



SoftLogix5800 Controller

(catalog number 1789-L10, -L30, -L60)

Before You Begin

These installation instructions describe how to install the SoftLogix5800 controller and how to get it running.

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IMPORTANT

Installation instructions ship with the SoftLogix controller. If you want the associated user manual or other Logix-related manuals, you must order them separately. See page 20.

System Requirements

The following table identifies system requirements for the SoftLogix5800 controller.

Category:	Requirement:
personal computer	IBM-compatible Pentium 4 1.6 GHz or greater ⁽¹⁾ other requirements include: <ul style="list-style-type: none"> • floppy drive to support the Activation disk • hard disk drive must support bus mastering • you might also need bus-mastering drivers for the PC chip set; for Intel motherboards, this software is called "Application Accelerator" Demanding applications including sequential, motion, and other local applications running on the PC may require a dual CPU to achieve performance requirements.
operating system	Supported operating systems: <ul style="list-style-type: none"> • Microsoft Windows 2000 with Service Pack 4 (recommended) • Microsoft Windows XP with Service Pack 1 (recommended) • Microsoft Windows NT version 4.0 with Service Pack 6A or greater
RAM	256 Mbytes of RAM minimum
hard disk space	50 Mbytes of free hard disk space (or more based on application requirements)
motion requirements	primary 32-bit PCI slot one slot per motion card 1784-PM16SE requirements: <ul style="list-style-type: none"> • maximum of four 1784-PM16SE cards per computer • can associate only one 1784-PM16SE card with one controller 1784-PM02AE requirements: <ul style="list-style-type: none"> • maximum of four 1784-PM02AE cards per computer • maximum of four 1784-PM02AE cards can be associated with one controller • cannot associate a 1784-PM02AE motion card with the same controller as a 1784-PM16SE card
network requirements	primary or extended 32-bit PCI slot one slot per communication card supports 1784-PCICS for ControlNet supports 1784-PCIDS for DeviceNet supports commercially-available Ethernet port for EtherNet/IP third party networks through the Rockwell Automation Encompass Program
video requirements	16-color VGA graphics adapter 640 x 480 or greater resolution (256-color 800 x 600 minimum for optimal resolution)

⁽¹⁾ The SoftLogix controller has only been tested and qualified on genuine Intel processors.

Which SoftLogix controller you have determines how many slots are available in the virtual chassis and how many devices you can install.

This controller:	Has this maximum:	Available slots:
1789-L10	1 SoftLogix5800 controller memory size limit of 2 Mbytes per controller 2 PCI network interface cards, which can be a mix of: ⁽¹⁾ <ul style="list-style-type: none"> • one 1784-PCICS • one 1784-PCIC • one 1784-PCIDS • one EtherNet/IP card⁽²⁾ no motion support 1 1784-SIM module no third party virtual backplane module support	3-slot virtual chassis ⁽³⁾
1789-L30	2 SoftLogix5800 controllers memory size limit of 64 Mbytes per controller 5 PCI network interface cards ⁽⁴⁾ 2 1784-PM02AE analog motion cards 1 1784-PM16SE SERCOS motion card 5 1784-SIM modules EtherNet/IP support third party virtual backplane module support	5-slot virtual chassis
1789-L60	6 SoftLogix5800 controllers memory size limit of 64 Mbytes per controller 16 PCI network interface cards ⁽⁴⁾ 4 1784-PM02AE analog motion cards 4 1784-PM16SE SERCOS motion card 16 1784-SIM modules EtherNet/IP support third party virtual backplane module support	16-slot virtual chassis

⁽¹⁾ Even though the 1789-L10 controller supports two PCI network interface cards, each card must be a different network card. You cannot have two of the same cards installed in the computer.

⁽²⁾ EtherNet/IP via PCI bus card or embedded EtherNet/IP port on the PC motherboard.

⁽³⁾ As of version 12 of the SoftLogix controller, the 1789-L10 controller supports 3 slots in the virtual chassis.

⁽⁴⁾ The number of available slots in the virtual chassis is limited by activation level. You can have as many PCI communication cards as you have available slots in the virtual chassis and in the personal computer.

Pre-installation preparation in Windows

Before you can install the SoftLogix controller you need to:

- Log into Windows under an account that is a member of the Administrators user group on the computer where you are installing the SoftLogix controller.

To log in as a member of the Administrators group, your user account must be added to the Administrators group on the computer. Ask your system administrator if you need help.

