



iSeries

PCI Card and
Integrated xSeries Adapter Card
Installation Instructions

Version 5





@server

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Install PCI feature cards

These instructions will step you through installing PCI cards.

This feature is customer installable. However, the installation of this feature is intended for an experienced user who understands industry terminology with system experience. You can elect not to do this installation yourself. Contact IBM® or an authorized dealer to make arrangements for them to perform the feature installation for a fee.

Before you begin

You need to allow additional time to complete your jobs, back up your system, perform an initial program load (IPL) of your system, and verify your hardware configuration.

When you use these instructions, you may do some of the following:

- Remove the system unit covers.
- Install your new hardware.
- Install covers.
- Perform an IPL of your operating system.
- Verify your new hardware configuration.

Some of the figures in these instructions may not look exactly like the system unit that you have. However, the steps to perform the task are the same.

- ___ 1. Ensure that you have a current backup of your system (including operating systems, licensed programs, and data).
- ___ 2. Ensure that you take a few minutes to become familiar with these instructions.
- ___ 3. If there are incorrect, missing, or visibly damaged parts, contact one of the following:
 - Your authorized dealer
 - IBM Rochester Manufacturing Automated Information Line (R-MAIL)
 - 1-800-300-8751 (United States)
 - 1-507-253-5242 (worldwide)
- ___ 4. If you encounter difficulties during the installation, contact your authorized service provider or your authorized dealer.
- ___ 5. If you are installing new hardware in logical partitions, you need to plan and understand the requirements to be successful. Go to Logical partitions in the *Information Center*. Then return to these instructions.
- ___ 6. Determine if there are any existing PTF prerequisites before you install your new feature. Go to the following Web site:
<http://www-912.ibm.com/supporthome.nsf/document/10000051>
 - a. Select **All Documents**.
 - b. Select **Collapse**.
 - c. Select **General Information**.
 - d. Select **Offerings**.
 - e. Select **Feature Prerequisites**.

- f. Select **Customer Install Features Prerequisites**.
- g. Locate your feature number and OS/400® release and check the prerequisites.

Install your new feature card

These instructions help you install a new feature card in your unit. In some cases it may be necessary to move cards already in your system. For more information on when it may be necessary to move PCI cards, refer to the iSeries System Builder



. Then return here and refer to “Move a card in your iSeries” on page 51.

Integrated xSeries Adapter for iSeries feature

Are you installing machine type 1519 or card number 2689 in a xSeries server?

- ___ **Yes:** Go to “Install Integrated xSeries Adapter for iSeries” on page 63.
- ___ **No:** Continue with the instructions.

Terms you need to know

IOA Input/output adapter

IOP Input/output processor

IOP card group

An IOP and all the IOAs controlled by that IOP.

- A maximum of one IOP and four IOAs are allowed in an IOP card group.
- An exception is the IXS card (feature card 289x), which has a maximum of three IOAs in the same IOP card group.

Feature number

The numbers used to order new features for system units and expansion units.

CCIN (customer card identification number)

The identifier number on the feature card.

PCI bridge set

A set of PCI card positions. IOP card groups may not cross PCI bridge set boundaries.

Find your current system configuration

Find out the current configuration of your iSeries system unit or expansion unit. Bring up an iSeries session and sign on to the system. If you have more than one iSeries, bring up a session on the system that is being upgraded and for which you have service tools authority.

- ___ 1. Type **strsst** on the command line of the *Main Menu* and press Enter.
- ___ 2. Type **your service tools user ID and service tools password** on the *Start Service Tools (STRSST) Sign On* display and press Enter.
- ___ 3. Select **Start a service tool** from the *System Service Tools (SST)* display and press Enter.
- ___ 4. Select **Hardware service manager** from the *Start a Service Tool* display and press Enter.
- ___ 5. Select **Packaging hardware resources (system, frames, cards...)** from the *Hardware Service Manager* display and press Enter.

- ___ 6. Type **9** on the **System Unit** line and press Enter.
- ___ 7. Select **Include empty positions**.
- ___ 8. Look for the cards in the **Card Pos** column (xxx). Write the **Type** number of the existing cards (xxxx) in the appropriate "Current configuration tables" on page 25.
- ___ 9. Press F12 one time.
- ___ 10. Do you have an expansion unit attached?
 - ___ **No:** Continue with the instructions.
 - ___ **Yes:** Do the following:
 - ___ a. Type **9** for the **System Expansion Unit** field and press Enter.
 - ___ b. Select **Include empty positions**.
 - ___ c. Look for the cards in the **Card Pos** column (Cxx). Write the **Type** number of the existing cards (Cxx) in the appropriate "Current configuration tables" on page 25.
 - ___ d. When complete, press F12 one time.
 - ___ e. If you have more than one expansion unit, go to step 10a and repeat the steps for each expansion unit that is listed.

Determine the best place to install your card

- ___ 1. Are you installing the card in logical partitions?
 - ___ **No:** Continue with the next step.
 - ___ **Yes:** The LPAR Validation Tool should be used to determine card placement. Go to Use the LPAR Validation Tool in the *Information Center*. Then return to these instructions and go to "Install your card" on page 11.
- ___ 2. Are you installing a 289x feature?
 - ___ **No:** Continue with the next step.
 - ___ **Yes:** The 289x IOP (IXS) card is customer installable in the 270 system unit with 5075, 5095 or 0595 expansion units attached or a 810 system unit with 5075, 5078, 0578, 5088, 0588, 5095, or 0595 expansion units attached.

Are you installing a 289x in a 270 system unit with 5075, 5095 or 0595 expansion units attached or a 810 system unit with 5075, 5078, 0578, 5088, 0588, 5095, or 0595 expansion units attached?

 - ___ **No:** The 289x card is only customer installable in units listed above. Contact IBM Service to install the 289x in other units.
 - ___ **Yes:** Do the following:
 - ___ a. The 289x is installed in the card position labeled **IXS**. Refer to "Current configuration tables" on page 25 for the IXS location.
 - ___ b. In the 270 or 810 system unit, the 2890, 2891, and 2899 card occupies one card position, and a second card position is reduced to a short card position. The 2892 occupies one card position.
 - ___ c. In the expansion units, the 2890, 2891, and 2899 card occupies two card positions, and a third card position is reduced to a short card position. The 2892 occupies two card positions.

- ___ d. For the 2890, 2891, and 2899, place the first LAN IOA in the short card position. For the 2892, place the first LAN IOA in the position next to the 2892 card.
 - ___ e. If there is a second LAN, place that card in the next position.
 - ___ f. If there is a third LAN, place that card in the next position.
 - ___ g. Check your current system configuration to see if the IXS position and LAN IOA positions are available. If not, you need to move cards. Go to “Move a card in your iSeries” on page 51 if you need to move a card, or go to “Install your card” on page 11 if you can install the IXS card now.
- ___ 3. Are you installing a 2842, 2843, or 2844 IOP feature?
- ___ **Yes:** Continue with the next step.
 - ___ **No:** Go to step 6 on page 5.
- ___ 4. Use Table 1 to locate values of your current configuration.
- Install the 2842, 2843, or 2844 IOP in any card position labeled **IOP**. There are some imbedded IOPs. Refer to “Current configuration tables” on page 25 for the IOP locations.
 - You may need to move an IOA card to install your IOP. If you need to move an IOA, go to step 6 on page 5 to determine where to move the card.
 - By installing an IOP, you are creating a new IOP card group.
 - IOPs cannot be placed in consecutive positions. IOPs can be placed in the position following 2892 or 2792.

Table 1. IOP Card numbers, names, memory values, performance values and restrictions

Feature number	CCIN	Description	Restrictions	Maximum number IOAs	Memory value	Performance value
Imbed IOP	284B, 284C, 284D, 284E, 286C, 286F	Imbed IOP	• IOPs cannot be placed in consecutive positions	4	100	100
2790 2791 2799	2890-001 2890-002 2890-003	PCI Integrated xSeries Server	• Not customer installable	3	Not applicable	Not applicable
2792	2892-001	PCI Integrated xSeries Server	• Not customer installable	3	Not applicable	Not applicable
2842	2842	PCI Node Input/Output Processor (IOP)	<ul style="list-style-type: none"> • Only 270 or 810 and 5075, 0595, 5095 • IOPs cannot be placed in consecutive positions • A maximum of: <ul style="list-style-type: none"> – Two 2842s in 270 and 810 units – Three 2842’s in 5075 units – Two 2842’s in 5095 or 0595 units 	4	100	100

Table 1. IOP Card numbers, names, memory values, performance values and restrictions (continued)

Feature number	CCIN	Description	Restrictions	Maximum number IOAs	Memory value	Performance value
2843	2843	PCI Node Input/Output Processor (IOP)	<ul style="list-style-type: none"> IOPs cannot be placed in consecutive positions A maximum of: <ul style="list-style-type: none"> Two 2843s in 810 units Five 2843s in 820 units Three 2843s in 825 units Three 2843s in 5075 units Two 2843s in 5095 or 0595 Four 2843s in 830, 840, 870, 890 units Five 2843s in 5074, 5094, 0594 units Two 2843s in SB2/SB3 units 	4	211	100
2844	2844	PCI Input/Output Processor	<ul style="list-style-type: none"> IOPs cannot be placed in consecutive positions A maximum of: <ul style="list-style-type: none"> Two 2844s in 810, 5095, 0595 units Five 2844s in 820, 5074, 5094, 5088, 0588 units Three 2844s in 825, 5075 units Four 2844s in 830, 840, 870, 890 units 2844 is not supported in the 270 unit 	4	211	100
2890 2891 2899	2890-001 2890-002 2890-003	Integrated xSeries Server Input/Output Processor (IOP)	<ul style="list-style-type: none"> IOPs cannot be placed in consecutive positions Only 4838, 2743, 2760, and 2744 IOAs can be added in the same CCIN 2890 card group Two positions are used by the 2890 card except for 270 or 810 units 	2 (270, 810, 5075, 5095, 0595) 3 (5078, 0578, 5088, 0588)	Not applicable	Not applicable
2892	2892-001	PCI Integrated xSeries Server	<ul style="list-style-type: none"> IOPs cannot be placed in consecutive positions Only 2744, 5700, 5701 IOAs can be added in the same IOP card group Two positions are used by the 2892 card, except for 270 or 810 	2 (270, 810, 5075, 5095, 0595) 3 (5078, 0578, 5088, 0588)	Not applicable	Not applicable

- 5. Install your IOP card. Go to “Install your card” on page 11.
- 6. Fill in the “Placement tables” on page 37 to determine the best place to install or move your IOA card, using the card information on the “Current configuration tables” on page 25 (entered at step 8 on page 3).

- ___ a. Locate the first IOP (2842, 2843, 2844, 289x, Imbed).
- ___ b. Determine the IOAs controlled by the IOP (IOP card group).
 - An IOP card group is an IOP and all IOAs controlled by that IOP.
 - IOP card groups cannot cross PCI bridge set boundaries. Refer to “Current configuration tables” on page 25.
- ___ c. Locate the first IOP card group with an empty position.
- ___ d. Find and enter (on the placement table) the values of each IOA that is currently installed in this IOP card group with an empty position. Use Table 2 to find the values.
- ___ e. Install the new card in the next available position in the IOP card group. Do not leave open positions if possible.
You should try to not move your console position.
- ___ f. Write down the feature number or CCIN of the new card in the table.
- ___ g. Find and enter the values of the new card in the placement table.
- ___ h. Add together the IOA’s *Memory Value* and write down in the *IOA Totals*.
- ___ i. Add together the IOA’s *Performance Value* and write down in the *IOA Totals*.
- ___ j. If the totals are **not** greater than the value of the IOP for that card group, verify the restrictions, such as card length to make sure the card can be installed in the empty position. If the restrictions are not met, choose another empty position and repeat the process. Otherwise, you are ready to install the new card in that empty position.
- ___ k. If the totals **are** greater than either IOP card value, it is recommended to move to the next available IOP card group with an empty card position and repeat the steps to complete another *Placement Worksheet*.
- ___ l. Press F3 three times and press Enter to return to the *Main Menu*.
- ___ m. Go to “Install your card” on page 11.

Table 2. Card numbers, names, memory values, performance values and restrictions

Feature Number	CCIN Number	Description	Restrictions	Card Length	Memory Value	Performance Value
0092	2689	Integrated Adapter for xSeries		Long	N/A	N/A
2742	2742	PCI Two-line WAN		Short	15	14

Table 2. Card numbers, names, memory values, performance values and restrictions (continued)

Feature Number	CCIN Number	Description	Restrictions	Card Length	Memory Value	Performance Value
2743 2760	2743 2760	PCI Ethernet/IEEE 802.3 adapter	<p>These restrictions do not apply if 2743 is part of a CCIN 2890 IOP card groups.</p> <ul style="list-style-type: none"> Do not place in a 5V position Place in a 64-bit position except in iSeries 270 and 810 where a 32-bit position must be used because there are no 64-bit positions or in iSeries 820 where a 64-bit position is preferred but a 32-bit position may be used Limited to one 2743, 2760, 5700, or 5701 per PCI bridge set boundary An IOP with a 2743 supports a maximum of one other IOA of any kind 	Short	2	26
2744	2744	PCI 100/16/4MB Token-Ring	<ul style="list-style-type: none"> No more than a total of two 4838, 2849 and 2744 in any combination allowed per IOP, except for CCIN 289x IOPs 	Short	25	36
2749	2749	PCI Ultra Magnetic Media Controller		Short	22	25
2757	2757	PCI RAID Disk Unit Controller	<ul style="list-style-type: none"> No more than one 2757, 2763, 2782, 4748, 9748, 9757, 9763, 9778 or 9782 allowed per IOP when this IOP is also driving a 2817, 4815, 4816, or 4818 A maximum of three 2757, 2763, 2782, 4748, 9748, 4778, 9778, 5705 allowed per IOP in any combination 	Long	29	30
2760, 2743	2760, 2743	PCI 1 Gbps Ethernet UTP	<p>These restrictions do not apply if 2760 is part of a CCIN 2890 IOP card group.</p> <ul style="list-style-type: none"> Do not place in a 5V position Place in a 64-bit position except in iSeries 270 and 810 where a 32-bit position must be used because there are no 64-bit positions or iSeries 820 where a 64-bit position is preferred but a 32-bit position may be used Limited to one per PCI bridge set boundary An IOP with a 2743 supports a maximum of one other IOA of any kind 	Short	2	26

Table 2. Card numbers, names, memory values, performance values and restrictions (continued)

Feature Number	CCIN Number	Description	Restrictions	Card Length	Memory Value	Performance Value
2763	2763	PCI 2-Port RAID Disk Unit Controller	<ul style="list-style-type: none"> • Only on 270, 810, 820, 5075, 5095, 0595 • No more than two allowed per IOP • Only one 2763, 4748, 4778, 9748 or 9778 in the same IOP card group with 2817, 4815, 4816, 4818 	Long	29	21
2765	2765	PCI Fibre Channel Tape Controller	<ul style="list-style-type: none"> • Limited to no more than two 2765s or 2766s per PCI bridge set boundary 	Short	36	50
2766	2766	PCI Fibre Channel Disk Unit Controller	<ul style="list-style-type: none"> • Only one per IOP and no other IOAs • Limited to no more than two 2765s or 2766s per PCI bridge set boundary • Not permitted in any SB2 or SB3 systems and attached units 	Short	–	–
2772	2772	Dual WAN/Modem Adapter	Non-CIM (complex impedance matching)	Short	15	14
2773	2773	Dual WAN/Modem Adapter	CIM (complex impedance matching)	Short	15	14
9767	2767	PCI Disk Unit Controller IOA	<ul style="list-style-type: none"> • Only on 270, 820, 5075 	Short	29	21
2776		HSL-2 Ports 8 Copper	Not customer installed.			
2768	2768	PCI Magnetic Media Controller		Short	22	25
2782	2782	PCI RAID Disk Unit Controller	<ul style="list-style-type: none"> • No more than one 2757, 2763, 2782, 4748, 9748, 9757, 9763, 9778, or 9782 allowed per IOP when this IOP is also driving 2817, 4815, 4816, or 4818 • 2782 is supported on 270, 810, 820, 825, 5075, 5095, 0595 • A maximum of three 2782, 2763, 2757, 4748, 9748, 4778, 9778, 5705 allowed per IOP in any combination 	Long	29	21
2785	2785	HSL 2-Ports Copper				
2786	2786	HSL 2-Ports Optical				
2788	2788	HSL-2 Ports – 8 optical				
2793	2793	PCI 2-Line WAN with Modem	Non-CIM (complex impedance matching)	Short	15	14
2794	2793	PCI 2-Line WAN with Modem	CIM (complex impedance matching)	Short	15	14

Table 2. Card numbers, names, memory values, performance values and restrictions (continued)

Feature Number	CCIN Number	Description	Restrictions	Card Length	Memory Value	Performance Value
2817	2817	PCI 155 Mbps MMF ATM	<ul style="list-style-type: none"> • Only one 2817, 4815, 4816, or 4818 per IOP • Only one 2757, 2763, 2782, 4748, 4778, 5705, 9748, 9778 within the same IOP card group as 2817 • If you have one 2817, 4815, 4816, or 4818, then you can have only one 2744, 2849, or 4838 in the IOP card group 	Short	35	47
2849	2849	PCI 100/10 Mbps Ethernet	<ul style="list-style-type: none"> • No more than total of two 2849, 4838 and 2744 in any combination allowed per IOP, except when part of a 289x IOP card group 	Short	25	36
2886	2886	Optical Bus Adapter				
2887	2887	HSL-2 Bus Adapter				
4723	2723	PCI Ethernet/IEEE 10		Short	25	12
4745	2745	PCI Node WAN		Short	15	14
4746	2746	PCI Twinaxial Workstation Controller		Short	10	6
4748/9748	2748	PCI RAID Disk Unit Controller	<ul style="list-style-type: none"> • No more than three 4748, 9748, 2757, 2782, 5705, 4778, or 9778 allowed per IOP • Only one 2763, 4748, 4778, 9748, or 9778 in the same IOP card group with 2817, 4815, 4816, or 4818 	Long	29	21
4750	2750	PCI ISDN BRI U	<ul style="list-style-type: none"> • No more than one allowed per IOP 	Long	25	7
4751	2751	PCI ISDN BRI S/T	<ul style="list-style-type: none"> • No more than one allowed per IOP 	Long	25	7
4761	2761	Remote Access Integrated Modem (8-port)	<ul style="list-style-type: none"> • No more than one allowed per IOP 	Long	22	7
4778/9778	2778/ 4778/ 9778	PCI RAID Disk Unit Controller	<ul style="list-style-type: none"> • No more than three 4748, 9748, 2757, 2782, 5705, 4778, or 9778 allowed per IOP • Only one 2763, 4748 or 9748 in the same IOP card group with 2817, 4815, 4816, or 4818 	Long	29	25
4801	4758-023	PCI Cryptographic Coprocessor	<ul style="list-style-type: none"> • Cannot be controlled by the Imbed IOP in 270, 810 or 820 units • Cannot be controlled by the load source IOP in 825, 830, 840, 870, 890, SB2, or SB3 units 	Short	11	18

