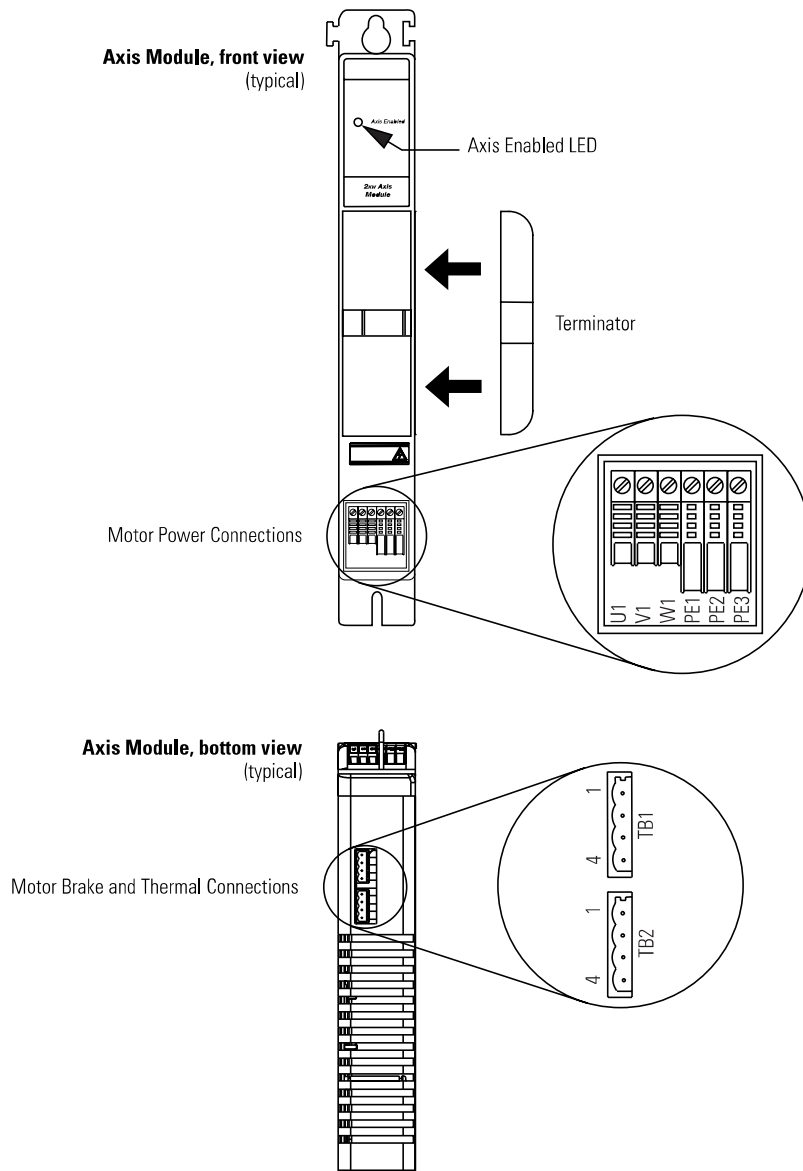


Locating Axis Module Connectors and Indicators

Use the figure below to locate the axis module connectors and indicators. Shown below are typical 1394C-AM03, -AM04, and -AM07 axis modules. Although the physical size of the 1394C-AM50-xx and AM75-xx model is larger, the location of the connectors and indicators is identical.

Figure 1.3
1394 Axis Modules (1394C-AMxx and -AMxx-IH)