- Install or verify that the following Windows services (required by the SoftLogix controller) are running. These services are automatically installed when you install Windows Networking or RAS:
 - Remote Procedure Call (RPC)
 - Server
 - Workstation

If you are using Windows 2000 or Windows XP, right click on the My Computer icon and select the Manage menu item. This opens the Computer Manager tool. Select the Services and Applications folder to verify that the required services are running.

If you are using Windows NT, open the Services applet in the Control Panel to verify that the required services are running.

Installing RSLinx Software

Before you install the SoftLogix controller, make sure RSLinx is installed on the computer. A separate CD with RSLinx software ships with the SoftLogix controller.

Installing the SoftLogix5800 Controller

IMPORTANT

If you have a previous version of the SoftLogix controller already installed on the computer, use Add/Remove Programs to remove that earlier version before installing the current version.

When you insert the installation CD into your CDROM drive, the CD automatically begins the Setup program for the controller. If your computer meets the hardware and software requirements for the controller, you can install the controller.

1. Make sure RSLinx software is installed on the computer. Shutdown RSLinx software before beginning this installation procedure.
2. Insert the SoftLogix installation CD.
3. From the installation window, select the SoftLogix 5800 button.



4. Follow the setup wizard. Click Next to progress through the wizard.
5. Microsoft recommends that you re-apply the Service Pack after installing other software packages.

You can use this installation CD to install the SoftLogix controller on multiple computers. Use the separate Activation disk to install an activation key on a computer in order to run the controller. If you plan to run the controller on multiple computers, you will need one activation key for each computer. See the next section on installing an activation key.

Installing EDS files

The installation procedure automatically installs the appropriate EDS files when you install the SoftLogix controller. However, on computers where you just install RSLogix 5000 or RSLinx software, you must install the appropriate EDS files if you want to remotely browse a SoftLogix controller. Use the Install EDS Files button on the installation CD to install the EDS files.

Activating the SoftLogix5800 Controller

The activation files on the Activation disk provide copy protection for the SoftLogix5800 controller. You must insert the Activation disk and move an activation key from the activation disk to the hard drive where you are installing the controller.

The Activation disk contains:

- one or more activation keys (you need one activation key for each computer that you intend to run a SoftLogix5800 controller)
- EVMOVE.EXE utility that moves activation keys to and from a computer
- RESET.EXE utility that reactivates a damaged activation key

The EVMOVE.EXE and RESET.EXE files always remain on the Activation disk.

This section describes:

For information about:	See page:
two methods for activating the controller	7
using the Activation disk as an activation key	7
installing the activation key on the hard drive	8
moving activations back to the Activation disk	8
protecting your activation files	9
resetting a damaged activation key	9
troubleshooting activation	10

Two methods for activating the controller

Depending on your needs, you can activate the SoftLogix controller from a:

- **Diskette drive.** Use this method if one key is typically used to enable the SoftLogix controller on more than one computer.
- **Hard drive.** Use this method if your Activation disk has a key available for every computer that will have a SoftLogix controller. If you select this method, you can still move a key from one computer to another. To run the SoftLogix controller on a different computer, use EVMOVE.EXE to move the activation key back to the Activation disk, then use EVMOVE.EXE again to move the activation key to the hard drive of the other computer.

Using the Activation disk as an activation key

To use the activation key from a diskette drive, modify the ROCKSOFT.INI file so that the SoftLogix controller searches the diskette drive for the activation key. Once you modify this file you must use the Activation disk each time you start the SoftLogix controller.

To modify the ROCKSOFT.INI file:

1. Install the SoftLogix controller, as described above.
2. When the Activation window opens, click Cancel to bypass the activation procedure.
3. Locate the directory where Windows is installed (for example, C:\WINNT).
4. Open the ROCKSOFT.INI file.
5. Locate the string that says: KEYDISK = FALSE.
6. Edit this string so that it says: KEYDISK = TRUE.
7. Save and close the ROCKSOFT.INI file.

Installing the activation key on the hard drive

When you move activation to a hard drive, the EVMOVE.EXE program moves only one activation key for the controller. However, when moving to a network drive, the EVMOVE.EXE program moves all activation keys by default. When activating the SoftLogix controller, you can accept this default or choose the number of activation keys to move.

To activate the SoftLogix controller:

1. Insert the Activation disk in a diskette drive.
2. Run EVMOVE.EXE from the disk.
3. In the From box, select the drive containing the Activation disk. In the To box, select the hard drive. Click OK.
4. Do one of the following:
 - To move activation keys for all installations on the computer, click Move.
 - To change the number of activations to move, select the SoftLogix controller, and then click the Edit Selected button. In the Move box, type the number of activation keys to move. Click OK, and then click Move.
5. To close the EvMove Summary box, click OK.