Table 2. Card numbers, names, memory values, performance values and restrictions (continued)

Feature Number	CCIN Number	Description	Restrictions	Card Length	Memory Value	Performance Value
4805	2058	PCI Cryptographic Accelerator	<ul style="list-style-type: none"> • Cannot be controlled by the load source IOP. • Maximum of one 4805 if 2743, 2760, 5700, or 5701 is also in the same IOP card group • Maximum of two 4805 per IOP 	Short	2	26
4815	2815	PCI 155MBPS UTP OC3 ATM	<ul style="list-style-type: none"> • Only one 2817, 4815, 4816, or 4818 per IOP • Only one 2763, 4748, 4778, 9748, 2782, 2757, 5705 or 9778 within the same IOP card group as 4815 • If you have one 2817, 4815, 4816, or 4818, then you can have only one 2744, 2849 or 4838 in the IOP card group 	Short	35	47
4816	2816	PCI 155Mbps MMF ATM	<ul style="list-style-type: none"> • Only one 2817, 4815, 4816, or 4818 per IOP • Only one 2763, 4748, 4778, 9748, 2782, 2757, 5705 or 9778 within same IOP card group as 4816 • If you have one 2817, 4815, 4816, or 4818, then you can have only one 2744, 2849 or 4838 in the IOP card group 	Short	35	47
4818	2818	PCI 155Mbps SMF OC3 ATM	<ul style="list-style-type: none"> • Only one 2817, 4815, 4816, or 4818 per IOP • Only one 2763, 4748, 4778, 9748, 2782, 2757, 5705 or 9778 within the same IOP card group as 4818 • If you have one 2817, 4815, 4816, or 4818, then you can have only one 2744, 2849 or 4838 in the IOP card group 	Short	35	47
4838	2838	PCI 100/10Mbps Ethernet	<ul style="list-style-type: none"> • No more than a total of two 4838, 2849 and 2744 in any combination allowed per IOP, except when part of 289x IOP card group 	Short	25	36

Table 2. Card numbers, names, memory values, performance values and restrictions (continued)

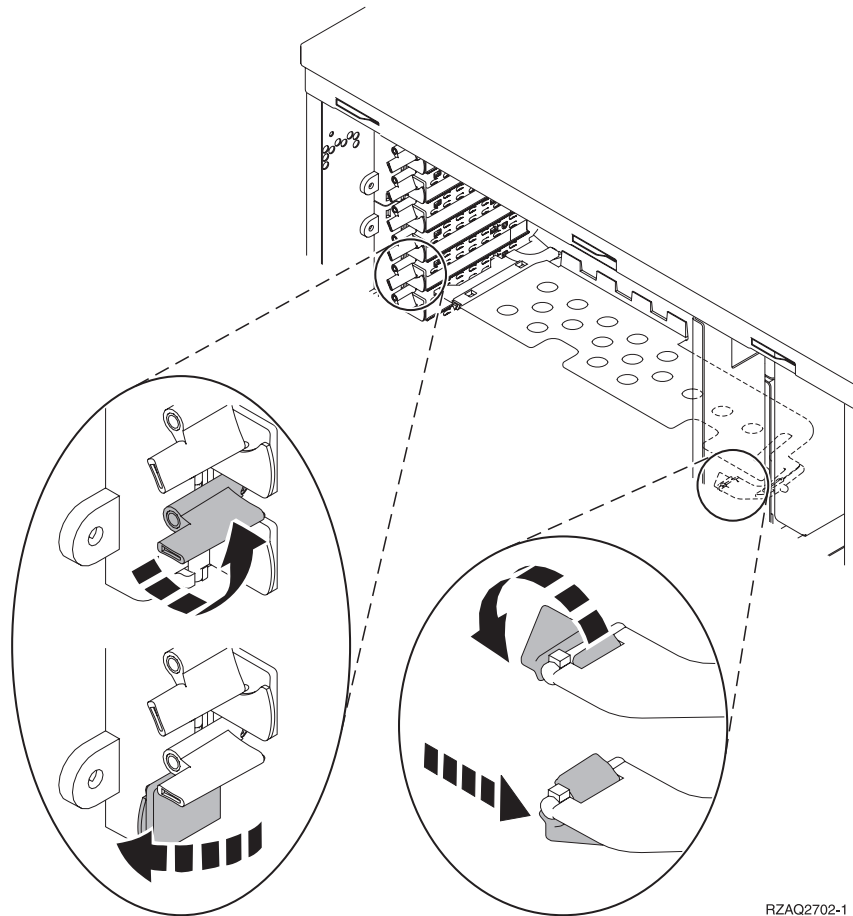
Feature Number	CCIN Number	Description	Restrictions	Card Length	Memory Value	Performance Value
5700 5701	5700 5701	PCI 1 Gbps Ethernet	<ul style="list-style-type: none"> • Must be placed in a 64-bit position if system contains 64-bit positions • If sytem only has 32-bit positions, then a 32-bit position can be used • Limited to one 2743, 2760, 5700, or 5701 in the PCI Bridge Set boundary • Can be combined with a maximum of one other IOA • The preceeding rules do not apply when controlled by a CCIN 289x IOP card group 	Short	2	26
5702	5702	PCI Ultra Tape Controller	<ul style="list-style-type: none"> • No more than one 2757, 2763, 2782, 4748, 9748, 9757, 9763, 9778, or 9782 allowed per IOP when this IOP is also driving 2817, 4815, 4816, or 4818 • A maximum of three 5702, 2763, 2757, 2782, 4778, 9778 allowed per IOP in any combination 	Short	2	21
5705	5705	PCI Tape/DASD Controller	<ul style="list-style-type: none"> • No more than one 2757, 2763, 2782, 4748, 9748, 9757, 9763, 9778, or 9782 allowed per IOP when this IOP is also driving 2817, 4815, 4816, or 4818 • 5705 is supported on 810 • A maximum of three 2782, 2763, 2757, 4748, 9748, 4778, 9778, 5705 (only one 5705 allowed) allowed per IOP in any combination 	Short	2	21
9767	2767	PCI Disk Unit Controller	<ul style="list-style-type: none"> • Only one per system • Only in 270, 820 and 5075 units 	Short	29	21
9771	2771	PCI 2-Line WAN w/Modem	<ul style="list-style-type: none"> • Only one per system 	Short	15	14

Install your card

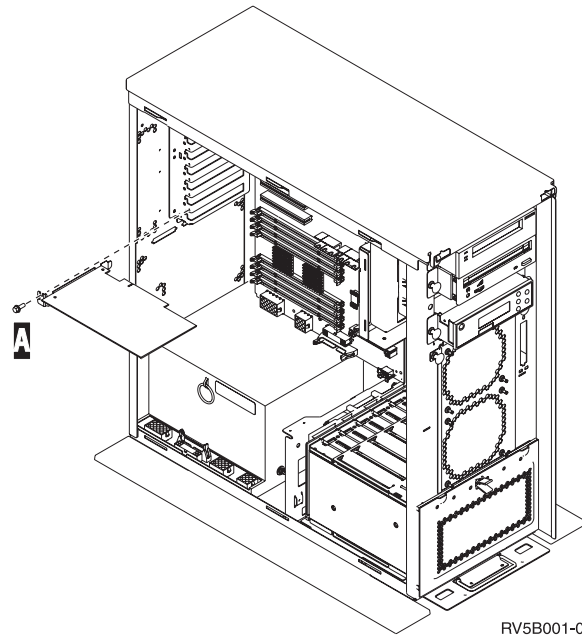
- ___ 1. Remove or open the back cover, if you have one, of the system unit, expansion unit, or rack where you will install the new feature card. Make sure you are in the correct partition if using logical partitions. Refer to "Remove the covers" on page 41 for more information.
- ___ 2. Locate the feature card area.
- ___ 3. Determine if the feature cards are secured in place with either latches or screws.

Does your unit have card latches?


- **Yes:** Your iSeries can either be powered off or powered on when you install your new card. Decide which way you want to install your card—“Your iSeries is powered on during installation” on page 13 or “Your iSeries is powered off during installation” on page 17.



- **No:** Your unit uses screws to secure the cards.
 - a. To install the new feature card, you must power off your unit.
 - b. Go to “Your iSeries is powered off during installation” on page 17.



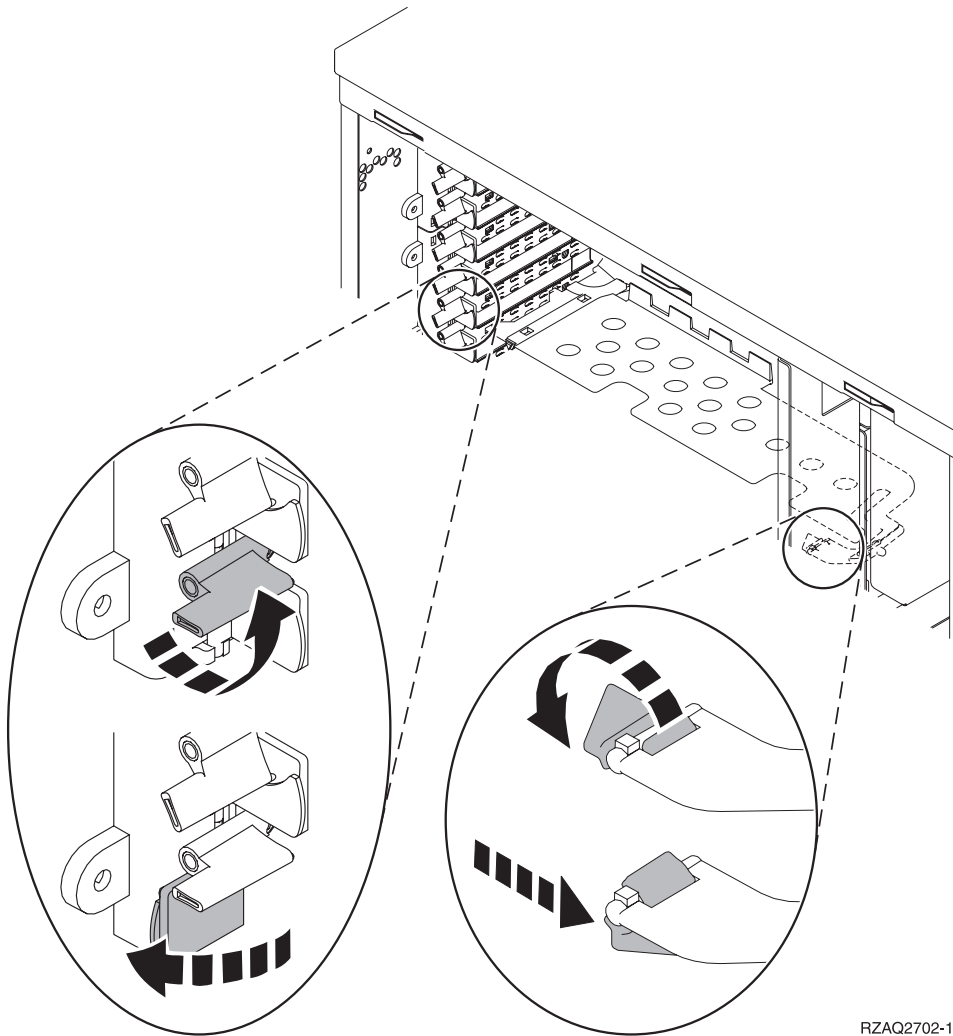
Your iSeries is powered on during installation

- ___ 1. Type **strsst** on the command line of the *Main Menu* and press Enter.
- ___ 2. Type **your service tools user ID and service tools password** on the *System Service Tools (SST) Sign On* display and press Enter.
- ___ 3. Select **Start a service tool** from the *System Service Tools (SST)* display and press Enter.
- ___ 4. Select **Hardware service manager** from the *Start a Service Tool* display and press Enter.
- ___ 5. Select **Packaging hardware resources (system, frames, cards...)** from the *Hardware Service Manager* display and press Enter.
- ___ 6. Type **9** on the *System Unit* or *Expansion Unit* line of the unit where you are installing the new card and press Enter.
- ___ 7. Select **Include empty positions**.
- ___ 8. **Attach the disposable wrist strap to prevent electrostatic discharge from damaging a device.** Attach the adhesive part of the foil to an unpainted surface.  View video.

Notes:

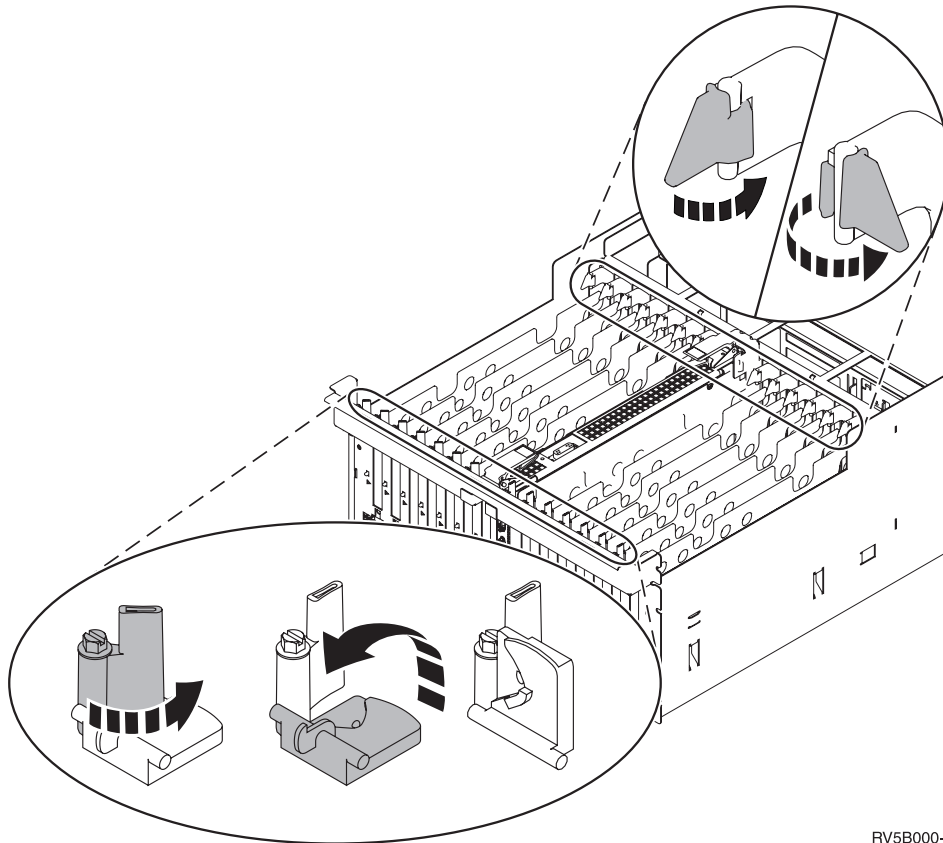
- a. Follow the same precautions you would use without the wrist strap. The 2209 Disposable Wrist Strap is for static control. It will not increase or decrease your risk of receiving electric shock when using or working on electrical equipment.
- b. Remove the liner from the copper foil at the end when you unroll the strap.
- c. Attach the copper foil to an **exposed, unpainted** metal surface on the frame of the unit (electrical ground).
- ___ 9. Select **Concurrent Maintenance** on the empty card position where you plan to install the card. Press Enter. If using logical partitions, make sure this position is controlled by the logical partition you planned.
- ___ 10. Select **Toggle LED blink off/on**. A light-emitting diode (LED) blinks identifying the position you chose to install the new feature card.

- 11. Select **Toggle LED blink off/on** to stop the blinking LED.
- 12. Open the latch at the card position where you plan to install the card. Move the latch counterclockwise and then swing the latch out.





RZAQ2702-1

Figure 1. Example of 270, 810, 820, 5075 Card Latch



RV5B000-0

Figure 2. Example of 830, 840, 870, 890, SB2, SB3, 5079 Card Latches

- __ 13. Remove the card filler plate.  View video.
- __ 14. Are you installing a 289x IXS card?
 - __ No: Go to step 15.
 - __ Yes: Do the following:
 - __ a. Remove a second card filler plate below the one you removed in step 13.
 - __ b. Remove the plastic card dividers from the positions the card will occupy. Press down on the ends and pull away from the backplane.
- __ 15. **Attention:** Adapter cards are fragile:
 - Handle only by the edges.
 - Keep fingers off printed circuit area.
 - Use static strap when handling.
 - Leave in protective packaging until ready to install.
- __ 16. Align the new adapter card with the card connector inside the system unit or expansion unit and push until it is connected securely.  View video.
- __ 17. Swing the latch in and move the latch clockwise to secure the card.

__ 18. DANGER

To prevent a possible electrical shock from touching two surfaces with different electrical grounds, use one hand, when possible, to connect or disconnect signal cables. (RSFTD004)

Connect any cables and label the cables with the card slot position.


