Setting the Controller IP Address

1 Purpose

The purpose of this technical bulletin is to demonstrate the Cambridge Technology approved methods to change the IP Address of SM1000, EC1000, or ScanMaster (SMC) controllers.

2 IP Address

An IP address is a unique number used to identify a networked electronic device. It is like giving the device a street address. This allows communication of devices on a network.

3 Connecting Your Controller to a PC

3.1 Apply power to the controller

Before trying to change the IP Address of the controller, connect the controller to power and a computer.

Please refer to one of the following documents on how to connect power to the controller.

If you are using SMC, please refer to the SMC Hardware Reference Manual, page 16.

If you are using EC1000, please refer to the EC1000 Hardware Manual, page 30.

If you are using SM1000, please refer to the SM1000 User Manual, page 15.

Note: Access to our application notes, software downloads, setup tools, controller hardware, and technical bulletins requires that you log in. If you need new credentials to log into the Customer Download site, please contact your regional technical support to request the login credentials.
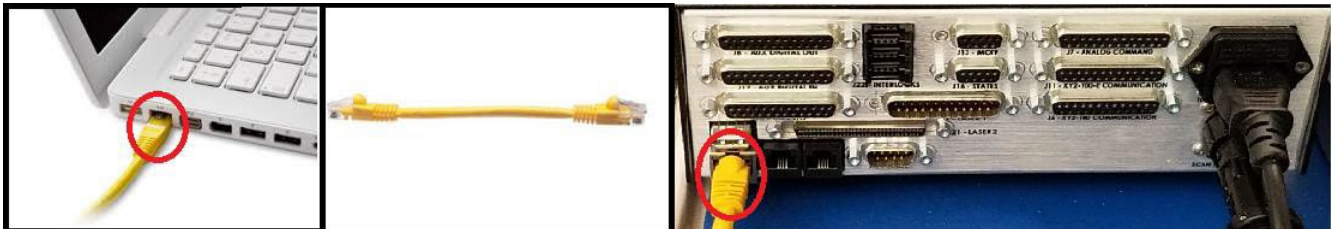
3.2 Connect your controller to the PC Ethernet connection

Connect one end of an Ethernet cable from a PC to the controller.

Figure 1 - SMC- Connect an Ethernet cable from PC to the Controller

Figure 2 - SM1000 - Connect an Ethernet Cable from PC to the SM1000 Controller

Figure 3 - EC1000 - Connect an Ethernet Cable from PC to the EC1000 I/O Module

# 4   Device Configuration Editor Tool (SMC Only)

The DeviceConfigEditor.exe application (**recommended method**) allows you to change the IP Address to correspond to the network that the controller will be running on.

Below is the procedure to use the Device Configuration Editor to change the controller IP address.

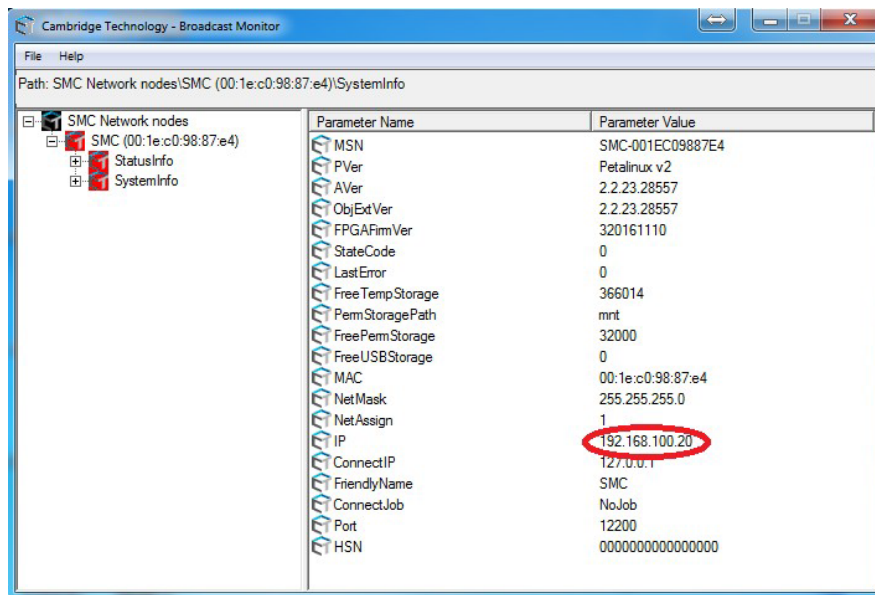**Note**: Proceed to Section 5 if you are using SM1000 or EC1000 controllers.