Moving activation keys back to the Activation disk

You can move activation keys from the hard drive back to the Activation disk at any time. For example, you could move activation back to the Activation disk for reasons such as:

- to run the SoftLogix controller on a different computer.
- before installing or using software that could damage the activation files (see “Protecting your activation files” on page 9).
- before sending the computer to be repaired.

To move an activation key back to the Activation disk:

1. Insert the Activation disk in a diskette drive.
2. Run EVMOVE.EXE from the disk.
3. In the From box, select the drive where the activation key is currently stored (such as the hard drive). In the To box, select the drive containing the Activation disk. Click OK.
4. Do one of the following:
 - To move activation keys for all installations on the computer, click Move.
 - To change the number of activations to move, select the SoftLogix controller, and then click the Edit Selected button. In the Move box, type the number of activation keys to move. Click OK, and then click Move.
5. To close the EvMove Summary box, click OK.

Protecting your activation files

Performing certain operations on the hard drive of a computer can damage activation files. Always move activation files from the hard drive back to the Activation disk before doing any of the following:

- upgrading or installing the computer's operating system or network software
- compressing or uncompressing the computer's hard drive

Resetting a damaged activation key

If an activation key becomes damaged for any reason, call Technical Support. When you call, be at a computer with the Activation disk available.

The support representative will explain how to find the product ID and system ID from the Activation disk and will assign a reset code for the activation key. After you get the reset code:

1. Insert the Activation disk in a diskette drive.
2. In Windows, run RESET.EXE from the disk.
3. In the Reset Code box, type the reset code, and then click Apply.
4. To close the Reset Summary box, click OK.

Troubleshooting activation

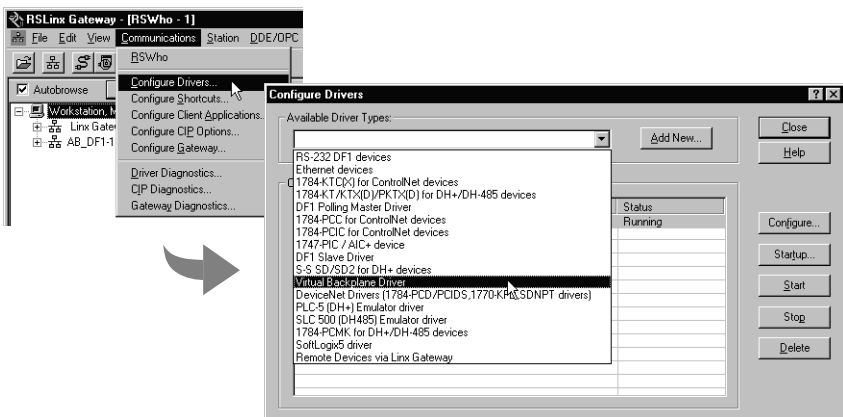
If your activation key was not installed correctly and you start the SoftLogix chassis monitor, the title bar of the monitor displays “Activation File Not Found!” If the activation is not working, make sure:

- you are using the right Activation disk. Check the serial number from the SoftLogix chassis monitor (select Help → About) against the serial number printed on the Activation disk label. The two serial numbers must match.
- the computer does not have a virus. Boot sector viruses can damage the Activation disk. Use a commercial virus protection program to keep your system free of viruses.
- you did not save any other files on the Activation disk. Saving any files to the Activation disk can damage the activation software.
- you did not damage the activation software. See “Protecting your activation files” on page 9.

Installing the Virtual Backplane Driver

Use RSLinx to configure the virtual backplane driver. You only need to do this once for the computer. To install the virtual backplane driver:

1. In RSLinx software, select Configure Driver. Select the virtual backplane driver and click Add New.



2. Enter the driver name, such as AB_VBP-1 and click OK.



3. There are no characteristics to define. RSLinx software loads the driver.

**IMPORTANT**

Even if you remotely program the controller over a ControlNet or Ethernet link, you must add the virtual backplane driver via RSLinx software. If you do not, persistent storage will not function and when you reboot the computer, the controller will come up with cleared memory (the program will not re-load).

Installing Communication Device Drivers

The *SoftLogix5800 Controller Release Notes*, publication 1789-RN516, lists the current versions of the drivers you need for your version of the SoftLogix controller to operate correctly with these devices:

- 1784-PCIC, -PCICS ControlNet communication card
- 1784-PCIDS DeviceNet communication card
- 1784-PM16SE SERCOS motion card
- 1784-PM02AE analog motion card

See the documentation for the device or its update kit to make sure you install its communication driver correctly.