- __ 19. Select **Power on domain** on the *Hardware Resource Concurrent Maintenance* display. Press Enter.
- __ 20. Select **Assign to** on the resource with the * on the *Work with Controlling Resource* display. Press Enter.
- __ 21. Wait for the *Hardware Resource Concurrent Maintenance* display to appear with the message indicating Power on complete.
- __ 22. If you have more cards to install, go to “Determine the best place to install your card” on page 3 and repeat the steps to install the next card.
- __ 23. If you are finished installing all the cards, remove the wrist strap.
- __ 24. Install the unit covers.
- __ 25. Did you install a 289x IXS card?
 - __ **No:** Do the following:
 - __ a. Sign on the system unit. Ensure that you have service tools authority.
 - __ b. Type **strsst** on the command line of the iSeries session and press Enter.
 - __ c. Type **your service tools user ID and service tools password** on the *Start a Service Tools (STRSST) Sign On* display and press Enter.
 - __ d. Select **Start a service tool** from the *Start a Service Tools* display and press Enter.
 - __ e. Select **Hardware service manager** from the display and press Enter.
 - __ f. Select **Packaging hardware resources (system, frames, cards...)** from the display and press Enter.
 - __ g. Type **9** on the *System Unit or Expansion Unit* line.
 - __ h. Press Page Down if needed and look at the *Card Pos* column for the adapter card you just installed.
 - __ i. Did you find the card you just installed?
 - __ **Yes:** Go to step 26 on page 17.
 - __ **No:** Return to step 1 on page 13 and verify the install procedure steps.
 - __ **Yes:** Do the following:
 - __ a. If you installed a 289x IXS card, it is recommended that you perform a verification test.
 - __ b. Sign on the system unit. Ensure that you have service tools authority.
 - __ c. Type **strsst** on the command line and press Enter.
 - __ d. Type **your service tools user ID and service tools password** on the *System Service Tools (SST) Sign On* display and press Enter.
 - __ e. Select **Start a service tool** from the *Start a Service Tools* display and press Enter.

- ___ f. Select **Hardware service manager** from the display and press Enter.
- ___ g. Select **Packaging hardware resources (system, frames, cards...)** from the display and press Enter.
- ___ h. Type **9** on the *System Unit or Expansion Unit* line.
- ___ i. Press Page Down if needed and look at the *Card Pos* column to find the card you just installed.
 - ___ 1) Select **Associated Logical Resources** on the line next to the 289x that was just installed. Press Enter.
 - ___ 2) Select **Verify** on the line next to the 289x card (Communication IOA).
 - ___ 3) Press Enter at the *Verification Test* display.
 - ___ 4) Select **Processor Internal Test** and press Enter.
 - ___ 5) Press Enter at the *Number of Test Runs* display.
 - ___ 6) When the test is complete, the message *The test is successful* appears on the *Verification Test Results* display.
 - ___ 7) Press Enter twice.
 - ___ 8) Select **Hardware Memory Test** and press Enter.
 - ___ 9) Press Enter at the *Number of Test Runs* display.

Note: If the test fails, make sure that you have installed the card properly. If the test continues to fail, contact your authorized dealer or service provider.
 - ___ 10) When the test is complete, the message *The test is successful* appears on the *Verification Test Results* display.
 - ___ 11) Press Enter twice.
 - ___ 12) Press F3 three times and press Enter to return to the *Main Menu*.

- ___ 26. Your feature upgrade is complete.
- ___ 27. Press F3 three times and press Enter to get back to the *Main Menu*.

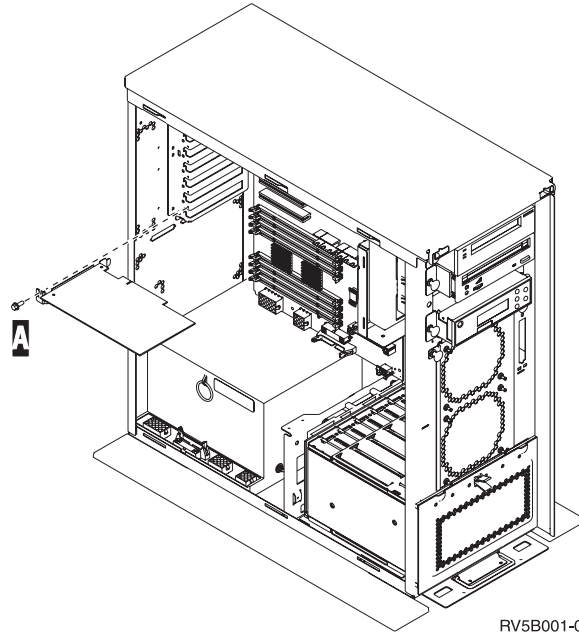
Your iSeries is powered off during installation

- ___ 1. Ensure that all jobs are complete.
- ___ 2. When all jobs are complete, type **pwrdownsys *immed** on an iSeries command line and press Enter.
- ___ 3. When the iSeries power down is complete, unplug any power cords, such as printers and displays, from electrical outlets.
- ___ 4. Unplug the system or expansion-unit power cord from the electrical outlet.
- ___ 5. **Attach the disposable wrist strap to prevent electrostatic discharge from damaging a device.**  View video. Attach the adhesive part of the foil to an unpainted surface on the frame of the unit.

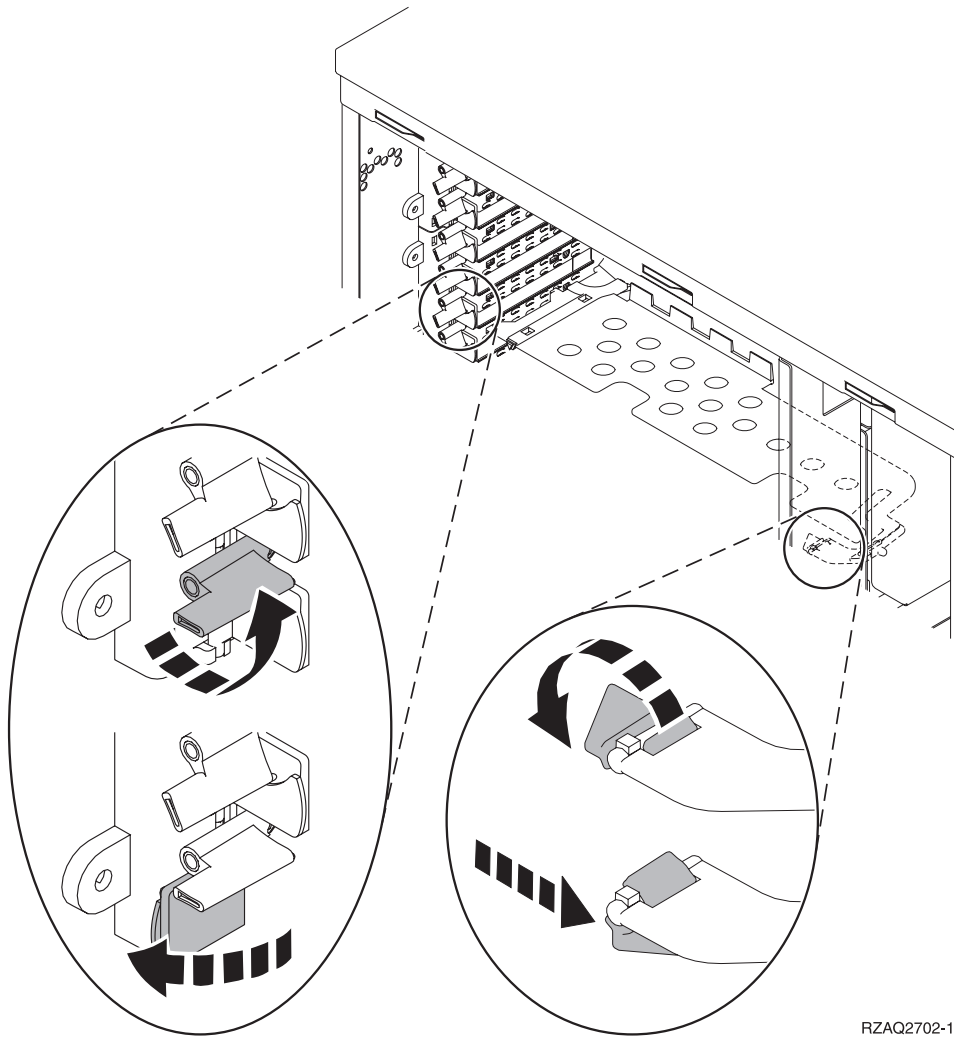
Notes:

- a. Follow the same precautions you would use without the wrist strap. The 2209 Disposable Wrist Strap is for static control. It will not increase or decrease your risk of receiving electric shock when using or working on electrical equipment.

- b. Remove the liner from the copper foil at the end when you unroll the strap.
- c. Attach the copper foil to an **exposed, unpainted** metal surface on the frame of the unit (electrical ground).
- 6. Locate the adapter card positions inside your system unit.
- 7. Does your unit have screws to secure the cards?

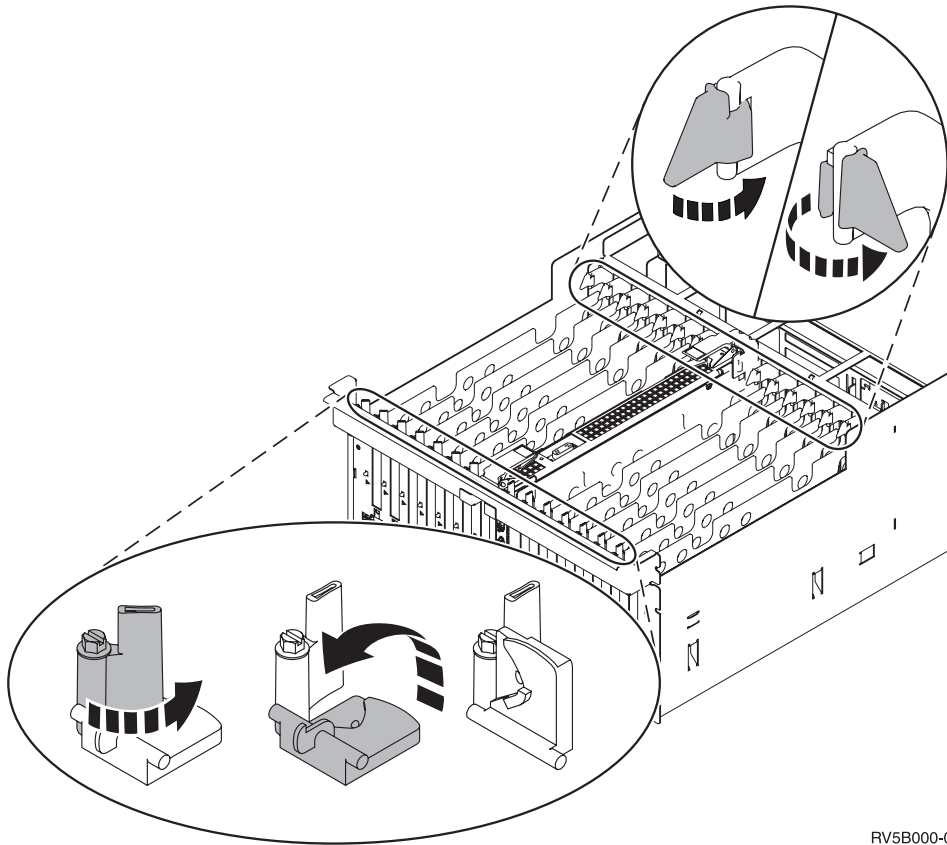


- No:** Continue with the next step.
- Yes:** Do the following:
 - a. Remove the screw from the card position where you plan to install the card.
 - b. Go to step 9 on page 20.
- 8. Open the latch at the card position where you plan to install the card. Move the latch counterclockwise and then swing the latch out. If using logical partitions, make sure this position is controlled by the logical partition you planned.





RZAQ2702-1

Figure 3. Example of 270, 810, 820, 825, 5075, 9094, 9094 Card Latch



RV5B000-0

Figure 4. Example of 830, 840, 870, 890, SB2, SB3, 5079, 5294 Card Latches

- ___ 9. Remove the card filler plate.  View video.
- ___ 10. Are you installing the 289x IXS card?
 - **No:** Go to step 11.
 - **Yes:** Do the following:
 - ___ a. Remove a second card filler plate below the first one removed.
 - ___ b. Remove the plastic card dividers from the positions the IXS card will occupy. Press down on the release lever at the headstock end and pull away from the backplane.
- ___ 11. **Attention:** Adapter cards are fragile:
 - Handle only by the edges.
 - Keep fingers off printed circuit area.
 - Use static strap when handling.
 - Leave in protective packaging until ready to install.
- ___ 12. Align the new adapter card with the card holders inside the system unit and push until it is connected securely.  View video.
- ___ 13. Swing the latch in and move the latch clockwise or install the screw to secure the card.

__ 14. **DANGER**

To prevent a possible electrical shock from touching two surfaces with different electrical grounds, use one hand, when possible, to connect or disconnect signal cables. (RSFTD004)

Connect any cables and label the cables with the card position.

- __ 15. If you have more cards to install, go to step 6 on page 18 and repeat the steps to install the next card.
- __ 16. If you are finished installing all cards, remove the wrist strap.
- __ 17. Install the unit covers.
- __ 18. **DANGER**

An electrical outlet that is not correctly wired could place hazardous voltage on metal parts of the system or the products that attach to the system. It is the customer's responsibility to ensure that the outlet is correctly wired and grounded to prevent an electrical shock. (RSFTD201)

Plug in the system unit and system unit console into an electrical outlet. Plug in everything you previously unplugged such as printers and displays.

- __ 19. Is your system unit an iSeries 270, 810 or 820, 825, 830, 840, 870, 890?
 - __ 270, 810: Continue with the next step.
 - __ 820, 825, 830, 840, 870, 890: Go to step 22.
- __ 20. Look at the Function/Data display on the control panel.
- __ 21. Does **01 B N V=S** appear in the Function/Data display?
 - __ **Yes:** Go to step 24 on page 22.
 - __ **No:** Do the following:
 - __ a. Press the Increment/Decrement push button until **02** appears in the Function/Data display.
 - __ b. Press the Enter push button on the control panel.
 - __ c. Press the Increment/Decrement push button until **B** appears in the Function/Data display.
 - __ d. Press the Enter push button on the control panel.
 - __ e. Press the Increment/Decrement push button until **N** appears in the Function/Data display.
 - __ f. Press the Enter push button on the control panel.
 - __ g. Press the Increment/Decrement push button until **S** appears in the Function/Data display.
 - __ h. Press the Enter push button on the control panel.
 - __ i. Press the Increment/Decrement push button until **01** appears in the Function/Data display.
 - __ j. Press the Enter push button on the control panel.

01 B N S should appear in the Function/Data display. If it does not, repeat steps 21a through 21j. If it does, go to step 24 on page 22.
- __ 22. Look at the Function/Data display on the control panel.
- __ 23. Does **01 B V=S** appear in the Function/Data display with IPL mode Normal (OK) selected?

- ___ **Yes:** Continue with the next step.
- ___ **No:** Do the following:
 - ___ a. Press the Mode Select button until the Manual mode indicator (a small hand) lights up.
 - ___ b. Press the Increment/Decrement push button until **02** appears in the Function/Data display.
 - ___ c. Press the Enter push button on the control panel.
 - ___ d. Press the Increment/Decrement push button until **B** appears in the Function/Data display.
 - ___ e. Press the Enter push button on the control panel.
 - ___ f. Press the Increment/Decrement push button until **S** appears in the Function/Data display
 - ___ g. Press the Enter push button on the control panel.
 - ___ h. Press the Mode Select button until the Normal indicator (**OK**) lights up.
 - ___ i. Press the Increment/Decrement push button until **01** appears in the Function/Data display.
 - ___ j. Press the Enter push button on the control panel.
01 B S should appear in the Function/Display display. If it does not appear, repeat steps 23a through 23j. If it does, continue to the next step.

- ___ 24. Press the Power push button that is located on the iSeries control panel. There is approximately a 10-second delay before the power-on light comes on, and data appears in the Function/Data display.

Note: The system takes approximately 5 to 20 minutes to power on and complete an IPL. When the IPL is complete, 01 B N S appears in the Function/Data display.

- ___ 25. Did you install a 289x IXS card?
 - ___ **No:** Do the following:
 - ___ a. Sign on the system unit. Ensure that you have service tools authority.
 - ___ b. Type **strsst** on the command line of the iSeries session and press Enter.
 - ___ c. Type **your service tools user ID and service tools password** on the *Start a Service Tools (STRSST) Sign On* display and press Enter.
 - ___ d. Select **Start a service tool** from the *Start a Service Tools* display and press Enter.
 - ___ e. Select **Hardware service manager** from the display and press Enter.
 - ___ f. Select **Packaging hardware resources (system, frames, cards...)** from the display and press Enter.
 - ___ g. Type **9** on the *System Unit or Expansion Unit* line.
 - ___ h. Press Page Down if needed and look at the *Card Pos* column for the adapter card you just installed.
 - ___ i. Did you find the card you just installed?
 - ___ **Yes:** Go to step 26 on page 23.