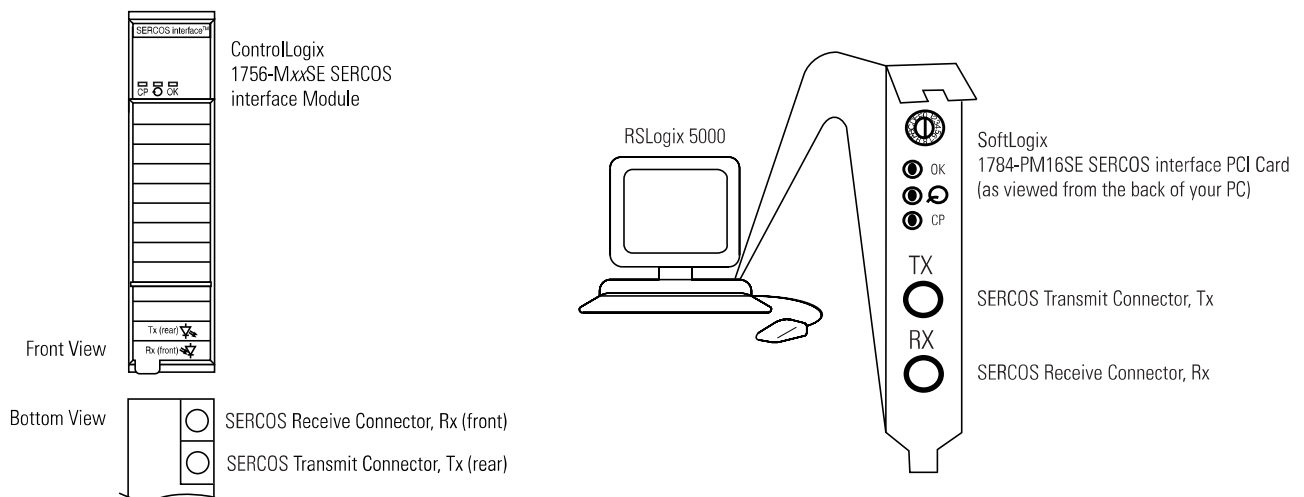
Note: Power and filter connectors are shown, however for wiring information, refer to the *1394 SERCOS Interface Installation Manual* (publication 1394-IN002x-EN-P).

Locating SERCOS Interface Fiber-Optic Connectors

Use the figure below to locate the SERCOS interface fiber-optic connectors. The fiber-optic ring is connected using the SERCOS Receive and Transmit connectors.

Note: Plastic cable is available in lengths up to 32 m (105.0 ft). Glass cable is available in lengths up to 200 m (656.7 ft).

Figure 1.4
ControlLogix and SoftLogix SERCOS Connector Locations



Configuring Your 1394 SERCOS interface System

These procedures assume you have completed mounting, wiring, and connecting your SERCOS interface module and 1394 SERCOS interface drive as described in the *1394 SERCOS Interface Installation Manual* (publication 1394-IN002x-EN-P).

The procedures in this section apply to 1394 SERCOS interface drive components and describe how to:

- Configure your 1394 system module
- Configure your Logix SERCOS interface module using RSLogix™ 5000 software
- Download your program to your Logix controller
- Apply power to your 1394 drive components
- Test and tune your motor using RSLogix 5000 software

These procedures assume you have connected the fiber-optic cables between your 1394 system module and the ControlLogix chassis with 1756-MxxSE interface module or personal computer with 1784-PM16SE PCI card.

Configuring Your 1394 System Module

To configure your 1394 system module:

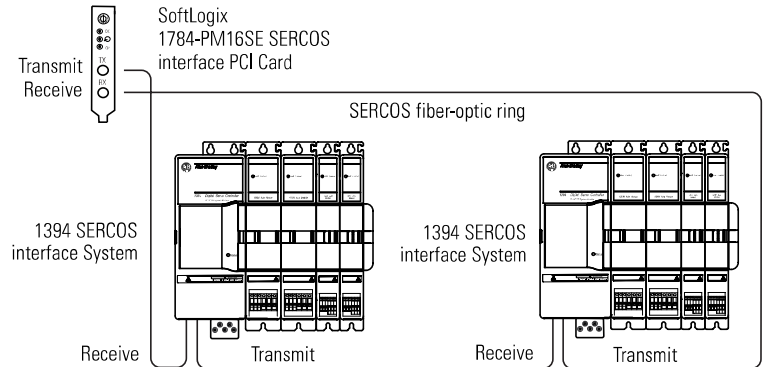
1. Verify that there is no 360/480V AC input power or 24V logic power applied to the system and that the SERCOS fiber-optic cables are connected to the Tx and Rx connectors. To verify your fiber-optic cable connections, refer to the *1394 SERCOS Interface Installation Manual* (publication 1394-IN002x-EN-P).
2. Set the base node address for each 1394 controller in your system by setting the Base Address switch. Refer to the example table below for switch settings. Refer to figures 1.1 and 1.2 for switch location. Configurations with up to nine 1394 SERCOS interface system modules are possible.

