

## 1.0 Configure the Computer

These instructions are for the Ethernet port in the Furnace computer that is not on the company network. A separate Ethernet port is used for the company network.

1. Set the IP address for the Ethernet port that communicates with the OPTO 22 Controller
  - A. Click Network Connections in Control Panel
  - B. Right click the **Local Area Connection** used to communicate with the OPTO 22 Controller then select Properties
  - C. Right click **Internet Protocol (TCP/IP)** then select Properties
  - D. Set the IP address to 10.192.105.100, Subnet Mask to 255.255.255.0.  
Everything else can be left as is.

2. Configure the OPTO22 Furnace Software to use Ethernet
  - A. Launch OptoTerm.exe (located in C:\Opto22\OptoUtil)
  - B. Right click FC then click Modify
  - C. Click Ethernet then click Next
  - D. Set the IP address to 10.192.105.102, Port to 2001, Retries to 0, Timeout to 5000
  - E. Click Finish then close OptoTerm

### 3. Locate **OptoBootP.exe**

If OptoBootP already exists on the computer it will be in one of the Opto22 subfolders. OptoBootP will be used later to set the IP address for the OPTO 22 Controller Ethernet card.

## 2.0 Configure the OPTO 22 SNAP-LCM4 Controller

4. Set the jumpers on the serial communication card.
  - A. Remove power.
  
  - B. Remove the serial communication card from the case.  
(The serial communication card is the one that has 4 green connectors.)

Set COM 2 jumpers for RS-485 2-wire as follows:

**Jumper group CFG2:** Install jumpers 2,4,5. Remove all others.

**Jumper group JP3:** Move Jumpers 6,7 to the 'B' side.

**Jumper group JP4:** Move Jumpers 1,2 to the 'B' side.

Set COM 3 jumpers for RS-485 2-wire as follows:

**Jumper group CFG3:** Install jumpers 2,4,5. Remove all others.

**Jumper group JP4:** Move Jumpers 3,4,5,6,7 to the 'B' side.

- C. Reinstall the serial communication card in the case.
  
- D. Install jumpers on the front of the Controller as follows:  
E/R, AUTO, X0, X1, B0, B1, B3, A0. Remove all others.
  
- E. Apply power. The +5 VDC from the existing power supply can be used.  
**Verify** the 3 LED's (BATT, LINE, and STAT) are on continuously (none are blinking).

**5. Connect wires to COM 2**

Connect the 2 wires from the COM 2 connector on the old Controller to the COM 2 connector on the new Controller. Pin1 to Pin1, Pin2 to Pin2. *Note that Pin 1 is on the bottom of the new connector next to the TX2 LED, not at the top.*

**Verify** that neither RX2 nor TX2 LED is on. If one of these is on continuously, the wires are reversed.

**6. Set the OPTO22 SNAP-LCM4 Ethernet address**

The following steps only work for new M4SENET-100 Ethernet cards (i.e. cards that have a factory IP address of 0.0.0.0). If the Ethernet card is used, refer to the manual (M4SENET-100 Installation Guide Form 1156) for instructions on setting the IP address back to the factory default of 0.0.0.0.

**A. Connect the Ethernet cable**

Use a crossover cable if connecting directly to the computer or a standard Ethernet cable if connecting through a hub or switch.

**Verify** that either the 10MB or the 100MB LED is lit on the M4SENET-100 Card.

**B. Launch OptoBootP on the Furnace computer**

Click the Listen button

**C. Double click the Controllers MAC address when it appears on the list.**

Set the IP address to 10.192.105.102, Subnet Mask to 255.255.255.0, Gateway to 0.0.0.0  
Click Send

**D. Verify the Ethernet link**

Click Ping. You should see 4 replies  
Close OptoBootP

### **3.0 Download the Furnace program to the Controller**

**A.** Close the RTC Furnace program if it is running on the computer.

**B.** Double click the Download Icon on the desktop.

If the program does not download successfully you may need a software upgrade.

**C.** Double click the Furnace Icon on the desktop. Verify proper operation of the Furnace.