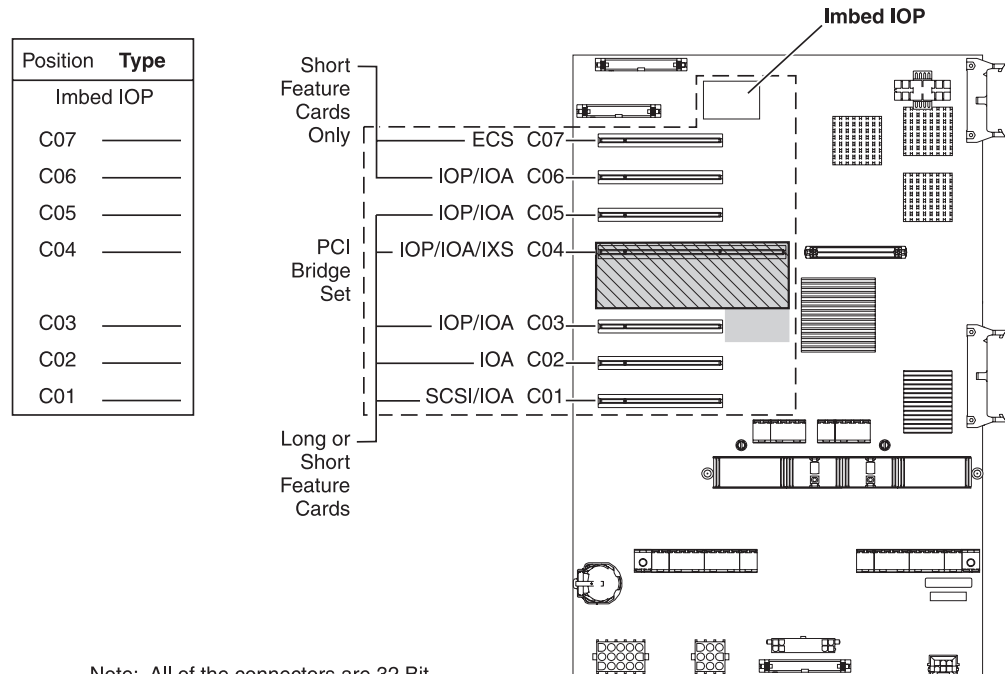
- ___ **No:** Return to step 1 on page 17 and verify the install procedure steps.
 - ___ **Yes:** Do the following:
 - ___ a. If you installed a 289x IXS card, it is recommended that you perform a verification test.
 - ___ b. Sign on the system unit. Ensure that you have service tools authority.
 - ___ c. Type **strsst** on the command line of the iSeries session and press Enter.
 - ___ d. Type **your service tools user ID and service tools password** on the *Start a Service Tools (STRSST) Sign On* display and press Enter.
 - ___ e. Select **Start a service tool** from the *Start a Service Tools* display and press Enter.
 - ___ f. Select **Hardware service manager** from the display and press Enter.
 - ___ g. Select **Packaging hardware resources (system, frames, cards...)** from the display and press Enter.
 - ___ h. Type **9** on the *System Unit or Expansion Unit* line.
 - ___ i. Press Page Down if needed and look at the *Card Pos* column for the card you just installed.
 - ___ 1) Select **Associated Logical Resources** on the line next to the 289x that was just installed. Press Enter.
 - ___ 2) Select **Verify** on the line next to the 289x card (Communication IOA).
 - ___ 3) Press Enter at the *Verification Test* display.
 - ___ 4) Select **Processor Internal Test** and press Enter.
 - ___ 5) Press Enter at the *Number of Test Runs* display.
 - ___ 6) When the test is complete, the message *The test is successful* appears on the *Verification Test Results* display.
 - ___ 7) Press Enter twice.
 - ___ 8) Select **Hardware Memory Test** and press Enter.
 - ___ 9) Press Enter at the *Number of Test Runs* display.
- Note:** If the test fails, make sure that you have installed the card properly. If the test continues to fail, contact your authorized dealer or service provider.
- ___ 10) When the test is complete, the message *The test is successful* appears on the *Verification Test Results* display.
 - ___ 11) Press Enter twice.
 - ___ 12) Press F3 three times and press Enter to return to the *Main Menu*.
- ___ 26. Your feature installation is complete.
 - ___ 27. Press F3 three times and press Enter to get back to the *Main Menu*.

Current configuration tables

Locate your unit and current configuration:

- "270 and 810 system unit"
- "820 system unit" on page 26
- "825 system unit" on page 27
- "830, 840, SB2, and SB3 system unit" on page 27
- "8079 unit" on page 29
- "8094 unit" on page 29
- "5075 expansion unit" on page 29
- "5074 or 0574 expansion unit" on page 30
- "5078 or 0578 expansion unit" on page 31
- "5079 expansion unit" on page 31
- "5088 or 0588 expansion unit" on page 32
- "5074 or 0574 expansion unit" on page 30
- "5094 expansion unit" on page 33
- "5095 or 0595 expansion unit" on page 34
- "5294 expansion unit" on page 35

270 and 810 system unit



Note: All of the connectors are 32 Bit

■ = positions occupied if 2890, 2891, or 2899 IXS is installed

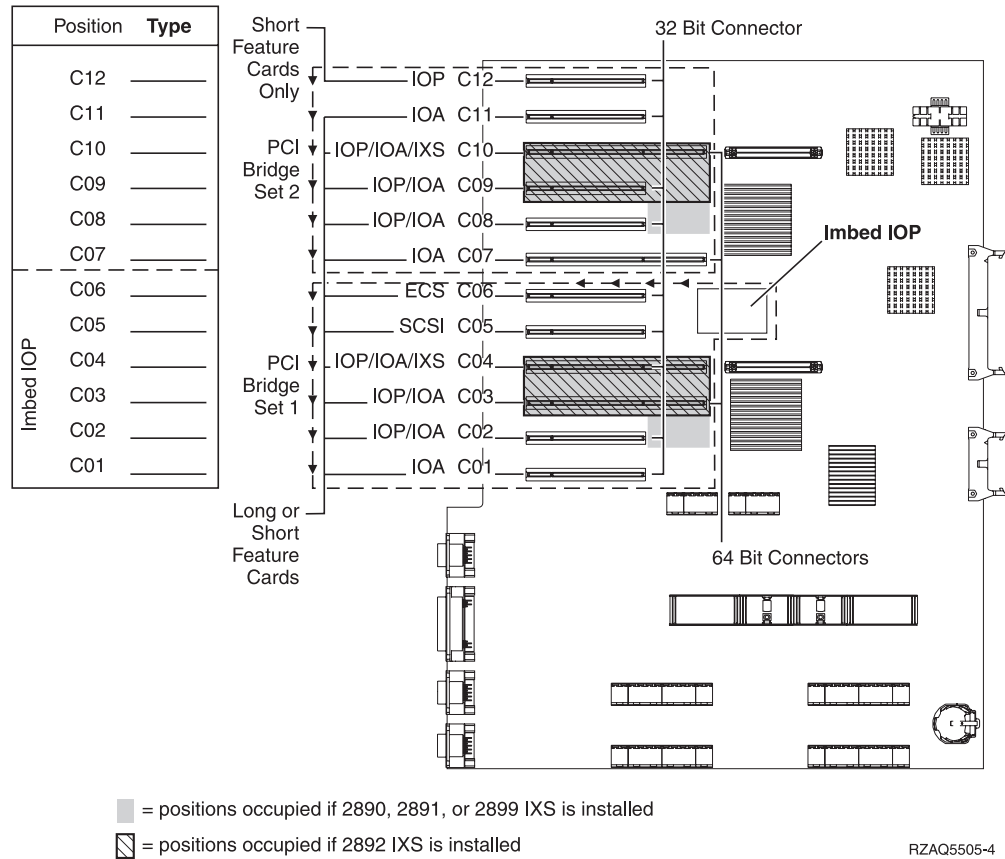
▨ = positions occupied if 2892 IXS is installed

RZAQ5504-4

- The Imbed IOP controls positions C07, C01, and possibly C06 and C05.

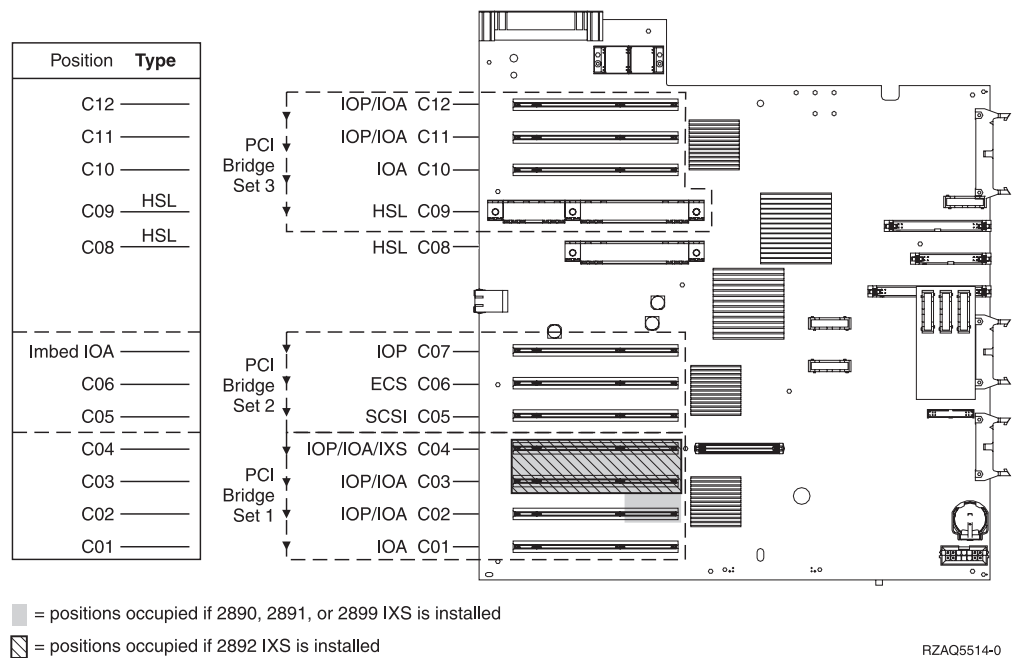
- IOPs control the IOAs in the positions below the IOP. For example, an IOP in C04 would control IOAs in C03 and C02.
- SCSI in the diagram indicates the first internal disk unit controller position (cards 2757, 2763, 2782, 4748, 4778, 5705, or 9767). (9767 is only in 270 units.) The first disk unit controller card must be in C01 and connect the load source disk unit internal tape and CD-ROM or DVD device.
- A second 2757, 2763, 2782, 4748, or 4778 is allowed in a 270 and 810 system unit with an attached 7104 or 7116 expansion unit.

820 system unit



- The Imbed IOP controls C06, C05, and possibly C04 and C03.
- IOPs control IOAs in the direction of the arrows in the PCI bridge set.
- SCSI in the diagram indicates the first internal disk unit controller position. Place IOA 2757, 2763, 2782, 4748, 4778 or 9767 in position C05. The first disk unit controller card must be in C05 and connect the load source disk unit internal tape and CD-ROM or DVD device.
- Two internal disk unit controllers are allowed per 820 system unit.
- A second internal disk unit controller in the system unit is only allowed when removable cable retention mechanisms are installed.
- The second internal disk unit controller cannot be in card position C07 or C08.

825 system unit

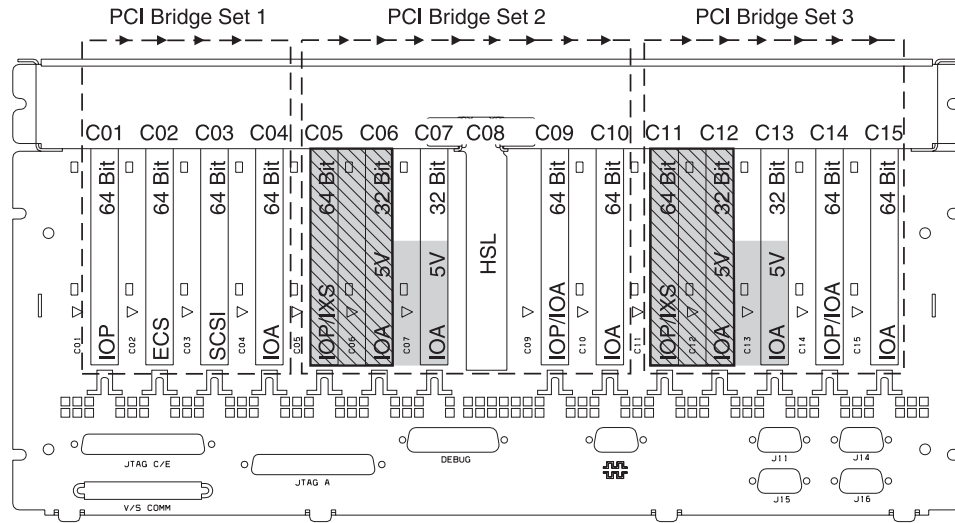


- The IOP controls C06, C05.
- IOPs control IOAs in the direction of the arrows in the PCI bridge set.
- SCSI in the diagram indicates the first internal disk unit controller position (cards 2757, 2763, 2782, 4748, 4778) The first disk unit controller card must be in C05 and connect the load source disk unit internal tape and CD-ROM or DVD device.
- Three internal disk unit controllers are allowed per 825 system unit.

830, 840, SB2, and SB3 system unit

- IOPs control IOAs in the direction of the arrows in the PCI bridge sets.
- SCSI in the diagram indicates the first internal disk unit controller position (cards 2757, 4778, 4748, 9748 or 9778). The first disk unit controller card must be in C03 and connect the load source disk unit internal tape and CD-ROM or DVD.
- In addition, two additional disk unit controllers are allowed in 830 or 840 system units.

- Additional disk unit controllers are not allowed in SB2 and SB3 system units.



■ = positions occupied if 2890, 2891, or 2899 IXS is installed

▨ = positions occupied if 2892 IXS is installed

Note: Long or short feature cards can go in any position.

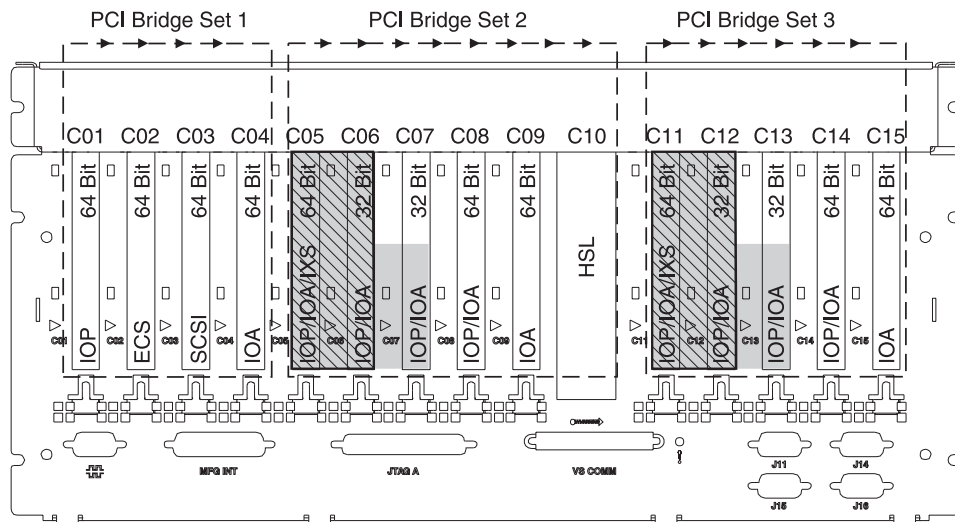
Position	Type
C01	IOP
C02	ECS
C03	SCSI
C04	IOA
C05	IOP/IXS
C06	IOA
C07	IOA
C08	HSL
C09	IOP/IOA
C10	IOA
C11	IOP/IXS
C12	IOA
C13	IOA
C14	IOP/IOA
C15	IOA

RZAQ5506-5

870 and 890 system unit

- IOPs control IOAs in the direction of the arrows in the PCI bridge sets.
- SCSI in the diagram indicates the first internal disk unit controller position (cards 2757, 4778, 4748, 9748 or 9778). The first disk unit controller card must be in C03 and connect the load source disk unit internal tape and CD-ROM or DVD.
- In addition, two disk unit controllers are allowed in 830 or 840 system units.

- Additional disk unit controllers are not allowed in SB2 and SB3 system units.



■ = positions occupied if 2890, 2891, or 2899 IXS is installed

▨ = positions occupied if 2892 IXS is installed

Note: Long or short feature cards can go in any position.

Position	Type
C01	
C02	
C03	
C04	
C05	
C06	
C07	
C08	
C09	
C10	HSL
C11	
C12	
C13	
C14	
C15	

RZAQ5511-0

8079 unit

For the lower unit, refer to an 840 system unit and for the upper unit, refer to the 5074 expansion unit.

8093 unit

For the lower unit, refer to an 890 system unit and for the upper unit, refer to the 5074 expansion unit.

8094 unit

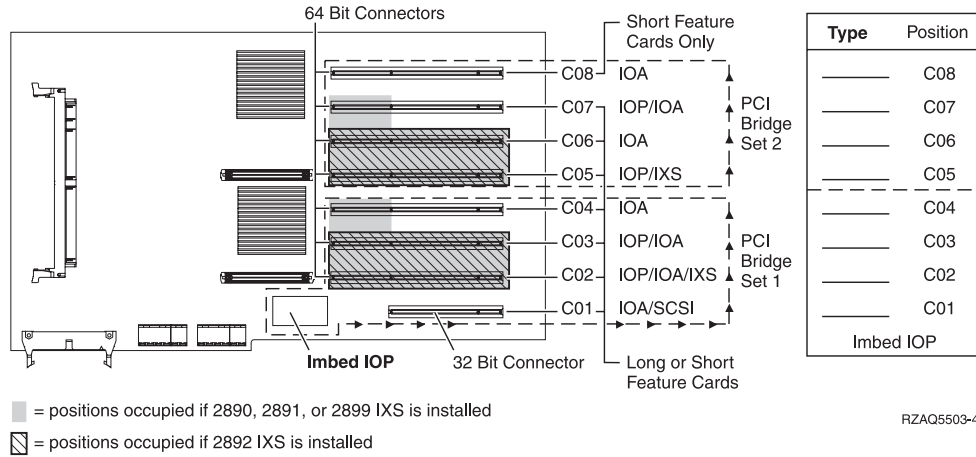
For the lower unit, refer to an 890 system unit and for the upper unit, refer to the 5094 expansion unit.

5075 expansion unit

You need one diagram for each expansion unit attached to the system unit. Copy the diagram for your use.

- The Imbed IOP controls C01 and possibly C02, C03, and C04.
- IOPs control IOAs in the direction of the arrows in the PCI bridge set.
- SCSI in the diagram indicates the disk unit controller position (cards 2757, 2763, 2782, 4748, or 4778). The first disk unit controller card must be in position C01.