4.1 Device configuration procedure

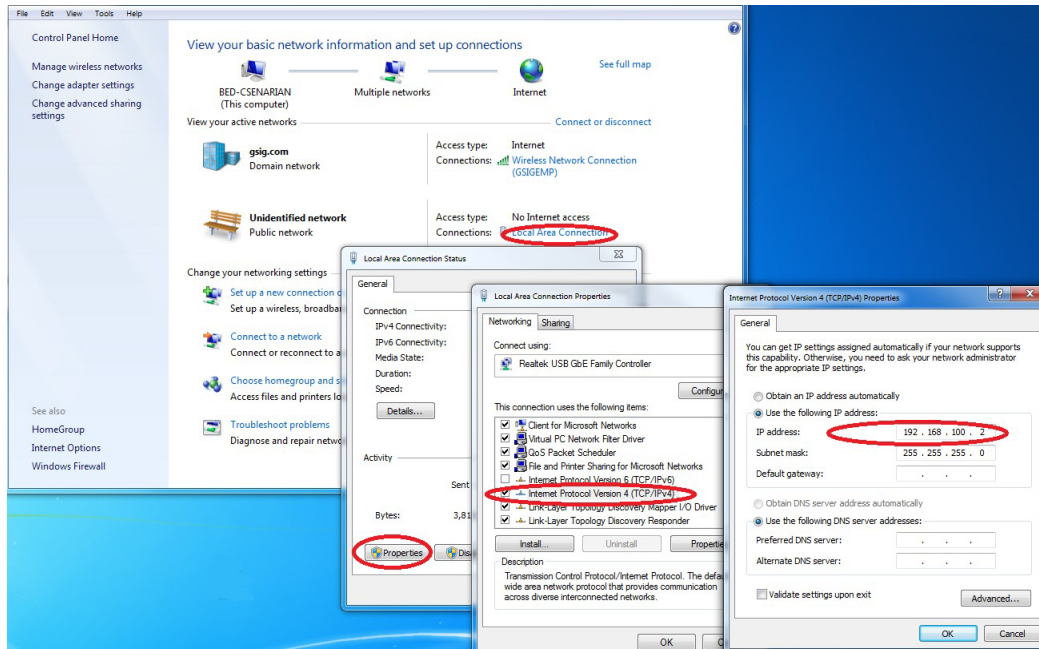1. Open 'Broadcast Monitor' to get the current controller IP Address.
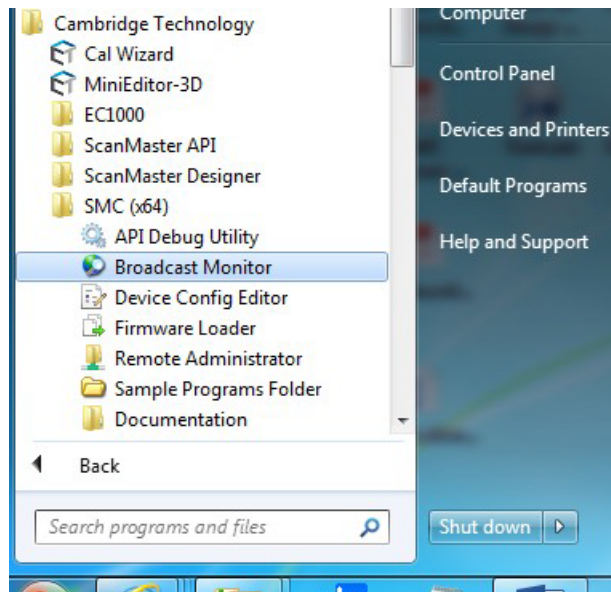
Figure 4 - Open Broadcast Monitor from Start Menu