For example, if the number of 1394 SERCOS interface system modules you have is:	Set the Base Address switch for system number:								
	1 to:	2 to:	3 to:	4 to:	5 to:	6 to:	7 to:	8 to:	9 to:
1	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2	1	2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3	1	2	3	N/A	N/A	N/A	N/A	N/A	N/A
4	1	2	3	4	N/A	N/A	N/A	N/A	N/A
5	1	2	3	4	5	N/A	N/A	N/A	N/A
6	1	2	3	4	5	6	N/A	N/A	N/A
7	1	2	3	4	5	6	7	N/A	N/A
8	1	2	3	4	5	6	7	8	N/A
9	1	2	3	4	5	6	7	8	9

Note: Base address 0 is used for troubleshooting and not a valid setting for normal operation.

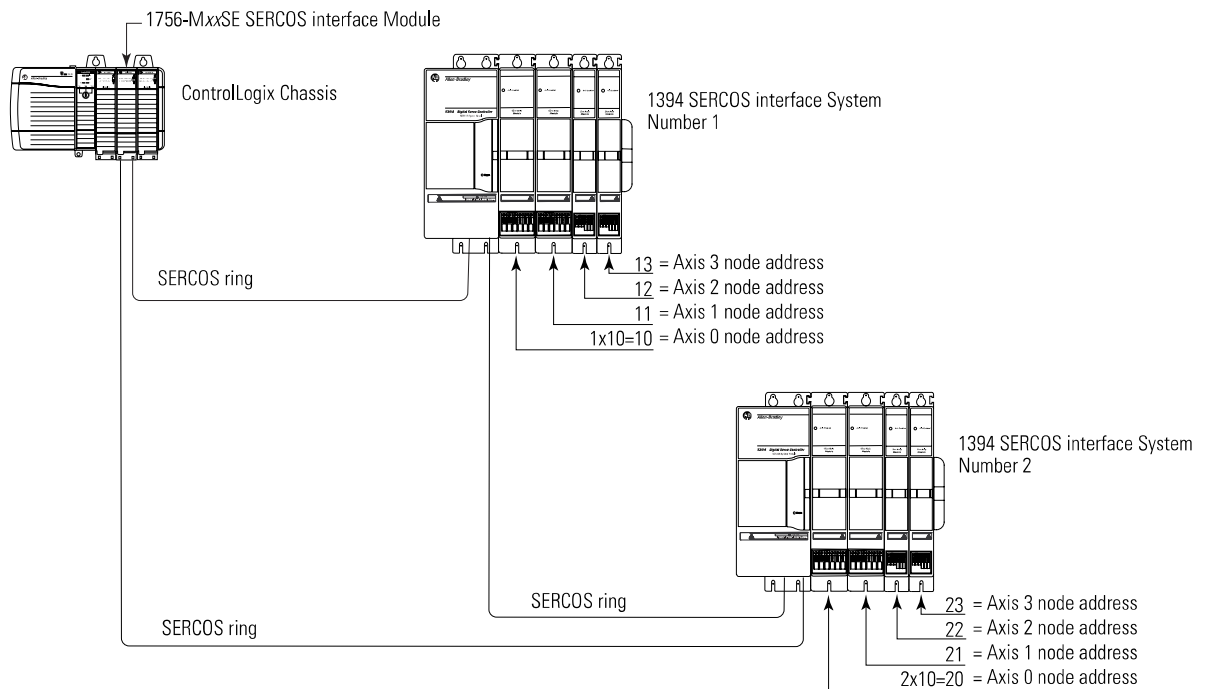
Refer to Figure 1.5 for an example of the fiber-optic ring connections between the 1394 system module(s) and the SoftLogix PCI card. Although Figure 1.5 only illustrates the SERCOS fiber-optic ring with the SoftLogix PCI card, node addressing for SoftLogix is done the same way as shown in the ControlLogix example.

Figure 1.5
Fiber-Optic Ring Connection (SoftLogix)



Axis 0 of each system module has a node address of the switch setting times 10 (for example: system number 1 times 10 = 10 and axes 1-3 on this system are numbered 11, 12, and 13, respectively). Refer to Figure 1.6 for an example of how node addresses are assigned.