Resource Name: _____



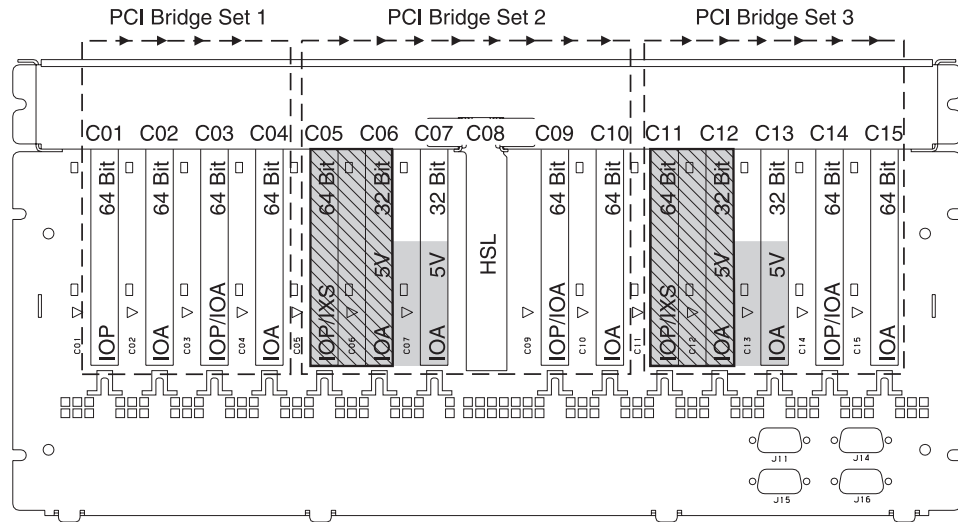
RZAQ5503-4

5074 or 0574 expansion unit

You need one diagram for each expansion unit attached to the system unit. Copy the diagram for your use.

- Place the first disk unit controller card 2757, 4748, 4778, or 9778 in position C02, C03, or C04.
- 5074 expansion units have a maximum of three disk unit controllers.
- IOPs control IOAs in the direction of the arrows in the PCI bridge sets.

Resource Name: _____



- = positions occupied if 2890, 2891, or 2899 IXS is installed
- ▨ = positions occupied if 2892 IXS is installed

Note: Long or short feature cards can go in any position.

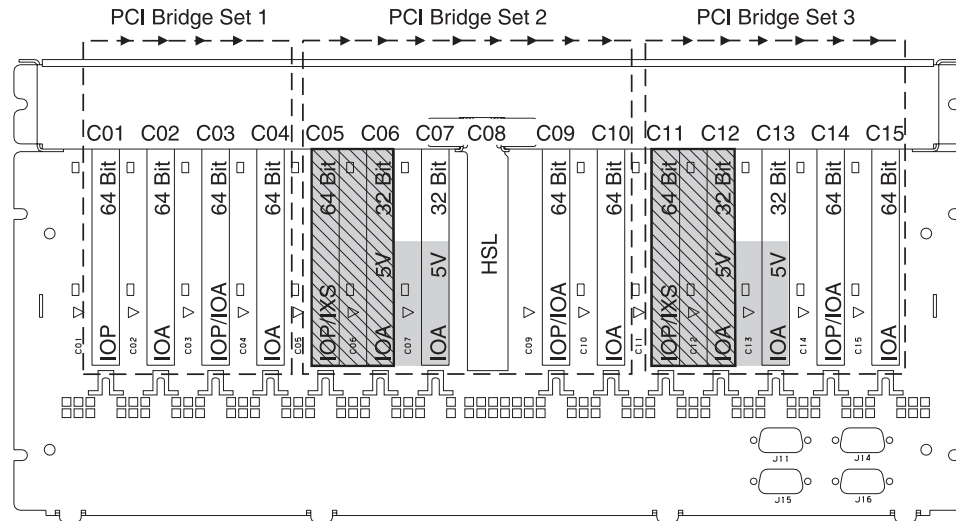
Position	Type
C01	
C02	
C03	
C04	
C05	
C06	
C07	
C08	HSL
C09	
C10	
C11	
C12	
C13	
C14	
C15	

RZAQ5507-5

5078 or 0578 expansion unit

IOPs control IOAs in the direction of the arrows in the PCI bridge sets.

Resource Name: _____



■ = positions occupied if 2890, 2891, or 2899 IXS is installed

▨ = positions occupied if 2892 IXS is installed

Note: Long or short feature cards can go in any position.

Position	Type
C01	
C02	
C03	
C04	
C05	
C06	
C07	
C08	HSL
C09	
C10	
C11	
C12	
C13	
C14	
C15	

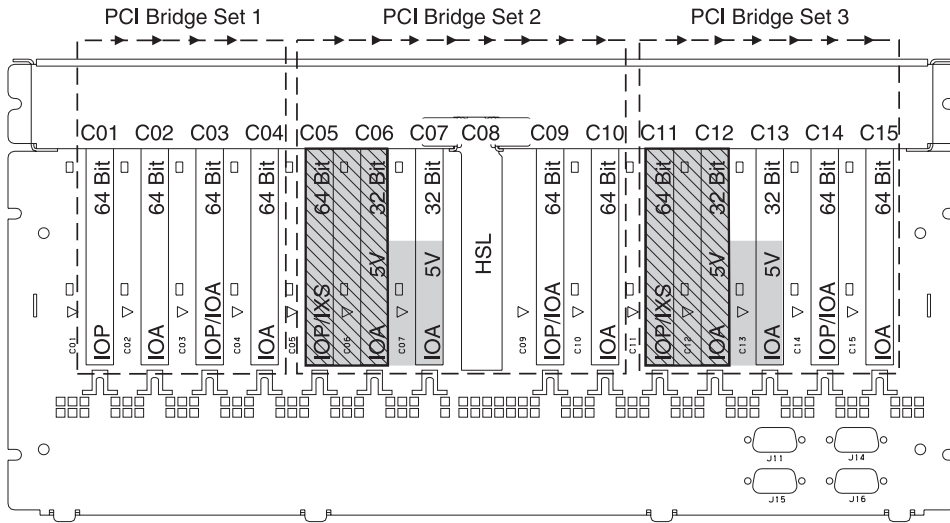
RZAQ5507-5

5079 expansion unit

You need one diagram for each expansion unit attached to the system unit. Copy the diagram for your use.

- Place the first disk unit controller card 2757, 4748, 4778, or 9778 in position C02, C03, or C04.
- 5074 expansion units have a maximum of six disk unit controllers.
- IOPs control IOAs in the direction of the arrows in the PCI bridge sets.

Resource Name: _____



■ = positions occupied if 2890, 2891, or 2899 IXS is installed

▨ = positions occupied if 2892 IXS is installed

Note: Long or short feature cards can go in any position.

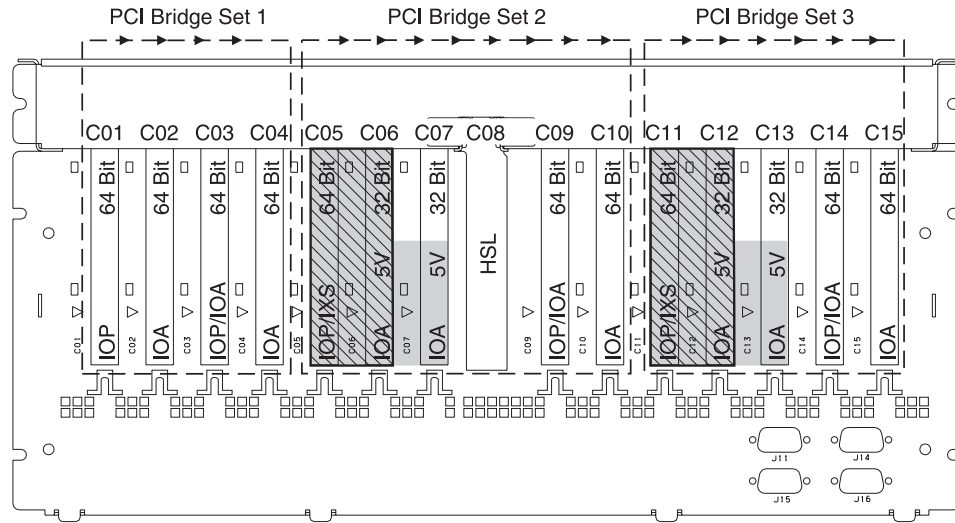
Position	Type
C01	IOP
C02	IOA
C03	IOP/IOA
C04	IOA
C05	IOP/IXS
C06	IOA
C07	IOA (5V)
C08	HSL
C09	IOP/IOA
C10	IOA
C11	IOP/IXS
C12	IOA
C13	IOA (5V)
C14	IOP/IOA
C15	IOA

RZAQ5507-5

5088 or 0588 expansion unit

- 2892 is the only IXS card allowed in C01.
- IOPs control IOAs in the direction of the arrows in the PCI bridge sets.

Resource Name: _____



■ = positions occupied if 2890, 2891, or 2899 IXS is installed

▨ = positions occupied if 2892 IXS is installed

Note: Long or short feature cards can go in any position.

Position	Type
C01	—
C02	—
C03	—
C04	—
C05	—
C06	—
C07	—
C08	HSL
C09	—
C10	—
C11	—
C12	—
C13	—
C14	—
C15	—

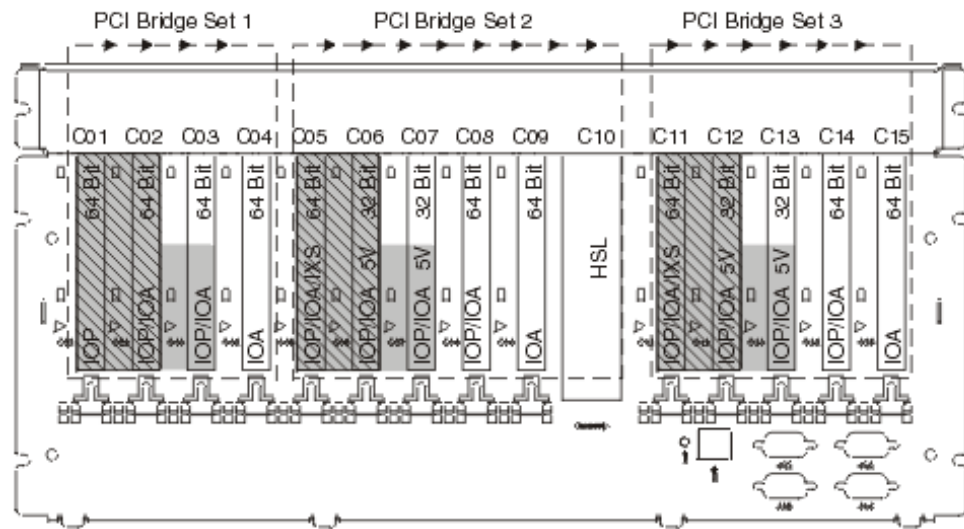
RZAQ5507-5

5094 expansion unit

You need one diagram for each expansion unit attached to the system unit. Copy the diagram for your use.

- Place the first disk unit controller card 2757, 4748, 4778, or 9778 in position C02, C03, or C04.
- 5094 expansion units have a maximum of three disk unit controllers.
- IOPs control IOAs in the direction of the arrows in the PCI bridge sets.

Resource Name: _____



■ = positions occupied if 2890, 2891, or 2899 IXS is installed

▨ = positions occupied if 2892 IXS is installed

Note: Long or short feature cards can go in any position.

Position	Type
C01	
C02	
C03	
C04	
C05	
C06	
C07	
C08	
C09	
C10	HSL
C11	
C12	
C13	
C14	
C15	

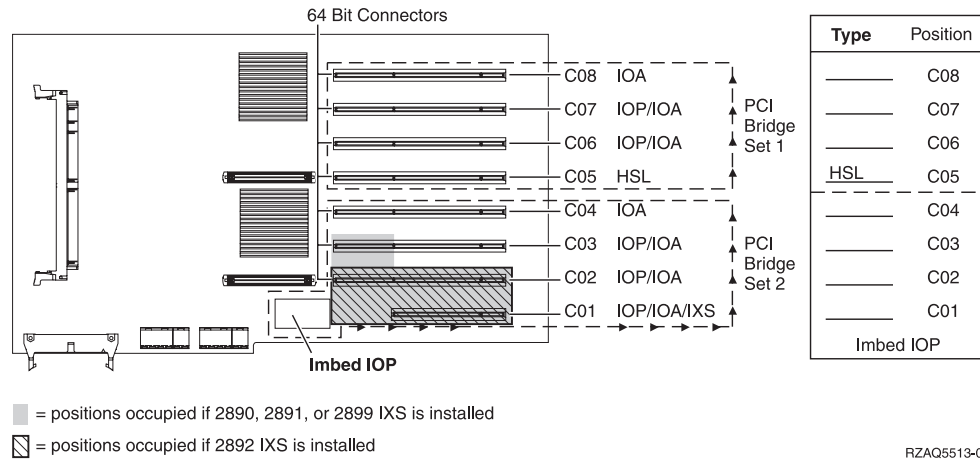
RZAQ55 12-0

5095 or 0595 expansion unit

You need one diagram for each expansion unit attached to the system unit. Copy the diagram for your use.

- The IOP controls C02 and possibly C03 and C04.
- IOPs control IOAs in the direction of the arrows in the PCI bridge set.
- SCSI in the diagram indicates the disk unit controller position (cards 2757, 2763, 2782, 4748, 4778).

Resource Name: _____

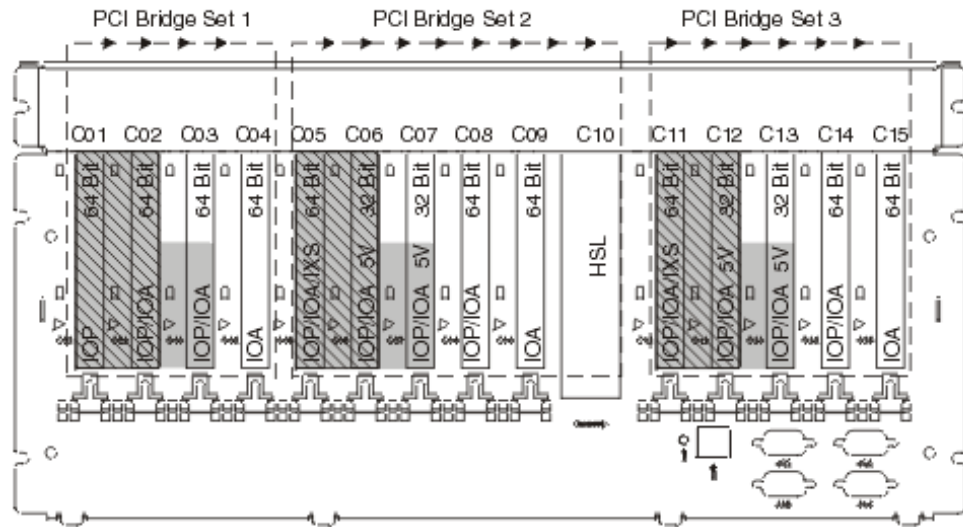


5294 expansion unit

You need one diagram for each expansion unit attached to the system unit. Copy the diagram for your use.

- Place the first disk unit controller card 2757, 4748, 4778, or 9778 in position C02, C03, or C04.
- 5094 expansion units have a maximum of six disk unit controllers.
- IOPs control IOAs in the direction of the arrows in the PCI bridge sets.

Resource Name: _____



■ = positions occupied if 2890, 2891, or 2899 IXS is installed

▨ = positions occupied if 2892 IXS is installed

Note: Long or short feature cards can go in any position.

Position	Type
C01	64 Bit IOP/IOA/IXS
C02	64 Bit IOP/IOA/IXS
C03	64 Bit IOP/IOA
C04	64 Bit IOA
C05	64 Bit IOP/IOA/IXS
C06	32 Bit IOP/IOA/5V
C07	32 Bit IOP/IOA/5V
C08	64 Bit IOP/IOA
C09	64 Bit IOA
C10	HSL
C11	64 Bit IOP/IOA/IXS
C12	32 Bit IOP/IOA/5V
C13	32 Bit IOP/IOA/5V
C14	64 Bit IOP/IOA
C15	64 Bit IOA

RZAQ55 12-0

Placement tables

If your unit is powered off, look at the back of the unit and write down the numbers on the cards in the correct table. Refer to the “Current configuration tables” on page 25 for the location of Imbed IOPs.

Use one worksheet for each IOP in all of your units.

- “Example of a completed placement table”
- “Imbed IOP”
- “2842 IOP”
- “2843 IOP” on page 38
- “2844 IOP” on page 38
- “289x Integrated xSeries Server IOP” on page 38

Example of a completed placement table

IOP Card Group	Card Position	Feature Number or CCIN Number from Type Column	Memory Value	Performance Value
IOP	C01	2842	100	100
IOA	C02	2748	30	21
IOA	C03	4745	15	7
IOA	C04	4746	10	6
IOA	C05	4838 (added card)	26	37
	IOA Totals		81	71

Imbed IOP

IOP Card Group	Card Position	Feature Number or CCIN Number from Type Column	Memory Value	Performance Value
IOP	C	Imbed	100	100
IOA	C			
IOA	C			
IOA	C			
IOA	C			
	IOA Totals			

2842 IOP

IOP Card Group	Card Position	Feature Number or CCIN Number from Type Column	Memory Value	Performance Value
IOP	C	2842	100	100
IOA	C			
IOA	C			

IOP Card Group	Card Position	Feature Number or CCIN Number from Type Column	Memory Value	Performance Value
IOP	C	2842	100	100
IOA	C			
IOA	C			
	IOA Totals			

2843 IOP

IOP Card Group	Card Position	Feature Number or CCIN Number from Type Column	Memory Value	Performance Value
	C	2843	211	100
	C			
	C			
	C			
	C			
	IOA Totals			

2844 IOP

IOP Card Group	Card Position	Feature Number or CCIN Number from Type Column	Memory Value	Performance Value
	C	2844	211	100
	C			
	C			
	C			
	C			
	IOA Totals			

289x Integrated xSeries Server IOP

CCIN 2890 restrictions:

- Add only 4838, 2744, 2743, and 2760 IOAs.
- Except for the 270 or 810 system unit, the 2890 card uses three positions (if an IOA is used).
- There are no maximum limits for memory, or performance values.

CCIN 2892 restrictions:

- Add only 2744, 5700, and 5701 IOAs.
- Two positions are used.
- There are no maximum limits for memory, or performance values.