2. Get the current IP address from Broadcast Monitor as shown in Figure 5

**Figure 5 - Controller IP Address Shown in Broadcast Monitor**

3. Change your computer local adapter IP address to be in the same network neighborhood as your controller.

Figure 6 - Local Network Adapter Settings (Static Address Shown)

a. Open 'Control Panel' and select 'View Network Status and Tasks'.
b. Select 'Local Area Connection'.
c. Select 'Properties'.
d. Uncheck 'Internet Protocol Version 6 (TCP/IPv6)'.
e. Double click 'Internet Protocol Version 4 (TCP/IPv4)'.
f. If you plan to use static IP addressing in your controller, follow the steps from i to iii below. If you plan to use dynamic (automatic) addressing, continue to Step g below.
    i. In Static IP addressing, enter a static address in the same neighborhood of the controller (with the first 3 numbers being the same, and the last number being different from what is for the controller).
    ii. Change your 'Subnet Mask' to be the same as the controller.
    iii. Continue to Step 4 below.
g. For dynamic addressing, select 'Obtain an IP Address automatically'. A DHCP server sets the IP address and subnet mask for you.

4. Open 'Device Configuration Editor'.
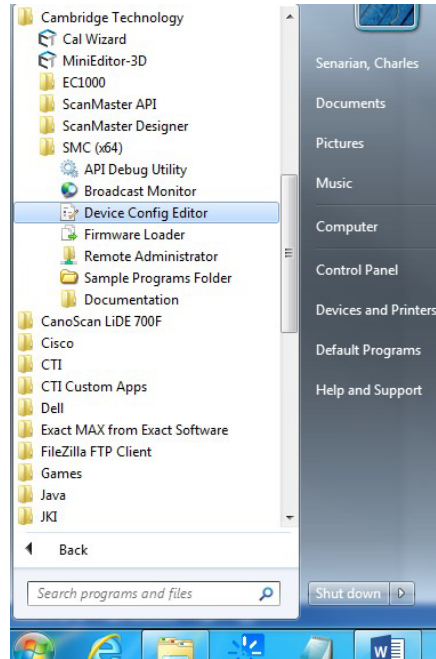
Figure 7 - Open Device Configuration Editor from the Start Menu
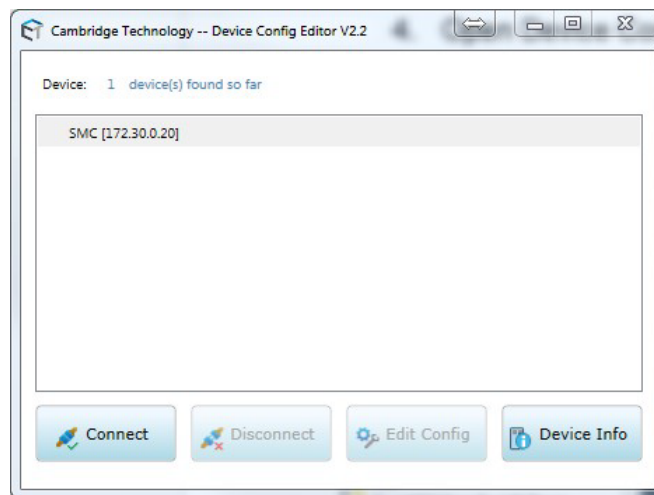
Figure 8 - Device Configuration Editor

