings	Controllers previously running Mach3 often have the networking interface set to *disabled*. When the PathPilot controller is first powered on, press *F2* or *Delete* on the keyboard to enter *BIOS Setup*. The Network or LAN controller is usually found under a heading labeled *Peripherals* or similar. Locate entry *Network Interface* or *Ethernet Interface* and enable it. Save changes and exit *BIOS Setup*; restart the controller as normal.
PathPilot share drops randomly	Antivirus is not set to *trust the local network*	If necessary, consult your antivirus provider on proper settings