Installing the Windows 2000 Driver for a Motion Card

If you are using a motion card under Windows 2000, you must install the appropriate plug-n-play drivers using the Add New Hardware wizard.

1. With the PC powered off and disconnected, install the motion card.

ATTENTION

Make sure to follow the installation instructions that ship with the motion card.

2. Boot the computer. The Found New Hardware wizard appears:



The first time you install the driver, Windows 2000 identifies a:

- 1784-PM16SE card as a PCI Device
- 1784-PM02AE card as a PCI Simple Communications Controller

If you are updating an existing driver, Windows 2000 identifies the card by its actual catalog number.

3. Click Next to move through the wizard. Select “Search for a suitable driver for my device (recommended)”.



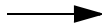
4. When the wizard prompts you for the location of the driver you want to install, select “Specify a location” and specify one of these:
 - on the SoftLogix5800 controller distribution CDROM at <CD-drive letter>\SoftLogix5800\Drivers\Win2k

or

 - in the SoftLogix5800 product installation target area at C:\Program Files\Rockwell Automation\SoftLogix5800\Drivers\Win2k (the path will be different if you did not install the controller in the default directory)



Click Next and specify the correct driver location.



5. Continue to follow the steps in the wizard to install the driver.

Installing the Windows XP Driver for a Motion Card

If you are using a motion card under Windows XP, you must install the appropriate plug-n-play drivers using the Add New Hardware wizard.

1. With the PC powered off and disconnected, install the motion card.

ATTENTION



Make sure to follow the installation instructions that ship with the motion card.

2. Boot the computer. The Found New Hardware wizard appears:



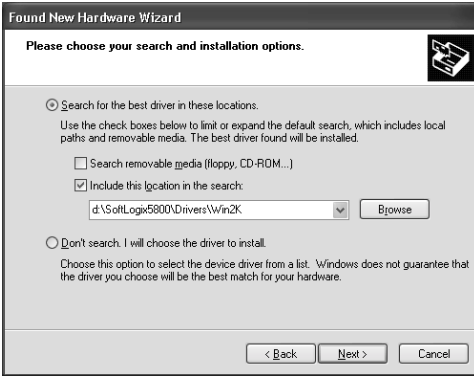
The first time you install the driver, Windows XP identifies a:

- 1784-PM16SE card as a PCI Device
- 1784-PM02AE card as a PCI Simple Communications Controller

If you are updating an existing driver, Windows XP identifies the card by its actual catalog number.

Select to install the driver from a list or specific location.

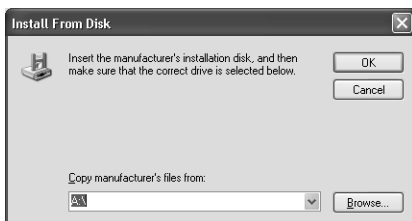
3. Click Next to move through the wizard. Select “Don’t Search. I will choose the driver to install”.



4. Click the Have Disk button.



5. Click the Browse button and locate the driver.



The driver file can be found at:

- on the SoftLogix5800 controller distribution CDROM at
<CD-drive letter>\SoftLogix5800\Drivers\Win2k
- or**
- in the SoftLogix5800 product installation target area at
C:\Program Files\Rockwell Automation\SoftLogix5800\Drivers\Win2k
(the path will be different if you did not install the controller in the default directory)

6. Continue to follow the steps in the wizard to install the driver.

Communicating Over an EtherNet/IP Network

With the version 13 SoftLogix controller, the SoftLogix5800 EtherNet/IP module supports both messaging and I/O at the same time. For the SoftLogix controller to operate on an EtherNet/IP network, you need:

- the computer where the SoftLogix controller resides must have an Ethernet communication port.
- the computer where the RSLogix 5000 programming software resides must have an Ethernet communication port.
- RSLinx software
- RSLogix 5000 programming software

You can use any commercially-available Ethernet port that meets the system requirements for running a SoftLogix controller on your computer. Use the Ethernet driver that comes with the device.

For more information about using the SoftLogix controller on an EtherNet/IP network, see the *SoftLogix System User Manual*, publication 1789-UM001.

Communicating Over a ControlNet Network

For the SoftLogix controller to operate on a ControlNet network, you need:

- a ControlNet communication card:
 - if you want to send messages and control I/O, including produced/consumed tags, over ControlNet, use a 1784-PCICS card
 - if you want to only send messages over ControlNet, use a 1784-PCIC card
- the SoftLogix chassis monitor to create the communication card in the virtual chassis and configure communication settings
- RSLinx software to install the virtual backplane driver
- RSLogix 5000 programming software to configure the communication card as part of the controller project
- RSNetWorx for ControlNet software to schedule the SoftLogix system on the network

For more information about using the SoftLogix controller on a ControlNet network, see the *SoftLogix System User Manual*, publication 1789-UM001.