5. Select 'Connect'.
6. Select 'Edit Config'.

a. **Note**: This launches the same 'SMC Device Configuration' Interface you would see from inside ScanMaster Designer. You can also make the same IP address change from the 'SMC Device Configuration' window in ScanMaster Designer (SMD).
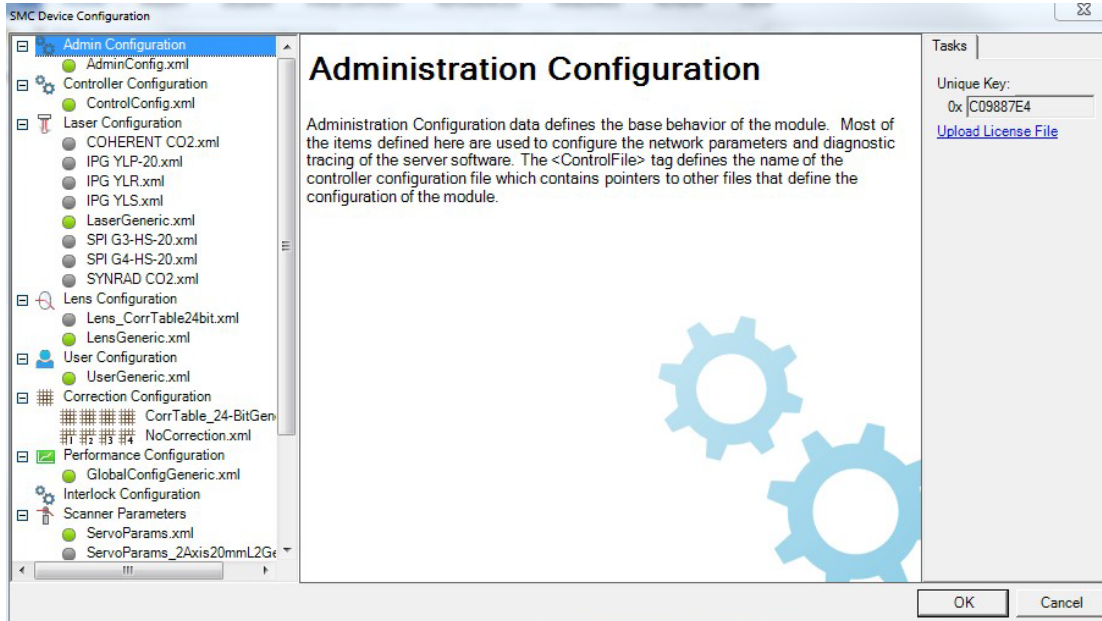