Figure 1.6
Axis Module Node Addresses



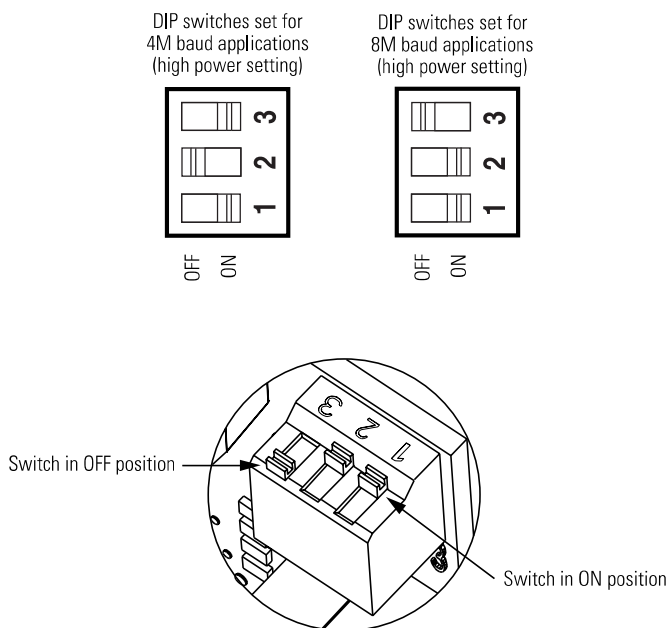
3. Set the baud rate using DIP switches 2 and 3. Refer to the table below for baud rate switch settings. Refer to figures 1.1 and 1.2 for DIP switch location.

For this baud rate:	Set switch 2:	Set switch 3:
2M baud	OFF	OFF
4M baud	OFF	ON
8M baud	ON	OFF

4. Set the SERCOS optical power level to **High** using DIP switch 1, as shown in Figure 1.7. Refer to the table below for optical power level switch settings. Refer to Figure 1.1 for the optical power switch location.

For this transmit level:	Set switch 1:
Low	OFF
High	ON

Figure 1.7
SERCOS Baud Rate and Optical Power DIP Switches



Configuring Your Logix SERCOS interface Module

This procedure assumes that you have finished wiring your 1394 SERCOS interface system and have finished configuring the 1394 system module switches.

For greater detail on the RSLogix 5000 software as it applies to ControlLogix and SoftLogix modules, refer to the table below for the appropriate publication.

For:	Refer to this Document	Publication Number:
Detailed information on configuring and troubleshooting your ControlLogix motion module	<i>ControlLogix Motion Module Setup and Configuration Manual</i>	1756-UM006x-EN-P
Detailed information on configuring and troubleshooting your SoftLogix PCI card	<i>SoftLogix Motion Card Setup and Configuration Manual</i>	1784-UM003x-EN-P

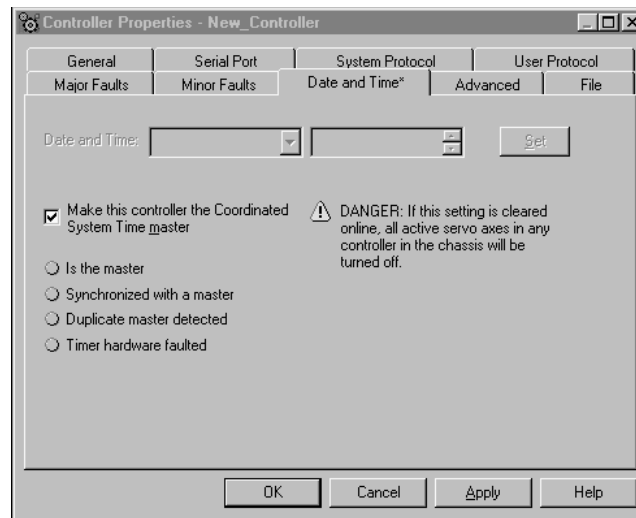
If you have already configured your Logix module using one of the setup and configuration manuals listed above, go directly to *Applying Power to the 1394 SERCOS interface System* (page 1-20). If not, go to *Configuring Your Logix Controller* beginning below.

