



## ProcessLogix Firmware Update 2 for the 1784-PCIC Cards

Catalog Numbers 1757-PLX52, 1784-PCIC Series A and Series B

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### **IMPORTANT**

This update is required for all ProcessLogix R320.0, R400.0 SP2, R500.1 SP1 and R510.0 Servers and Engineering Workstations in systems using at least one 1784-PCIC series A or series B card.

The 1784-PCIC series A card is qualified for all ProcessLogix R320.0, R400.0 SP2, R500.1 SP1 and R510.0 Servers.

The 1784-PCIC series B card is only qualified for ProcessLogix R500.1 SP1 and R510.0 Servers.

For ProcessLogix R320.0 Servers, you must first install the R320 49.5 Day Patch. Refer to Knowledgebase Tech Note 21586 for more information.

## Contents of the Update

This update contains the following software:

- New firmware and driver files for the 1784-PCIC series A and series B cards
- New EDS file for the 1784-PCIC series B card
- New NTools software
- Updated ver\_rev file

## Before You Begin

Before beginning the installation, download **ProcessLogix\_PCIC\_Update2.exe** to your ProcessLogix Servers and Engineering Workstations.

This document does not contain 1784-PCIC installation instructions. Refer to the ControlNet Universal PCI Communication Interface Card Installation Instructions, publication 1784-IN003.

This document refers to the Installation and Upgrade Guide that was shipped with your ProcessLogix software.

## Required System Components

The following software components must be installed on your Servers before you install this firmware update:

- For ProcessLogix R510.0:
  - Windows 2000 Server Service Pack 4
  - Internet Explorer 6.0 web browser Service Pack 1
- For ProcessLogix R500.1 SP1:
  - Windows 2000 Server Service Pack 4
  - Windows 2000 Security Rollup
  - Internet Explorer 6.0 web browser with Internet Explorer 6.0 Security Update
- For ProcessLogix R400.0 SP2:
  - Windows 2000 Server Service Pack 2
  - Windows 2000 Security Rollup
  - Internet Explorer 6.0 web browser with Internet Explorer 6.0 Security Update
- For ProcessLogix R320.0:
  - Windows NT Server Service Pack 6A
  - Internet Explorer 5.01 web browser
  - Microsoft Data Access Components 2.1

## Enhancements

The new NTools software, version 500.1.1.18, is released with ProcessLogix R500.1 SP1 and R510.0 systems.

## Corrected Anomalies

This table lists anomalies corrected in this update.

Anomaly #	Description
Lgx00064746	New hardware qualification: PCIC series B
Lgx00069425	Anomalous data in ControlNet schedule packet produced by 1784-PCICS
Lgx00071684	Unexpected DMA Terminal Count interrupt may result in unexpected data
Lgx00074665	New firmware qualification of PCIC Series A for R400.0 SP2 and R320.0 Server

## Install the Server Update

You must complete this procedure on all Servers in your ProcessLogix system. If you have a redundant Server pair, you must complete the following procedure on SERVERB first, and then repeat the procedure for SERVERA. Before beginning the installation, be certain that SERVERA is the Primary Server and the Servers are synchronized.

### ATTENTION



All procedures listed in this section should be performed with the systems off-process. Be certain that your process is off control before you begin this procedure. This means the 1757-PLX52 controller should be in the Idle state.

## Install the 1784-PCIC Card

If the 1784-PCIC card is already installed, skip to Install the Update on page 4.

Install the 1784-PCIC card.

Refer to the ControlNet Universal PCI Communication Interface Card Installation Instructions, publication 1784-IN003.

## Install the Update

To install the update, complete the following steps.

1. Close all ProcessLogix applications.
2. Double-click ProcessLogix\_PCIC\_Update2.exe.
3. At the Update dialog, click Setup.
4. At the Installation Complete dialog, click OK.

This update installs the following files.