Figure 9 - Device Configuration Interface

7. Select 'AdminConfig.xml', then 'Network Settings' tab
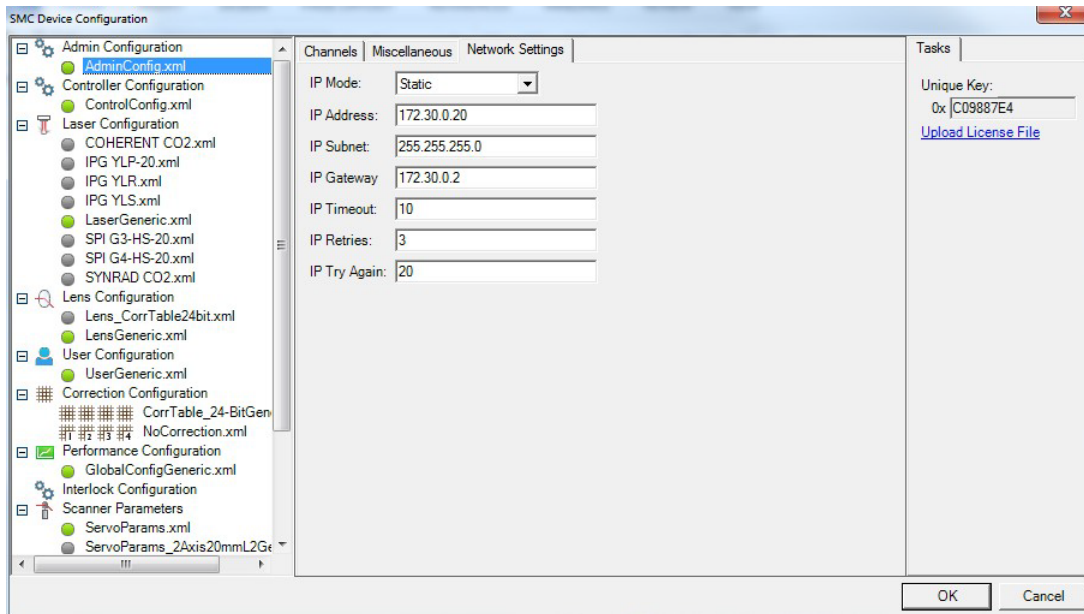

Figure 10 - Device Configuration Editor – Network Settings

8. Change the 'IP Mode' to 'Static', or 'Autodetect' for dynamic addressing.

9. Change the 'IP Address' to the new address you want the controller to have.

   Note: When you enter an IP Address into the 'IP Address' field, the Device Configuration Editor will generate an IP Gateway address for you in the 'IP Gateway' field. *We recommend you use this generated 'IP Gateway' address*.

10. Make sure the 'IP Subnet' is the same as what you are using in the local network adapter.

11. If your 'IP Gateway' address needs to be different from the address generated for you in step 9, enter a valid 'IP Gateway' address into the 'IP Gateway' filed.