Configuring Your Logix Controller

To configure your Logix controller:

1. Apply power to your Logix chassis/PC containing the SERCOS interface module and open your RSLogix 5000 software.
2. Select **New** in the File menu. The New Controller window opens.
 - Select controller type
 - Name the file
 - Select the ControlLogix chassis size
 - Select the ControlLogix processor slot
3. Select **OK**.
4. Select **Controller Properties** in the edit menu. The Controller Properties window opens.

5. Select the **Date and Time** tab.



6. Check the box **Make this controller the Coordinated System Time master**.

IMPORTANT

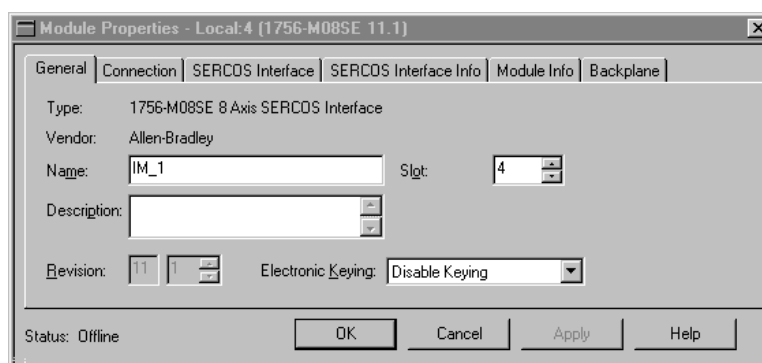
Only one ControlLogix processor can be assigned as the Coordinated System Time master.

7. Select **OK**.

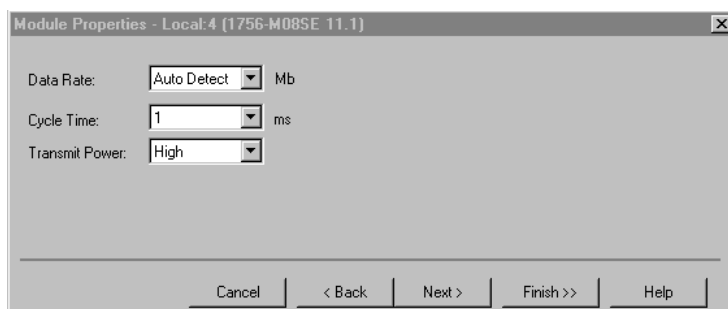
Configuring Your Logix Module

To configure your Logix module:

1. Right-click on I/O Configuration in the explorer window and select **New Module**. The Select Module Type window opens.
2. Select **1756-MxxSE** or **1784-PM16SE** as appropriate for your actual hardware configuration.
3. Select **OK**. The Module Properties wizard opens.



- Name the module
 - Select the slot where your module resides
 - Select an Electronic Keying option.
4. Select **Next** until the following screen opens.



5. Select **Data Rate**, **Cycle Time**, and **Optical Power** settings.

- Ensure the Data Rate setting matches DIP switches 2 and 3 (baud rate) as set on the system module, or use the Auto Detect setting.
- Set the Cycle Time according to the table below.

Logix SERCOS Module	1394 SERCOS interface System Module Series	Data Rate Mbit/s	SERCOS Ring Cycle Time ms	Number of Axes
1756-M08SE (Series A)	C or D	4	0.5	N/A
			1.0	up to 4
			2.0	up to 8
1756-M08SE (Series B)	D only	8	0.5	N/A
			1.0	up to 8
			2.0	
1756-M16SE or 1784-PM16SE	C or D	4	0.5	N/A
			1.0	up to 4
			2.0	up to 8
	D only	8	0.5	N/A
			1.0	up to 8
			2.0	up to 16

- Ensure the Optical Power setting (high or low) matches DIP switch 1 as set on the system module.