IOP Card Group	Card Position	Feature Number or CCIN Number from Card Position
	C	289x IXS
	C	

IOP Card Group	Card Position	Feature Number or CCIN Number from Card Position
	C	289x IXS
	C	
	C	

Remove the covers

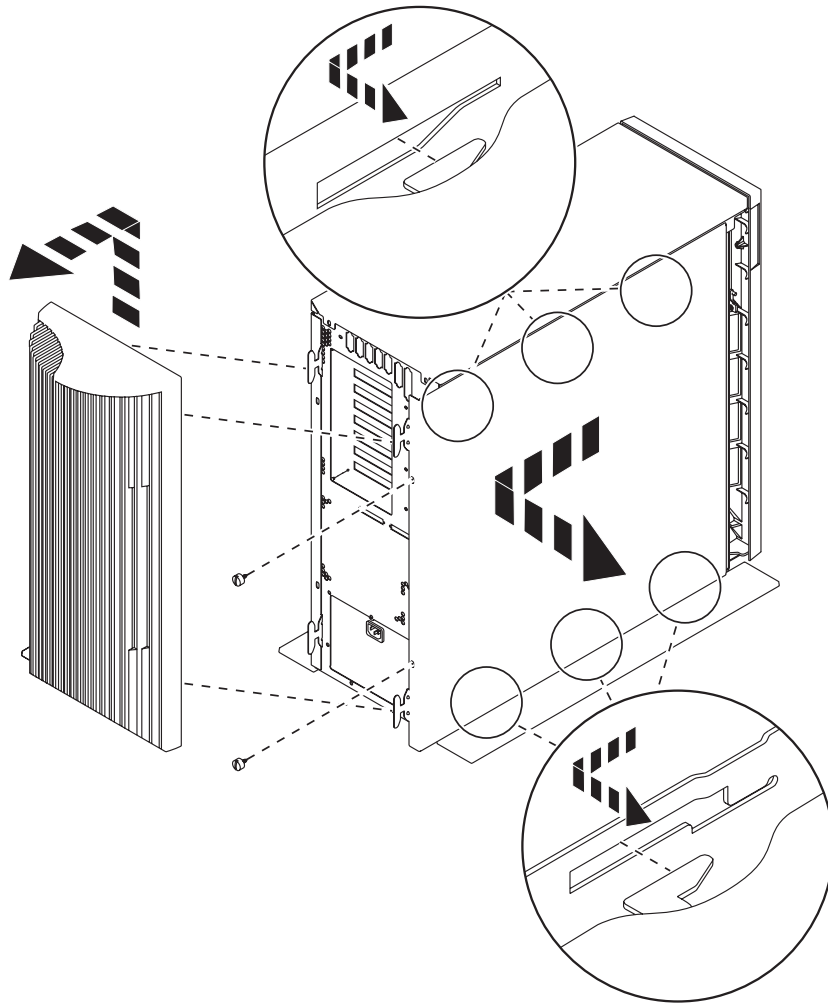
Locate the diagram of the unit you are working on:

- “270, 810 or 820 system units”
- “825 system unit” on page 42
- “830, 840, 870, 890, SB2, SB3, 5074, 5079, and 5094 units” on page 43
- “5075 and 5095 expansion unit” on page 44
- “5078 and 5088 expansion unit” on page 45
- “Access units in a rack” on page 46

270, 810 or 820 system units

To access the PCI card location, you need to remove the back cover, if you have one, and the side cover:

- ___ 1. Place your hand near the bottom of the back cover and lift up and out.
- ___ 2. **Attention:** If you are removing the side cover while the server is powered on, errors may occur due to electromagnetic interference.
Remove the right side cover (view from back) by loosening the thumbscrews and sliding the cover from front to back until it stops.
- ___ 3. Pull the cover out.

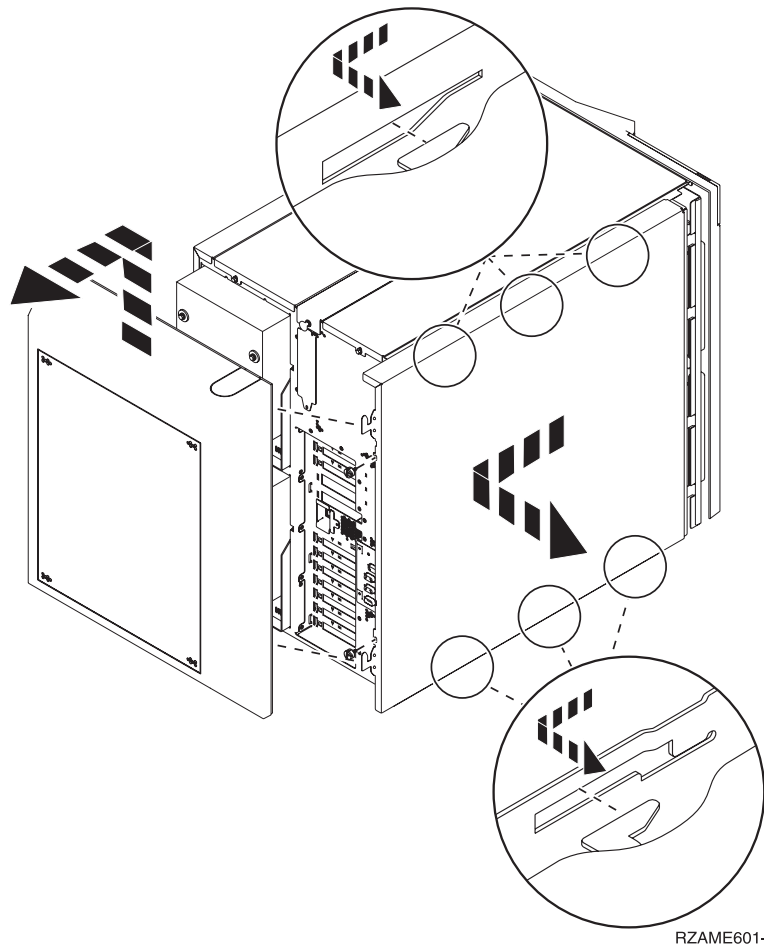


RZAQ2517-0

825 system unit

To access the PCI card location, you need to remove the back cover and the side cover:

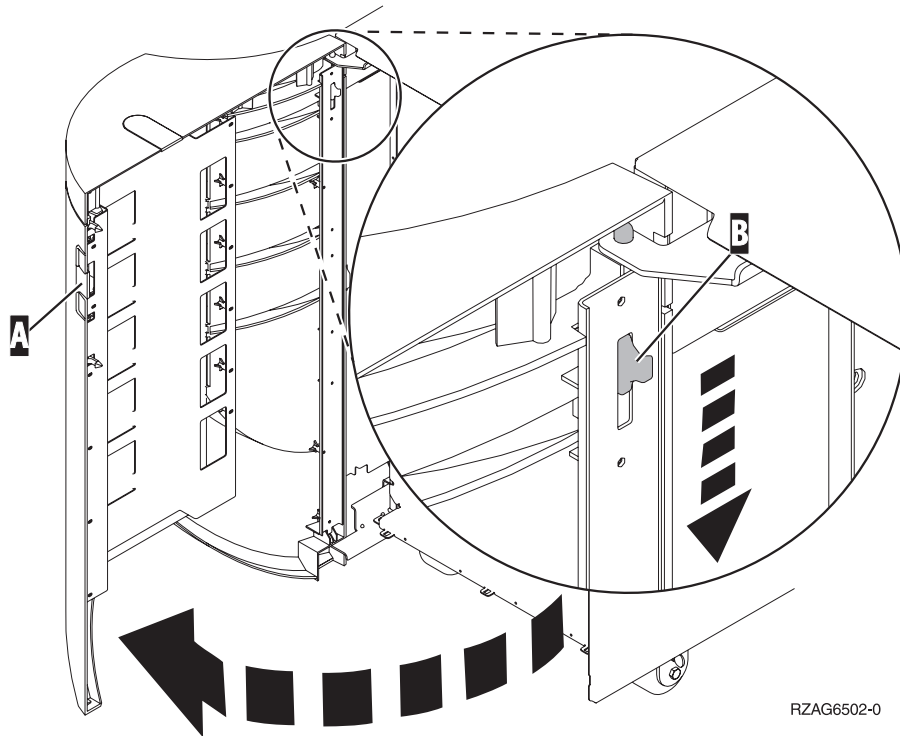
- ___ 1. Place your hand near the bottom of the back cover and lift up and out.
- ___ 2. Remove the right side cover (view from back) by loosening the thumbscrews and sliding the cover from front to back until it stops.
- ___ 3. Pull the cover out.



830, 840, 870, 890, SB2, SB3, 5074, 5079, and 5094 units

To access the PCI card location, you need to open the back cover:

- **A** Open the back cover.
- **B** Remove the back cover.
- Remove the PCI card access plate.



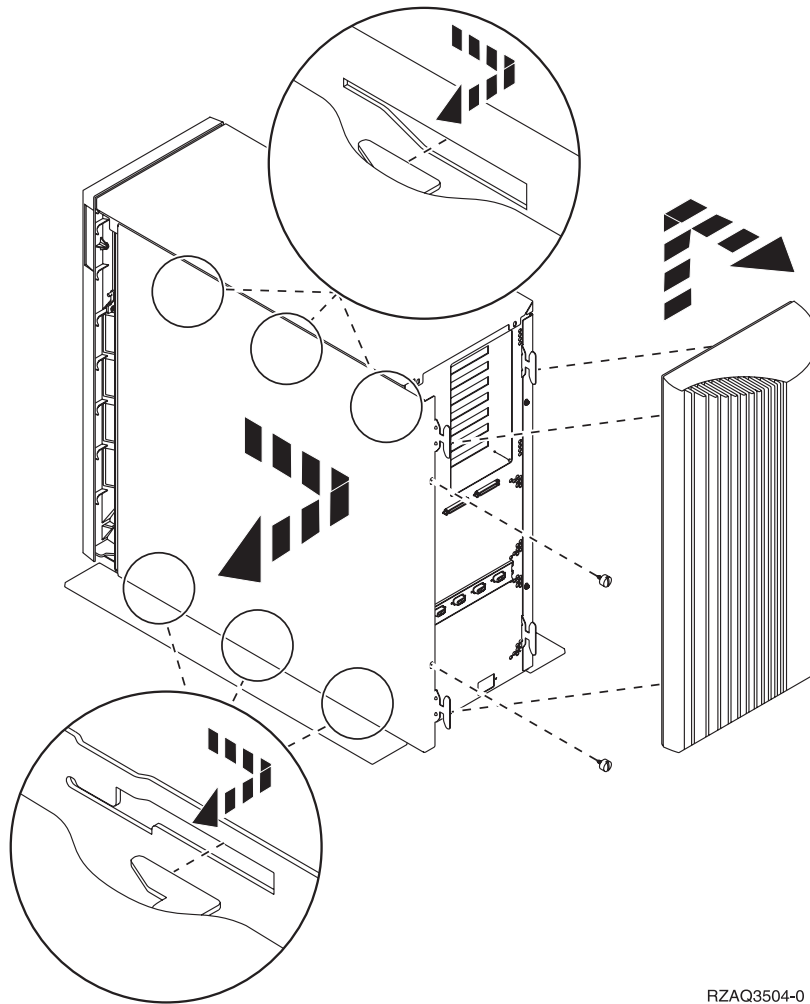
5075 and 5095 expansion unit

To access the PCI card location, you need to remove the back cover and the side cover:

- 1. Place your hand near the bottom of the back cover and lift up and out.
- 2. **Attention:** If removing the side cover while the server is powered on, errors may occur due to electromagnetic interference.

Remove the left side cover (view from back) by loosening the thumbscrews and sliding the cover from front to back until it stops.

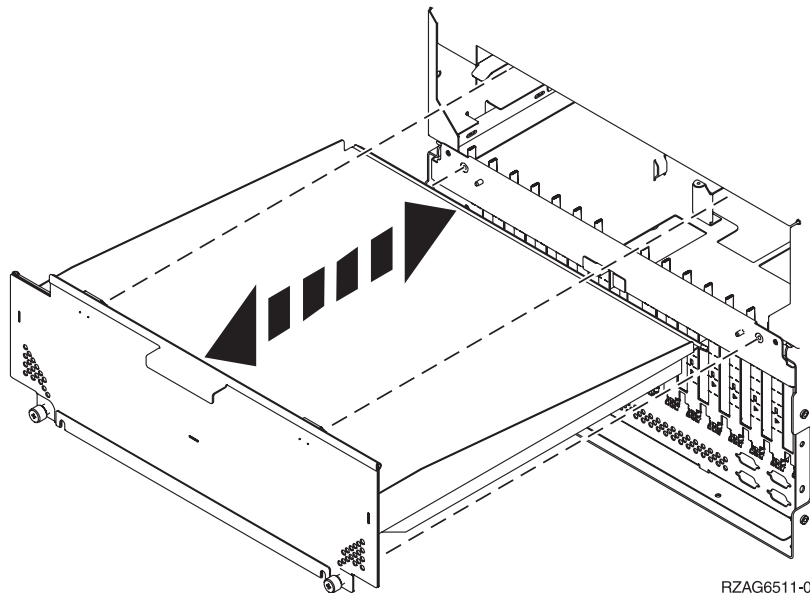
- 3. Pull the cover out.



RZAQ3504-0

5078 and 5088 expansion unit

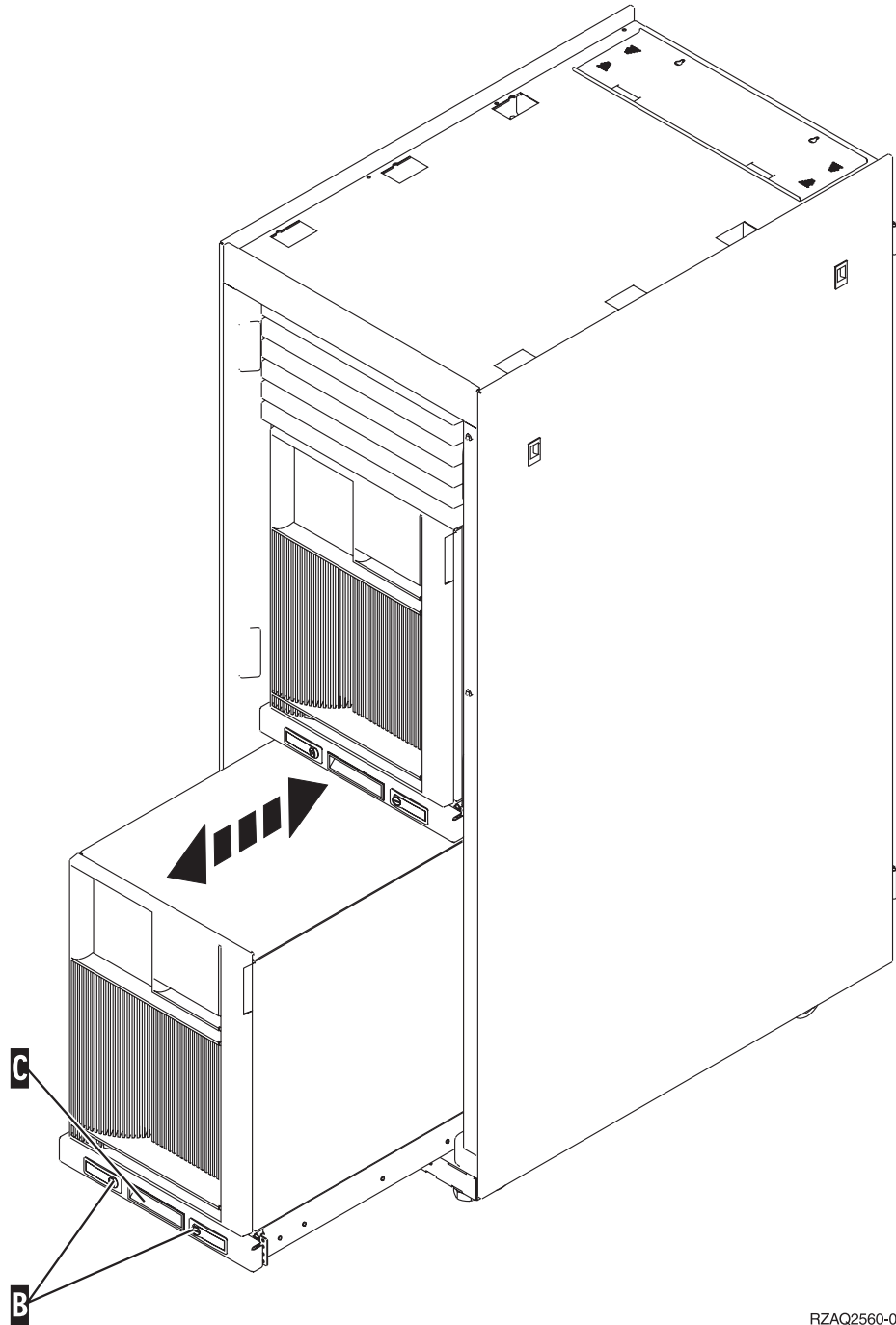
To access the PCI card location, open the back and remove the air flow shield.



RZAG6511-0

Access units in a rack

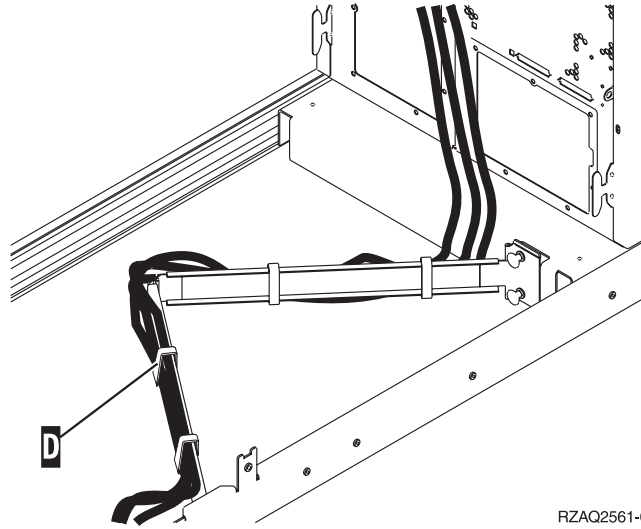
1. Press latches **B** and pull the server out using the handle **C**.