   Note: Using an invalid Gateway Address can make the controller unable to communicate. Again, we recommend you use the generated 'IP Gateway' address from step 9 if you can

12. Select 'OK'.

13. Restart the controller.

14. Reopen 'Device Configuration Editor'.

15. Confirm the IP address has changed.

5 Remote Administrator Tool

The RemoteAdministrator.exe application also allows you to change the IP address to correspond to the network that the controller will be running on.

Below is the procedure to use the Remote Administrator to change the controller IP address.

5.1 Remote Administrator Procedure
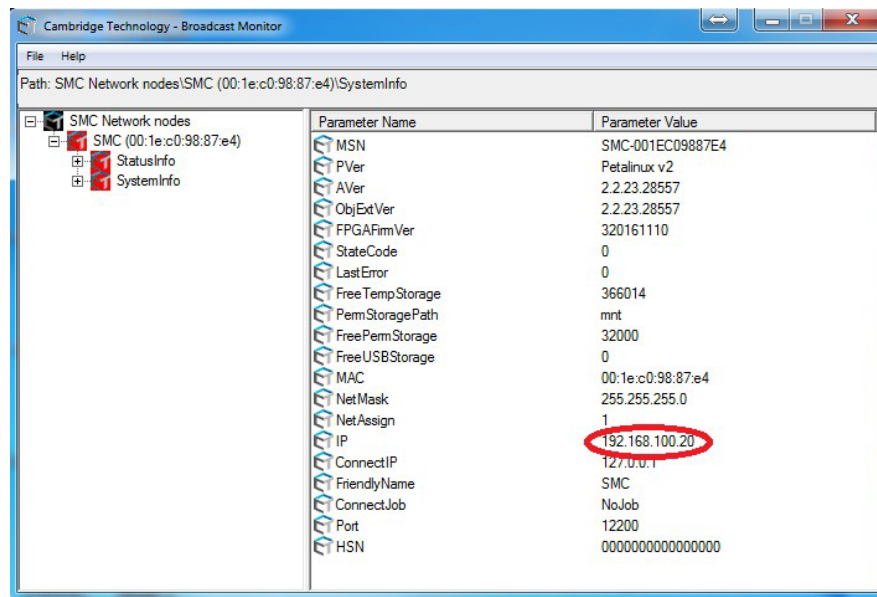
1. Open 'Broadcast Monitor' to get the current SM1000/EC1000 or SMC IP Address.
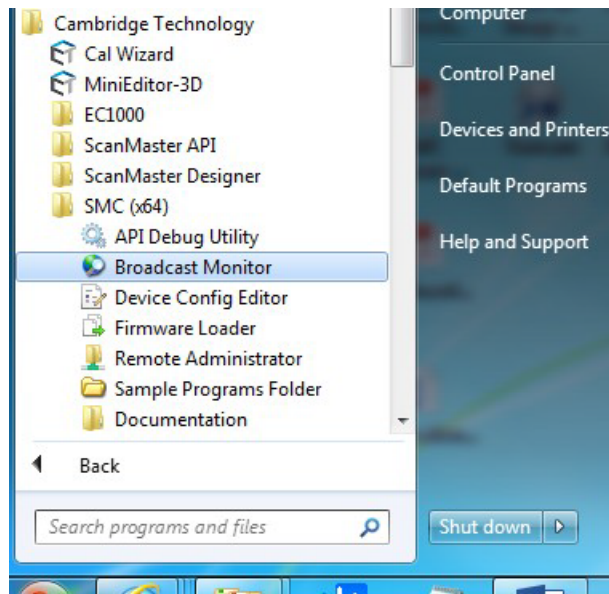
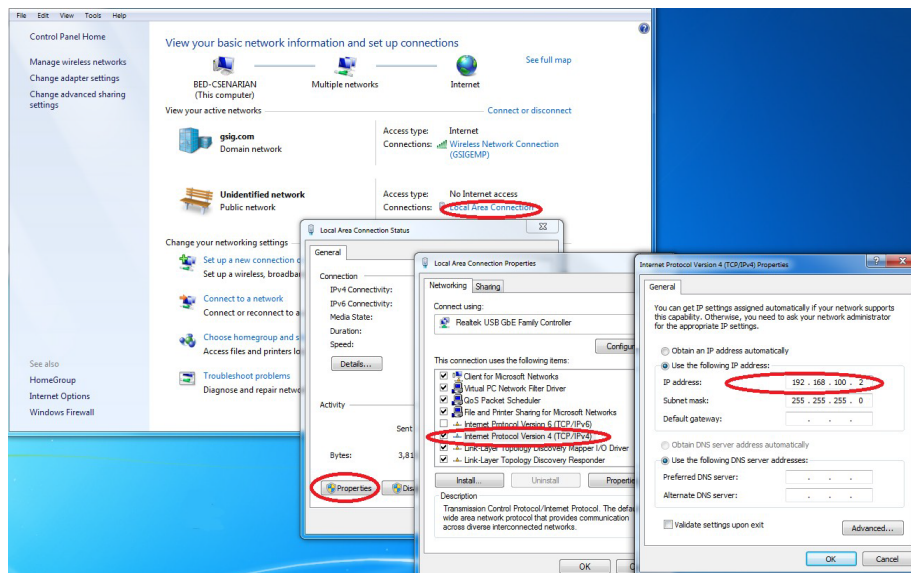**Figure 11 - Open Broadcast Monitor from Start Menu**