6. Select **Finish**. Your new module appears under the I/O Configuration folder in the explorer window.

7. Repeat steps 1-6 for each Logix module.

Configuring Your 1394 System Module

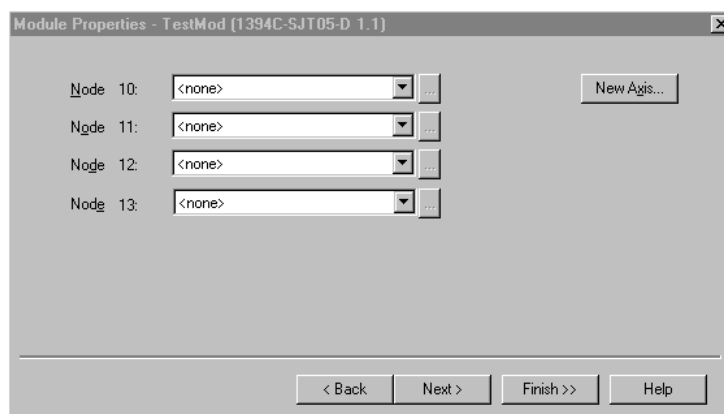
To configure your 1394 system module:

1. Right-click on the new module you just created and select **New Module**. The Select Module Type window opens.
2. Select your 1394C-SJTxx-D system module.
3. Select **OK**. The Module Properties window opens.

- Name the module
- Set the Base Node address

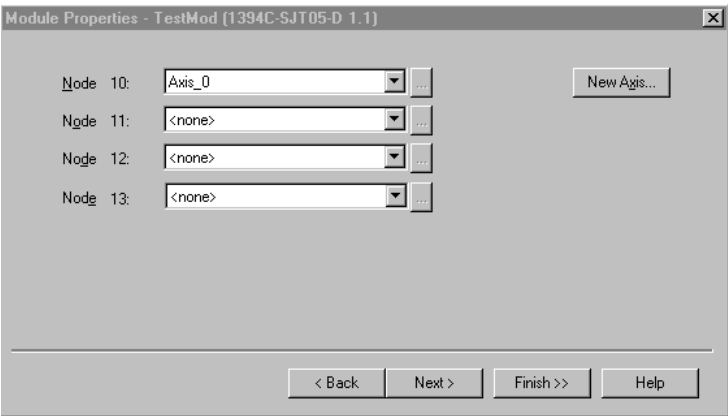
Note: Set node address in the software to match the node setting on the drive. Refer to *Configuring Your 1394 System Module*, step 2, page 1-8.

- Select an Electronic Keying option
4. Select **Next** until the following window opens.

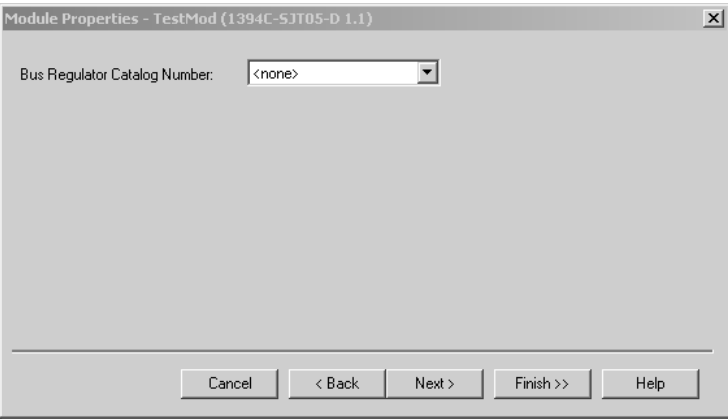


5. Select the **New Axis** button. The New Tag window opens.
6. Provide/Select the following New Tag attributes:
 - Axis name
 - **AXIS_SERVO_DRIVE** as the Data Type
7. Select **OK**.
8. Repeat steps 5 and 6 for each axis. The axes appear under the Ungrouped Axes folder in the explorer window.

- 9. Assign each axis to a node address (as shown in the window below).



- 10. Select **Next** until the following widow opens.



- 11. Select the Bus Regulator Catalog Number (shunt option) as appropriate for your actual hardware configuration.

If your hardware configuration includes this shunt option:	Then select:
1394C-SJT05-D or -SJT10-D with internal shunt only	Internal or <none>
1394C-SJT05-D or -SJT10-D with optional external shunt	1394-SR10A
1394C-SJT22-D with required external shunt	1394-SR9A, -SR9AF, -SR36A, or -SR36AF

- 12. Select **Finish**.
- 13. Repeat steps 1-12 for each 1394 system module. The axes appear under the Ungrouped Axes folder in the explorer window.