RZAQ2560-0

2. Refer to previous unit diagrams to remove the side cover.

- ___ 3. If you are cabling the server, feed the excess cabling along the cable management arm **D** and secure the cables with the fasteners.



RZAQ2561-0

System-unit control panel

Go to the front of your iSeries system unit. Open the control panel door.

Your control panel looks like either Figure 5 or Figure 6 on page 50. Refer to the control panel for your unit.

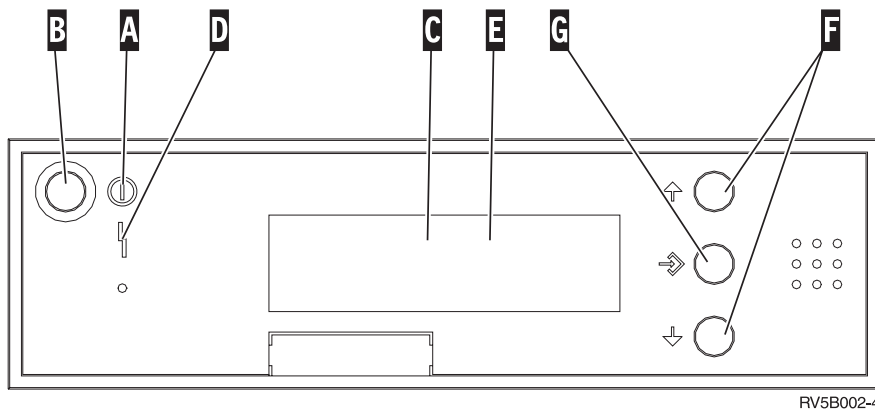


Figure 5. Control panel without Electronic Keystick

Following are the descriptions of the Figure 5 callouts:

- A** Power On Light
 - A blinking light indicates power to the unit.
 - A constant light indicates that the unit is on and working.
- B** Power Push button
- C** Processor Activity
- D** System Attention
- E** Function/Data Display
- F** Increment/Decrement buttons
- G** Enter Push button

If your control panel looks like Figure 6 on page 50, before you can use **F** Increment/Decrement buttons and **G** Enter push button, you need to press **H** Mode Selects to select Manual mode **N**. To use Mode Select, the keystick needs to be inserted.

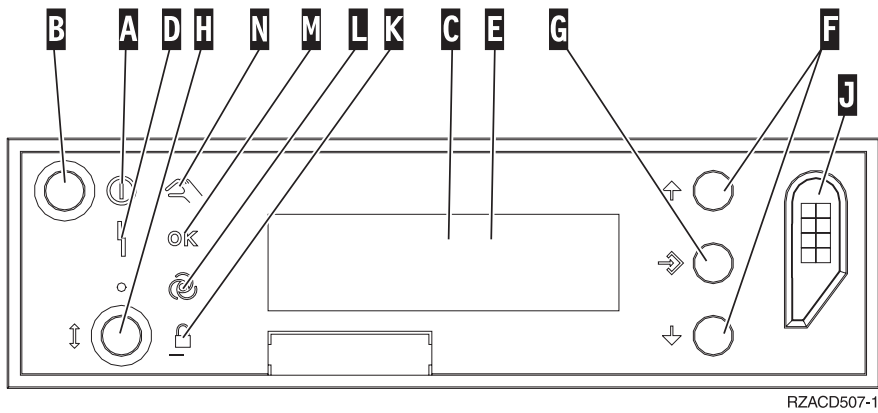


Figure 6. Control panel with Electronic Keystick

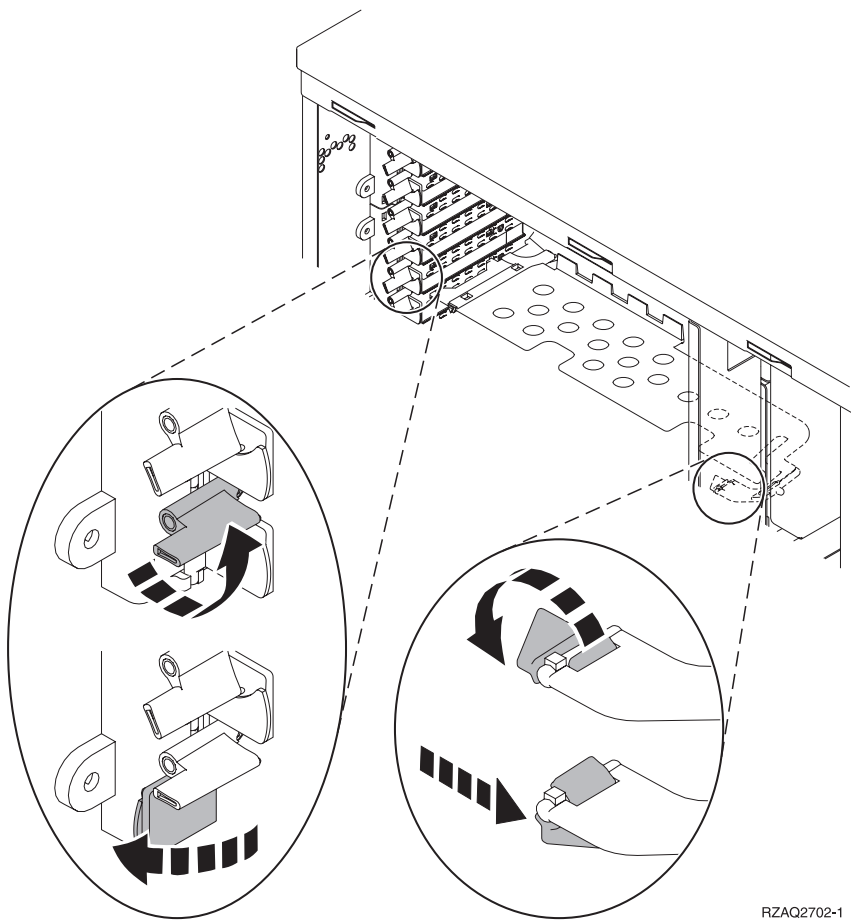
- A** Power On Light
 - A blinking light indicates power to the unit.
 - A constant light indicates that the unit is on and working.
- B** Power Push button
- C** Processor Activity
- D** System Attention
- E** Function/Data Display
- F** Increment/Decrement buttons
- G** Enter Push button
- H** Mode Selects
- J** Electronic Keystick Slot
- K** Secure
- L** Auto
- M** Normal
- N** Manual

Move a card in your iSeries

- ___ 1. Remove or open the back cover of the system unit or expansion unit where you will remove the feature card. Refer to "Remove the covers" on page 41 for more information.
- ___ 2. Locate the feature card area.
- ___ 3. Either latches or screws secure the cards in place.

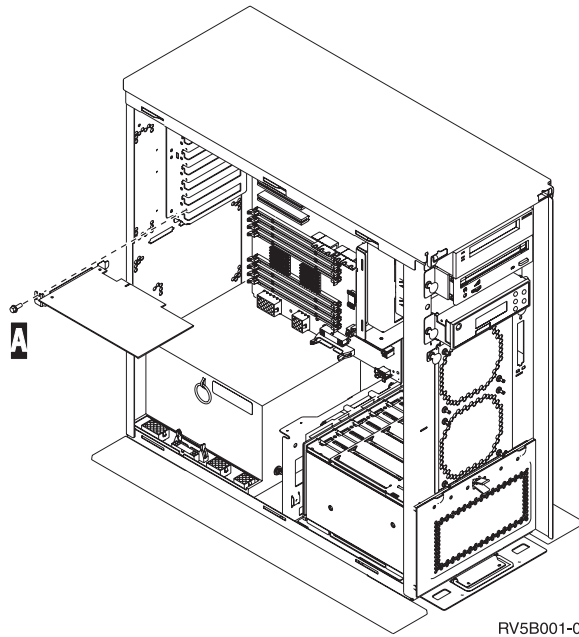
Does your unit have card latches?

- ___ **Yes:** Your iSeries can either be powered off or powered on when you install your new card. Decide which way you want to install your card—"Your iSeries is powered on while moving cards" on page 52 or "Your iSeries is powered off while moving cards" on page 56.



RZAQ2702-1

- ___ **No:** Your unit has screws to secure the cards.
 - ___ a. To move or install a feature card, you must power off your unit.
 - ___ b. Go to "Your iSeries is powered off while moving cards" on page 56.



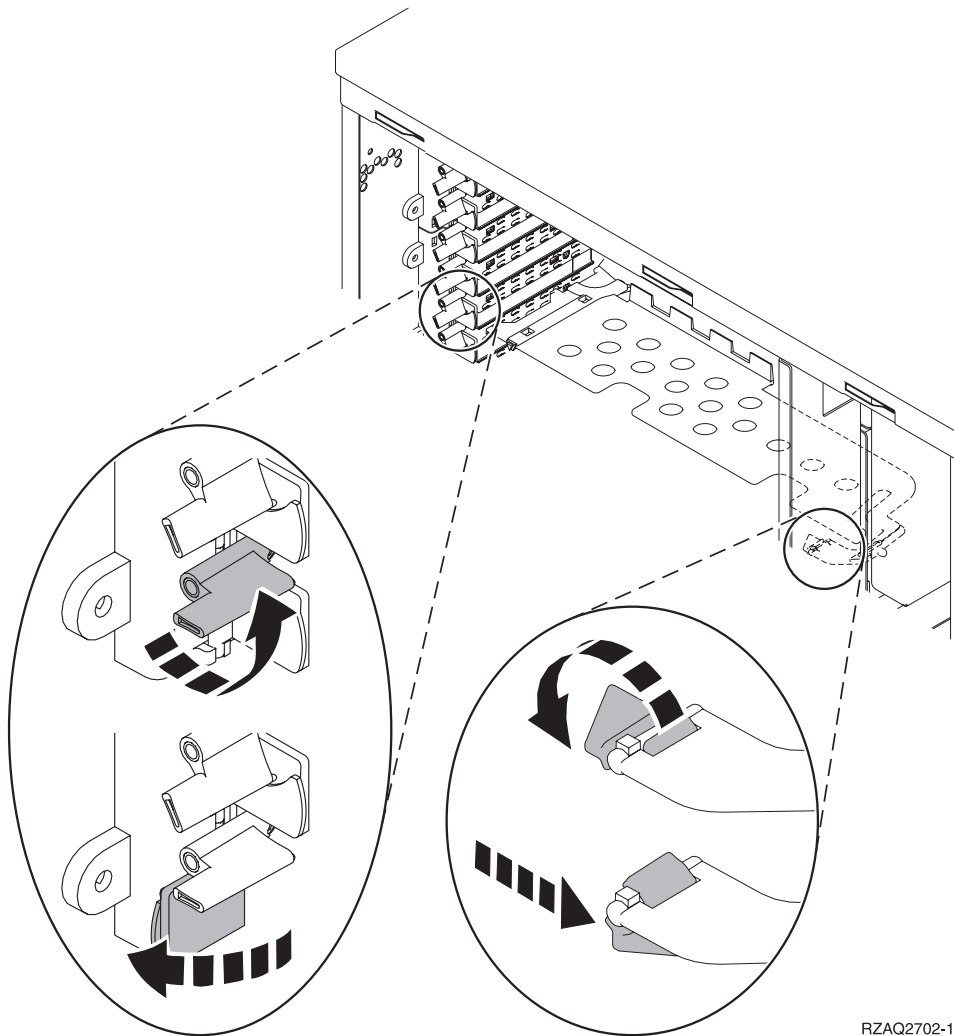
Your iSeries is powered on while moving cards

- 1. Type **strsst** on the command line of the *Main Menu* and press Enter.
- 2. Type **your service tools user ID and service tools password** on the *Start Service Tools (STRSST) Sign On* display and press Enter.
- 3. Select **Start a service tool** from the *System Service Tools (SST)* display and press Enter.
- 4. Select **Hardware service manager** from the *Start a Service Tool* display and press Enter.
- 5. Select **Packaging hardware resources (system, frames, cards...)** from the *Hardware Service Manager* display and press Enter.
- 6. Type **9** on the *System Unit* or *Expansion Unit* line of the unit where you are installing the new card and press Enter.
- 7. Select **Include empty positions**.
- 8. **Attach the disposable wrist strap to prevent electrostatic discharge from damaging a device.** Attach the adhesive part of the foil to an unpainted metal surface on the frame of the unit.

Notes:

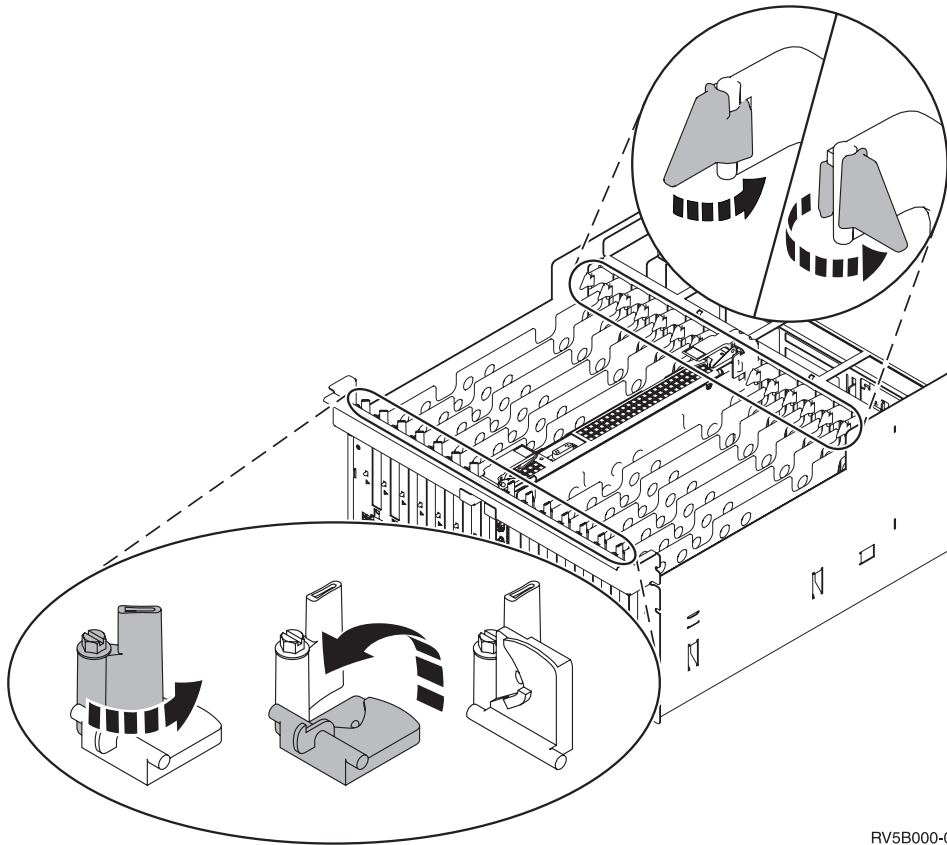
- a. Follow the same precautions you would use without the wrist strap. The 2209 Disposable Wrist Strap is for static control. It will not increase or decrease your risk of receiving electric shock when using or working on electrical equipment.
- b. Remove the liner from the copper foil at the end when you unroll the strap.
- c. Attach the copper foil to an **exposed, unpainted** metal surface on the frame of the unit (electrical ground).
- 9. Select **Concurrent Maintenance** on the card position where you want to remove the card. Press Enter.
- 10. Select **Toggle LED blink off/on**. A light-emitting diode (LED) blinks identifying the position you chose.

- 11. Select **Toggle LED blink off/on** to stop the blinking LED.
- 12. Select **Power off domain** on the *Hardware Resource Concurrent Maintenance* display. Press Enter.
- 13. Wait for the *Hardware Resource Concurrent Maintenance* display to appear with the message indicating Power off complete.
- 14. Open the latch at the card position where you plan to remove the card. Move the latch counterclockwise and then swing the latch out.



RZAQ2702-1

Figure 7. Example of 270, 810, 820, 5075 Card Latch



RV5B000-0

Figure 8. Example of 830, 840, SB2, SB3, 5079 Card Latches

- __ 15. Remove the card and place it in a protective package.
- __ 16. **Attention:** Adapter cards are fragile:
 - Handle only by the edges.
 - Keep fingers off printed circuit area.
 - Use static strap when handling.
 - Leave in protective packaging until ready to install.
- __ 17. Locate the adapter card you want to install in this position.
- __ 18. If installing the 289x IXS card:
 - __ a. Remove a second card filler plate below the first one removed.
 - __ b. Remove the plastic card dividers from the positions the IXS card will occupy. Press down on the release lever at the headstock end and pull away from the backplane.
- __ 19. Align the adapter card with the card connector inside the system unit or expansion unit and push until it is connected securely.
- __ 20. Swing the latch in and move the latch clockwise to secure the card.
- __ 21. Connect any cables and label the cables with the card position.
- __ 22. Select **Power on domain** on the *Hardware Resource Concurrent Maintenance* display. Press Enter.
- __ 23. Press Enter.
- __ 24. Select **Assign to** on the resource with the asterisk (*) on the *Work with Controlling Resource* display. Press Enter.