2. Get the current IP address from Broadcast Monitor as shown in Figure 10.

Figure 12 - Controller IP Address Shown in Broadcast Monitor

3. Change your computer local adapter IP address to be in the same network neighborhood as your controller.

Figure 13 - Local Network Adapter Settings (Static IP Shown)

a. Open 'Control Panel' and select 'View Network Status and Tasks'.
b. Select 'Local Area Connection'.
c. Select 'Properties'.
d. Uncheck 'Internet Protocol Version 6 (TCP/IPv6)'.

f. If you plan to use static IP addressing, follow the steps from i to iii below. If you plan to use dynamic (automatic) addressing, continue to Step g below.
   i.   In Static IP Addressing, enter a static address in the neighborhood of the controller (First 3 numbers the same).
   ii. Change your Subnet Mask to be the same as the controller.
   iii. Continue to Step 4 below.
g. For dynamic addressing, select 'Obtain an IP Address automatically'.
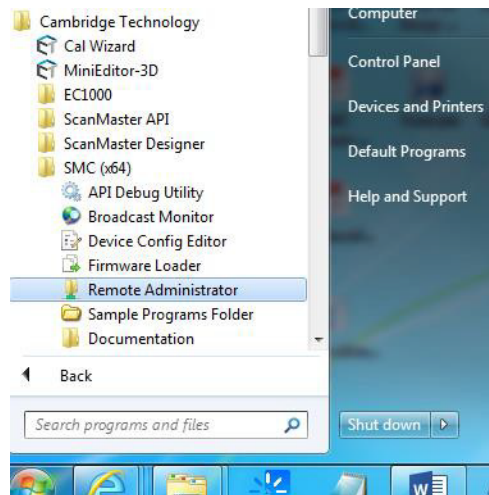
Figure 14 - Open Remote Administrator from the Start Menu
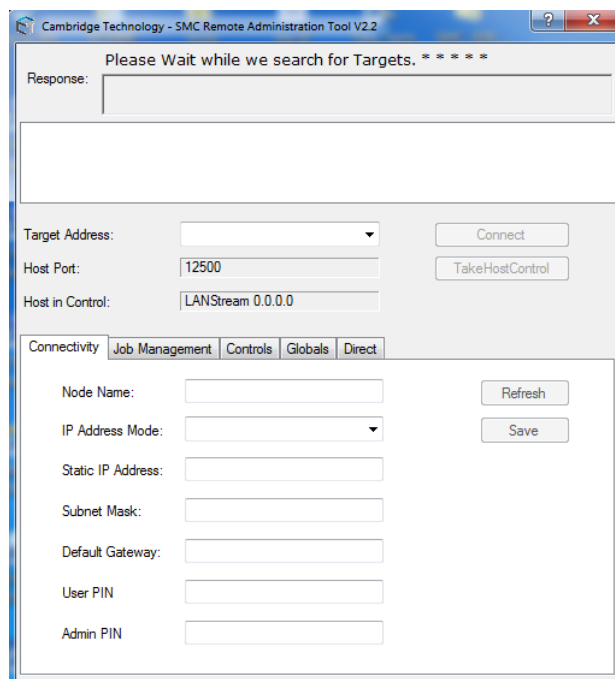
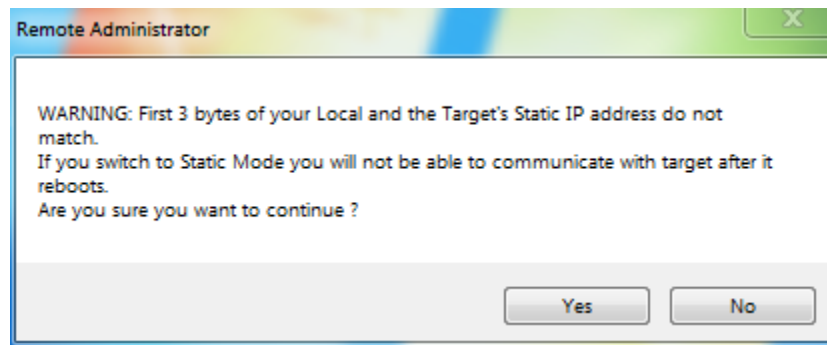**Figure 15 - Remote Administrator – Connectivity Tab**

4. Open 'Remote Administrator'. In 'Target Address', select the IP address shown in Broadcast Monitor earlier.

6. Press 'Take Host Control'.

7. Change the 'IP Address Mode' to 'Static', or 'Assigned Automatically by Dynamic Host Configuration Protocol (**DHCP**)'.

8. Change the IP address to the new address you want the controller to have.

 Note: When you enter an IP Address into the 'IP Address' field, the Device Configuration Editor will generate an IP Gateway address for you in the 'IP Gateway' field. *We recommend you use this generated 'IP Gateway' address*.

9. Make the 'Subnet Mask' the same as you are using in the local network adapter.

10. If your 'IP Gateway' address needs to be differnet from the address generated for you in step 8, enter a valid 'IP Gateway' address into the 'IP Gateway' filed.

 Note: Using an invalid Gateway Address can make the controller unable to communicate. Again, we recommend you use the generated 'IP Gateway' address from step 8.