File Type	Revisions	Location and File Name
Firmware	3.10.42	C:\Honeywell\TPS50\System\Firmware\1784-PCIC\1784-PCIC-A\3_10_42\MnBtPcic3x.nvs <sup>(3)</sup> C:\Honeywell\TPS50\System\Firmware\1784-PCIC\1784-PCIC-A\3_10_42\PCI_RID2.BIN C:\Honeywell\TPS50\System\Firmware\1784-PCIC\1784-PCIC-A\3_10_42\PcicBt.bin C:\Honeywell\TPS50\System\Firmware\1784-PCIC\1784-PCIC-A\3_10_42\PcicMn.bin
Firmware	4.10.42	C:\Honeywell\TPS50\System\Firmware\1784-PCIC\1784-PCIC-B\4_10_42\MnBtPcic4x.nvs <sup>(4)</sup> C:\Honeywell\TPS50\System\Firmware\1784-PCIC\1784-PCIC-B\4_10_42\PCI_RID2.BIN C:\Honeywell\TPS50\System\Firmware\1784-PCIC\1784-PCIC-B\4_10_42\PcicBt.bin C:\Honeywell\TPS50\System\Firmware\1784-PCIC\1784-PCIC-B\4_10_42\PcicMn.bin
Driver	4.05.01 <sup>(1)</sup>	C:\Honeywell\TPS50\System\Firmware\1784-PCIC\DRV_4_05_01\ABPCICW.sys C:\Honeywell\TPS50\System\Firmware\1784-PCIC\DRV_4_05_01\abvbp2k.inf C:\Honeywell\TPS50\System\Firmware\1784-PCIC\DRV_4_05_01\VirtualBackplane.sys C:\Honeywell\TPS50\System\Firmware\1784-PCIC\DRV_4_05_01\ABPCICSW.sys
	3.7.17 <sup>(2)</sup>	C:\winnt\system32\drivers\ABPCICS.sys
NTools	PS500.1-01.18	C:\Honeywell\TPS50\System\bin\ntools.exe
EDS	NA	C:\Program Files\Rockwell Software\RSCommon\ProcessLogix EDS\0001000C00490400.eds <sup>(4)</sup>

<sup>(1)</sup> This driver applies only to R400.0 SP2, R500.1 SP1 and R510.0 ProcessLogix systems.

<sup>(2)</sup> This driver applies only to R320.0 ProcessLogix systems.

<sup>(3)</sup> This file applies only to the 1784-PCIC series A card.

<sup>(4)</sup> This file applies only to the 1784-PCIC series B card.

## Install/Update the 1784-PCIC Driver

This procedure is required for ProcessLogix R400.0 SP2, R500.1 SP1 and R510.0 Servers. Driver version 4.05.01 is not supported on ProcessLogix R320.0 Server; if you have a R320.0 Server, skip to Register the EDS File on page 6.

1. If the Found New Hardware Wizard opens, skip to step 7; otherwise, continue with the next step.
2. Right-click the My Computer icon and select Manage.
3. Select Device Manager.
4. If A-B Virtual Backplane is available, continue with the sub-steps below. If it is not available, skip to step 5.
  - a. Expand A-B Virtual Backplane.
  - b. Right-click A-B 1784-PCIC(S) and select Properties
  - c. Skip to step 6.
5. Under Other Devices, right-click the PCI device and select Properties.
6. On the Driver tab, click Update Driver.
7. Click Next.
8. Select the Search for a suitable driver option and click Next.
9. Uncheck the Floppy disk and CD-ROM drives checkboxes.
10. Check only the Specify a location checkbox and click Next.
11. Browse to C:\Honeywell\TPS50\System\Firmware\1784-PCIC\DRV\_4\_05\_01\abvbp2k.inf and click open.
12. Click OK.
13. If the Insert Disk dialog opens, click OK and continue with the sub-steps below. If it does not open, skip to step 14.
  - a. Browse to C:\Honeywell\TPS50\System\Firmware\1784-PCIC\DRV\_4\_05\_01\VirtualBackplane.sys and click Open.
  - b. Click OK.
  - c. Skip to step 15.
14. Click Next to install the driver.

15. If a Digital Signature Not Found dialog opens, click Yes.
16. If necessary, click Yes to overwrite the VirtualBackplane.sys file.
17. If necessary, click Yes to overwrite the ABPCICSW.sys file.
18. Click Finish.
19. Click Close.

The driver update is complete.

## Register the EDS File

This procedure is required only for a 1784-PCIC series B card.  
If you have 1784-PCIC series A card, continue with Configure RSLinx Drivers for the ControlNet Supervisory Network on page 7.

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**IMPORTANT**

You must register the EDS file on every Server in your ProcessLogix system.

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1. From the Start menu, select Program > Rockwell Software > RSLinx Tools > EDS Hardware Installation Tool.
2. Click Add/Remove.
3. At the Register Device dialog, select Register a single file.
4. Browse to C:\Program Files\Rockwell Software\RSCCommon\ProcessLogix EDS\0001000C00490400.eds and click Open.
5. At the Register Device dialog, click Next.
6. At the EDS file Installation Test Results dialog, click Next.
7. At the Change Graphic Image dialog, click Next.
8. At the Final Task Summary dialog, click Next.
9. At the Completing the EDS Wizard dialog, click Finish.
10. Right-click the My Computer icon and select Manage.

11. Expand Services and Applications and select Services.

**IMPORTANT**

In the following step, the RSLinx software is restarted. This action also restarts the ProcessLogix Control Data Access Server service, which will temporarily interrupt Control Builder communication with the controller.

12. Right-click RSLinx and select Restart.
13. At the Restart Other Services dialog, click Yes.
14. Close the Computer Management dialog.

## Configure RSLinx Drivers for the ControlNet Supervisory Network

The following procedure is only required if you have installed a 1784-PCIC card or replaced an existing 1784-PCIC card.