Communicating Over a DeviceNet Network

For the SoftLogix controller to operate on a DeviceNet network, you need:

- a 1784-PCIDS DeviceNet communication card
- the SoftLogix chassis monitor to create the communication card in the virtual chassis and configure communication settings
- RSLinx software to install the DeviceNet communication driver and to install the virtual backplane driver
- RSLogix 5000 programming software to configure the communication card as part of the controller project
- RSNetWorx for DeviceNet software to configure the devices on the network
- IOLinx software must be installed for the SoftLogix controller to be able to read and write I/O data

For more information about using the SoftLogix controller on a DeviceNet network, see the *SoftLogix System User Manual*, publication 1789-UM001.

Monitoring the SoftLogix Controller LEDs



Indicator:	Color:	Description:
RUN	off	The controller is in Program or Test mode.
	green	The controller is in Run mode.
I/O	off	Either: <ul style="list-style-type: none"> • There are <i>no</i> devices in the I/O configuration of the controller. • The controller does <i>not</i> contain a project (controller memory is empty).
	green	The controller is communicating with all the devices in its I/O configuration.
	green flashing	One or more devices in the I/O configuration of the controller are <i>not</i> responding.
	red flashing	A virtual chassis error was detected. Contact your Rockwell Automation representative or local distributor.
FRC	off	No tags contain force values. Forces are inactive (disabled).
	flashing	At least one tag contains a force value. Force values are inactive (disabled).
	green	Forces are active (enabled). Force values may or may not exist.
RS232 ⁽¹⁾	off	No COM port was selected.
	green	The selected COM port was successfully assigned to channel 0 of the controller.
	red	There is a COM port conflict or you selected an invalid COM port number.
BAT ⁽¹⁾	off	Normal operation.
	amber flashing	The controller is in power-up mode.
	red	Persistent storage for the controller has failed.
OK	red flashing	Recoverable fault
	red	Non-recoverable fault. To correct: <ol style="list-style-type: none"> 1. Remove the controller from the virtual chassis and then re-install the controller. 2. Download the project. 3. Place the controller in Run mode. If the problem continues to occur, contact your Rockwell Automation representative or local distributor.
	green	The controller is OK.

⁽¹⁾ Note that these LEDs function slightly different than the same LEDs on a ControlLogix controller.

Other Publications

This product has the following additional manuals:

- *SoftLogix Documentation Set*, catalog number 1789-DPALEN
- *SoftLogix System User Manual*, publication 1789-UM001
- *SoftLogix Motion Module Setup and Configuration Manual*, publication 1784-UM003
- *Logix5000 Controllers Common Procedures Programming Manual*, publication 1756-PM001
- *Logix5000 Controllers General Instruction Set Reference Manual*, publication 1756-RM003
- *Logix5000 Controllers Process Control and Drives Instruction Set Reference Manual*, publication 1756-RM006
- *Logix5000 Controllers Motion Instruction Set Reference Manual*, publication 1756-RM007

To view these manuals, visit www.ab.com/manuals or www.theautomationbookstore.com

To purchase printed manuals:

- contact your local distributor or Rockwell Automation representative
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Notes:

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Rockwell Automation Support

Rockwell Automation provides technical information on the web to assist you in using our products. At <http://support.rockwellautomation.com>, you can find technical manuals, a knowledge base of FAQs, technical and application notes, sample code and links to software service packs, and a MySupport feature that you can customize to make the best use of these tools.

For an additional level of technical phone support for installation, configuration and troubleshooting, we offer TechConnect Support programs. For more information, contact your local distributor or Rockwell Automation representative, or visit <http://support.rockwellautomation.com>.

Installation Assistance

If you experience a problem with a hardware module within the first 24 hours of installation, please review the information that's contained in this manual. You can also contact a special Customer Support number for initial help in getting your module up and running:

United States	1.440.646.3223 Monday – Friday, 8am – 5pm EST
Outside United States	Please contact your local Rockwell Automation representative for any technical support issues.

New Product Satisfaction Return

Rockwell tests all of our products to ensure that they are fully operational when shipped from the manufacturing facility. However, if your product is not functioning and needs to be returned:

United States	Contact your distributor. You must provide a Customer Support case number (see phone number above to obtain one) to your distributor in order to complete the return process.
Outside United States	Please contact your local Rockwell Automation representative for return procedure.

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