11. Press 'Save'.
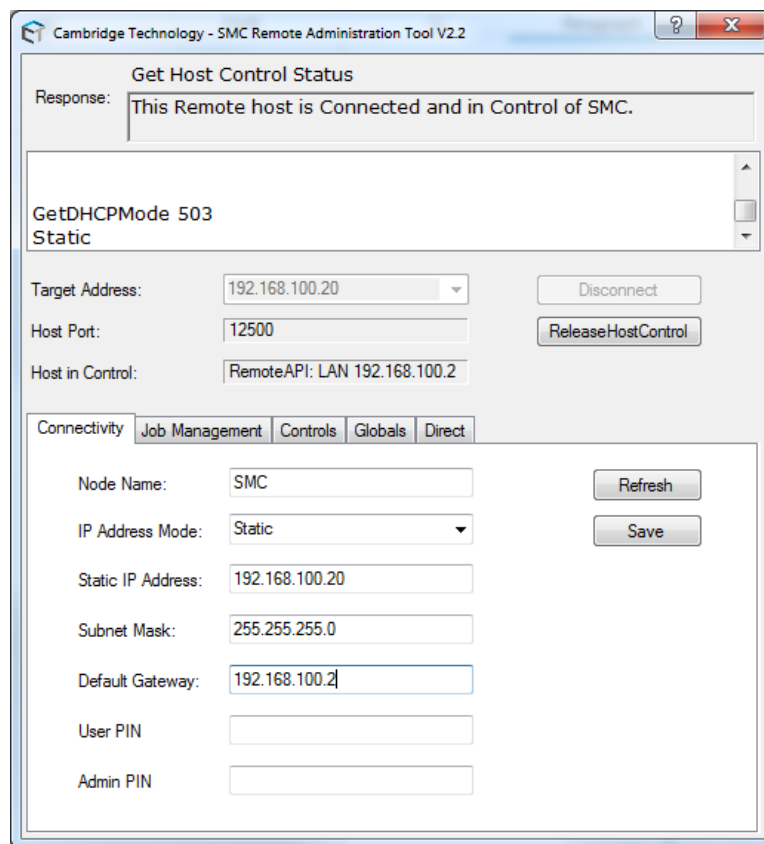
Figure 16 - Remote Administrator – Connectivity Tab

12. After pressing 'Save', you may see the following dialog. Press yes and be sure to change the address of your local network adapter IP Address to be in the same network neighborhood of the controller. Your controller and network adapter are in the same neighborhood when both their IP Addresses have the same first three numbers and have the same Subnet Mask.

Figure 17 - Remote Administrator Warning

13. Select 'Controls' tab.
14. Press 'Hardware Reset' and your controller will reboot.
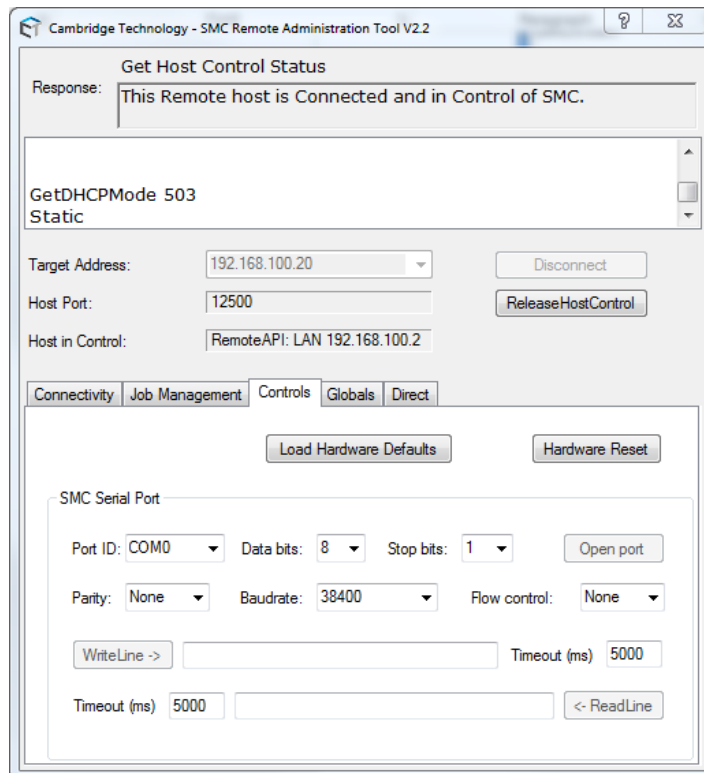
Figure 18 - Remote Administrator Controls Tab

15. Reopen 'Remote Administrator'.
16. Confirm the IP address has changed.