1. From the Start menu, select Programs > Rockwell Software > RSLinx > RSLinx.
2. Under Communications, select Configure Drivers.
3. Refer to the following table for driver configuration.

If	Then
A 1784-PCIC card is already configured	<ol style="list-style-type: none"> <li>a. Record the driver name of the 1784-PCIC card below. _____</li> <li>b. Select the driver for the 1784-PCIC card and click Delete.</li> <li>c. From the Available Driver Types pull-down menu, select 1784-PCIC(S) for ControlNet devices and click Add New.</li> <li>d. At the Add New RSLinx Driver dialog, type the driver name as recorded above.</li> <li>e. Click OK.</li> </ol>
A 1784-PCIC card is not already configured	<ol style="list-style-type: none"> <li>a. From the Available Driver Types pull-down menu, select 1784-PCIC(S) for ControlNet devices and click Add New.</li> <li>b. At the Add New RSLinx Driver dialog, click OK to accept the default driver name (AB_PCIC-1).</li> </ol>

4. In the Configure 1784-PCIC dialog, enter the following:
  - a. Serial Number (hex): This value is read from the PCIC card and does not change.
  - b. Network Address (dec):  
Change the default of 99 to:
    - 24, for nonredundant Servers
    - 24, for redundant Server A
    - 23, for redundant Server B
5. Click OK to start the PCIC driver.

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**IMPORTANT**

In the Configure Drivers dialog box, the PCIC driver should have the status Running. If the driver status is not Running, contact Rockwell Automation Technical Support.

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6. Close the Configure Drivers dialog.
7. Close RSLinx software.
8. Restart the computer.



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## Firmware Update

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**IMPORTANT**

Do not update the firmware of the 1784-PCIC series A or series B cards until after you have updated the device drivers for these devices.

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Use NTOOLS to update the firmware in the 1784-PCIC cards.

Refer to the table on page 4 for firmware locations.

For more information about updating the firmware in the 1784-PCIC cards, refer to the firmware update section in the Installation and Upgrade Guide.

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**IMPORTANT**

- Do not flash the 1784-PCIC series A card with 4.10.42 firmware.
  - Do not flash the 1784-PCIC series B card with 3.3 Q28, 3.6.38, 3.7.39, or 3.10.42 firmware.
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**IMPORTANT**

In ProcessLogix R500.1 SP1 and R510.0 redundant Server pairs, a 1784-PCIC series A card with 3.10.42 firmware and 4.05.01 driver in one Server is compatible with a 1784-PCIC series B card with 4.10.42 firmware and 4.05.01 driver in the other Server.

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If you have a nonredundant Server, installation of the Server update is complete. Skip to Install the Engineering Workstation Update on page 11.

If you have a redundant Server, continue with Verify that Servers Are Synchronized on page 9.

## Verify that Servers Are Synchronized

This procedure is required only for a redundant Server pair.

1. Verify that Servers are synchronized.
  - a. From the Start menu on the Primary Server, select Programs > ProcessLogix Server > Station.
  - b. Under View, select System Status > Server Redundancy.

- c. Verify that the display shows green LED indicators for the following states:

Primary Server

- Running

Backup Server

- Synchronized
- Running

Link Status

- Link 0 (LNK00) - OK Active link
- Link 1 (LNK01) - OK (only applies if you are using a dual LAN)

2. Skip to step 3 if all LED indicators are green.

Follow these steps to synchronize the Servers if the Backup Server Synchronized LED indicator is red.

- a. Verify that the Backup Server Running LED indicator is green.
- b. Click the Oper field in the lower-right corner of the display.
- c. Type *mng*r in the Station Logon dialog and click OK.
- d. Click Synchronize.
- e. Type *Y* and press Enter when the Synchronize Databases (Y/N) prompt appears.

Depending on your configuration, this may take some time to complete.

- f. Wait for the synchronization to complete (Synchronization Complete prompt appears) and verify that the display shows green LED indicators for the following states:

Primary Server

- Running

Backup Server

- Synchronized
- Running

Link Status

- Link 0 (LNK00) - OK Active link
- Link 1 (LNK01) - OK (Only applies if you are using a dual LAN)

3. Repeat all sections of the Install the Update procedure on SERVERA.

Refer to Install the Update on page 4.

4. After the update has been installed on both SERVERA and SERVERB, verify that SERVERA is now Primary and the Servers are synchronized.

Installation of the Server update is complete.

## Install the Engineering Workstation Update

You must complete this procedure on all Engineering Workstations in your ProcessLogix System

1. Close all ProcessLogix applications.
2. Double-click ProcessLogix\_PCIC\_Update2.exe.
3. At the Update dialog, click Setup.
4. At the Installation Complete dialog, click OK.

Installation of the Engineering Workstation update is complete.

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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>.

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