- ___ 25. Wait for the *Hardware Resource Concurrent Maintenance* display to appear with the message indicating Power on complete.
- ___ 26. If you have more cards to move or want to install the card you removed in another position, go to “Determine the best place to install your card” on page 3.
- ___ 27. If you are finished moving and installing all the cards, remove the wrist strap.
- ___ 28. Install the unit covers.
- ___ 29. Did you install a 289x IXS card?
 - ___ **No:** Do the following:
 - ___ a. Sign on the system unit. Ensure that you have service tools authority.
 - ___ b. Type **strsst** on the command line and press Enter.
 - ___ c. Type **your service tools user ID and service tools password** on the *Start Service Tools (STRSST) Sign On* display and press Enter.
 - ___ d. Select **Start a service tool** from the *Start a Service Tools* display and press Enter.
 - ___ e. Select **Hardware service manager** from the display and press Enter.
 - ___ f. Select **Packaging hardware resources (system, frames, cards...)** from the display and press Enter.
 - ___ g. Type **9** on the *System Unit or Expansion Unit* line.
 - ___ h. Press Page Down if needed and look at the *Card Pos* column for the adapter card you just installed.
 - ___ i. Did you find the card you just installed?
 - ___ **Yes:** Go to step 30 on page 56.
 - ___ **No:** Return to step 1 on page 52 and verify the installation procedure steps.
 - ___ **Yes:** Do the following:
 - ___ a. If you installed a 289x IXS card, it is recommended that you perform a verification test.
 - ___ b. Sign on the system unit. Ensure that you have service tools authority.
 - ___ c. Type **strsst** on the command line and press Enter.
 - ___ d. Type **your service tools user ID and service tools password** on the *Start Service Tools (STRSST) Sign On* display and press Enter.
 - ___ e. Select **Start a service tool** from the *Start a Service Tools* display and press Enter.
 - ___ f. Select **Hardware service manager** from the display and press Enter.
 - ___ g. Select **Packaging hardware resources (system, frames, cards...)** from the display and press Enter.
 - ___ h. Type **9** on the *System Unit or Expansion Unit* line.
 - ___ i. Press Page Down if needed and look at the *Card Pos* column for the card you just installed.
 - ___ 1) Select **Associated Logical Resources** on the line next to the 289x that was just installed.

- ___ 2) Select **Verify** on the line next to the 289x card.
- ___ 3) Press Enter at the *Verification Test* display.
- ___ 4) Select **Processor Internal Test** and wait for it to complete.
- ___ 5) Select **Hardware Memory Test** and wait for it to complete.
- ___ 6) Press Enter at the *Number of Test Runs* display.

Note: If the test fails, make sure that you have installed the card properly. If the test continues to fail, contact your authorized dealer or service provider.
- ___ 7) When the test is complete, the message *This test is successful* appears on the *Verification Test Results* display.
- ___ 8) Press Enter twice.
- ___ 30. Your feature upgrade is complete.
- ___ 31. Press F3 three times and press Enter to get back to the *Main Menu*.

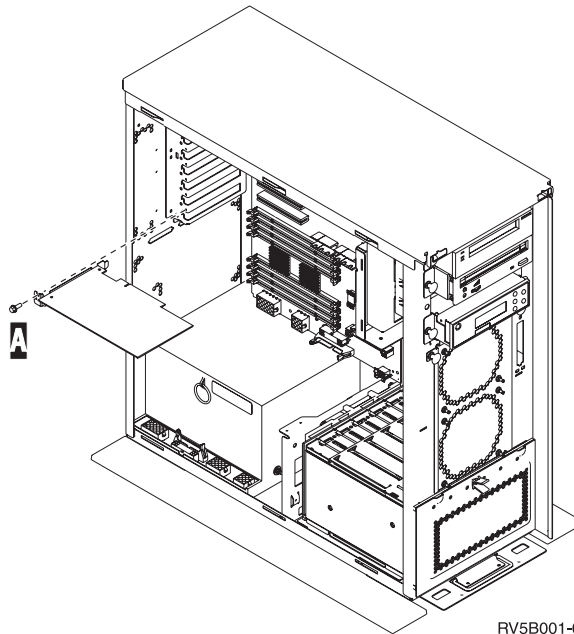
Your iSeries is powered off while moving cards

- ___ 1. Ensure that all jobs are complete.
- ___ 2. When all jobs are complete, type **pwrdownsys *immed** on an iSeries command line and press Enter.
- ___ 3. When the iSeries power down is complete, unplug any power cords, such as printers and displays, from electrical outlets.
- ___ 4. Unplug the system or expansion unit power cord from the electrical outlet.
- ___ 5. **Attach the disposable wrist strap to prevent electrostatic discharge from damaging a device.** Attach the adhesive part of the foil to an unpainted surface on the frame of the unit.

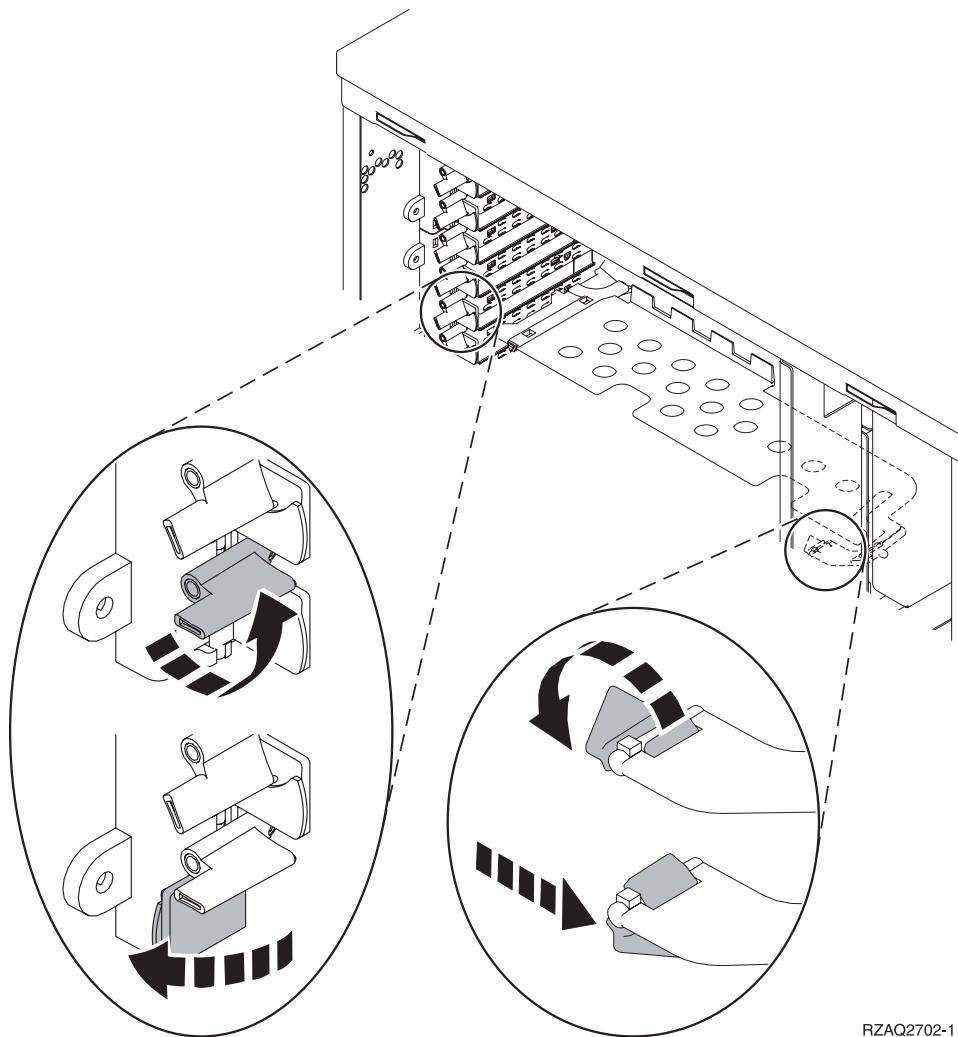
Notes:

- a. Follow the same precautions you would use without the wrist strap. The 2209 Disposable Wrist Strap is for static control. It will not increase or decrease your risk of receiving electric shock when using or working on electrical equipment.
- b. Remove the liner from the copper foil at the end when you unroll the strap.
- c. Attach the copper foil to an **exposed, unpainted** metal surface on the frame of the system unit (electrical ground).
- ___ 6. Locate the adapter card positions inside your system unit.

- ___ 7. Does your unit have screws to secure the cards?

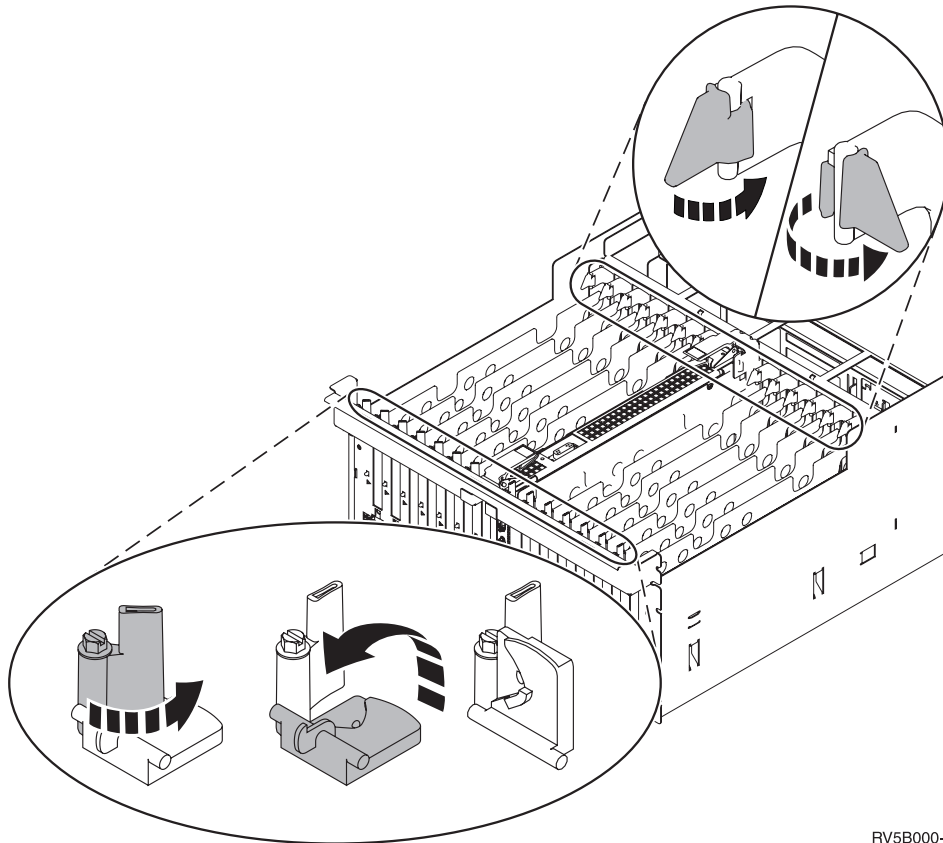


- ___ **No:** Continue with the next step.
- ___ **Yes:** Do the following:
- ___ a. Remove the screw from the card position where you plan to remove the card.
 - ___ b. Go to step 9 on page 59.
- ___ 8. Open the latch at the card position where you plan to remove the card. Move the latch counterclockwise and then swing the latch out.



RZAQ2702-1

Figure 9. Example of 270, 810, 820, 5075 Card Latch



RV5B000-0

Figure 10. Example of 830, 840, 870, 890, SB2, SB3, 5079 Card Latches

- ___ 9. Remove the card and place it in a protective package.
- ___ 10. **Attention:** Adapter cards are fragile:
 - Handle only by the edges.
 - Keep fingers off printed circuit area.
 - Use static strap when handling.
 - Leave in protective packaging until ready to install.
- ___ 11. Locate the adapter card you want to install in this position.
- ___ 12. If installing the 289x IXS card:
 - ___ a. Remove a second card filler plate below the first one removed.
 - ___ b. Remove the plastic card dividers from the positions the IXS card will occupy. Press down on the release lever at the headstock end and pull away from the backplane.
- ___ 13. Align the adapter card with the card holders inside the system unit and push until it is connected securely.
- ___ 14. Swing the latch in and move the other latch clockwise or install the screw to secure the card.
- ___ 15. **DANGER**

To prevent a possible electrical shock from touching two surfaces with different electrical grounds, use one hand, when possible, to connect or disconnect signal cables. (RSFTD004)

Connect any cables and label the cables with the card position.

- ___ 16. If you have more cards to move or want to install the card you removed in another position, go to “Determine the best place to install your card” on page 3.
- ___ 17. Then go to “Your iSeries is powered off while moving cards” on page 56 and repeat the steps to install the next card.
- ___ 18. If you are finished moving and installing all cards, remove the wrist strap.
- ___ 19. Install the unit covers.
- ___ 20. **DANGER**

An electrical outlet that is not correctly wired could place hazardous voltage on metal parts of the system or the products that attach to the system. It is the customer’s responsibility to ensure that the outlet is correctly wired and grounded to prevent an electrical shock. (RSFTD201)

Plug in the system unit and system unit console into an electrical outlet. Plug in everything you previously unplugged such as printers and displays.

- ___ 21. Is your system unit an iSeries 270 or 810 or 820, 825, 830, 840, 870, 890?
 - ___ **270 or 810:** Continue with the next step.
 - ___ **820, 825, 830, 840, 870, 890:** Go to step 24.
- ___ 22. Look at the Function/Data display on the control panel.
- ___ 23. Does **01 B N V=S** appear in the Function/Data display?
 - ___ **Yes:** Go to step 27 on page 61.
 - ___ **No:** Do the following:
 - ___ a. Press the Increment/Decrement push button until **02** appears in the Function/Data display.
 - ___ b. Press the Enter push button on the control panel.
 - ___ c. Press the Increment/Decrement push button until **B** appears in the Function/Data display.
 - ___ d. Press the Enter push button on the control panel.
 - ___ e. Press the Increment/Decrement push button until **N** appears in the Function/Data display.
 - ___ f. Press the Enter push button on the control panel.
 - ___ g. Press the Increment/Decrement push button until **S** appears in the Function/Data display.
 - ___ h. Press the Enter push button on the control panel.
 - ___ i. Press the Increment/Decrement push button until **01** appears in the Function/Data display.
 - ___ j. Press the Enter push button on the control panel.

01 B N S should appear in the Function/Data display. If it does not, repeat steps 23a through 23i. If it does, go to step 27 on page 61.
- ___ 24. Look at the Function/Data display on the control panel.
- ___ 25. Does **01 B V=S** appear in the Function/Data display?
 - ___ **Yes:** Continue with the next step.
 - ___ **No:** Do the following:
 - ___ a. Press the Increment/Decrement push button until **02** appears in the Function/Data display.

- ___ b. Press the Enter push button on the control panel.
 - ___ c. Press the Increment/Decrement push button until **B** appears in the Function/Data display.
 - ___ d. Press the Enter push button on the control panel.
 - ___ e. Press the Increment/Decrement push button until **S** appears in the Function/Data display
 - ___ f. Press the Enter push button on the control panel.
 - ___ g. Press the Increment/Decrement push button until **01** appears in the Function/Data display.
 - ___ h. Press the Enter push button on the control panel.
01 B S should appear in the Function/Display panel. If it does appear, not repeat steps 25a on page 60 through 25h.
 - ___ i. Go to step 26.
- ___ 26. Press the Power push button that is located on the iSeries control panel. There is approximately a 10-second delay before the power-on light comes on, and data appears in the Function/Data display.

Note: The system takes approximately 5 to 20 minutes to power on and complete an IPL. When the IPL is complete, 01 B N S appears in the Function/Data display.

- ___ 27. Did you install a 289x IXS card?
- ___ **No:** Do the following:
 - ___ a. Sign on the system unit. Ensure that you have service tools authority.
 - ___ b. Type **strsst** on the command line and press Enter.
 - ___ c. Type **your service tools user ID and service tools password** on the *System Service Tools (SST) Sign On* display and press Enter.
 - ___ d. Select **Start a service tool** from the *Start a Service Tools* display and press Enter.
 - ___ e. Select **Hardware service manager** from the display and press Enter.
 - ___ f. Select **Packaging hardware resources (system, frames, cards...)** from the display and press Enter.
 - ___ g. Type **9** on the *System Unit or Expansion Unit* line.
 - ___ h. Press Page Down if needed and look at the *Card Pos* column for the adapter card you just installed.
 - ___ i. Did you find the card you just installed?
 - ___ **Yes:** Go to step 28 on page 62.
 - ___ **No:** Return to step 1 on page 56 and verify the installation procedure steps.
 - ___ **Yes:** Do the following:
 - ___ a. If you installed a 289x IXS card, it is recommended that you perform a verification test.
 - ___ b. Sign on the system unit. Ensure that you have service tools authority.
 - ___ c. Type **strsst** on the command line and press Enter.

- ___ d. Type **your service tools user ID and service tools password** on the *System Service Tools (SST) Sign On* display and press Enter.
- ___ e. Select **Start a service tool** from the *Start a Service Tools* display and press Enter.
- ___ f. Select **Hardware service manager** from the display and press Enter.
- ___ g. Select **Packaging hardware resources (system, frames, cards...)** from the display and press Enter.
- ___ h. Type **9** on the *System Unit or Expansion Unit* line.
- ___ i. Press Page Down if needed and look at the *Card Pos* column.
 - ___ 1) Select **Associated Logical Resources** on the line next to the 289x that was just installed.
 - ___ 2) Select **Verify** on the line next to the 289x card.
 - ___ 3) Press Enter at the *Verification Test* display.
 - ___ 4) Select **Processor Internal Test** and wait for it to complete.
 - ___ 5) Select **Hardware Memory Test** and wait for it to complete.
 - ___ 6) Press Enter at the *Number of Test Runs* display.

Note: If the test fails, make sure that you have installed the card properly. If the test continues to fail, contact your authorized dealer or service provider.
 - ___ 7) When the test is complete, the message *This test is successful* appears on the *Verification Test Results* display.
 - ___ 8) Press Enter twice.
 - ___ 9) Press F3 three times to return to the *Main Menu*.
- ___ 28. Your feature upgrade is complete.
- ___ 29. Press F3 three times and press Enter to get back to the *Main Menu*.

Install Integrated xSeries Adapter for iSeries

Card number 2689 or machine type 1519 model 100 is the Integrated xSeries Adapter for iSeries. You will install the card in your xSeries server. Refer to your xSeries server documentation to complete some of the steps.

Prerequisites

Ensure you have the following before starting your installation:

- Machine type 1519 model 100–2689 card assembly
- Remote Supervisor Adaptor option (PN 09N7585) required with some xSeries models. See model specific instructions below
- xSeries server **without** disk units
- Mouse, keyboard, and display for the xSeries server
- High-speed link (HSL) cable (more than one may be needed for an HSL loop). For more information, refer to High-speed link (HSL) information in the *Information Center*.
- System power control network (SPCN) cable
- At least V5R1 operating system

Prepare the server

The boot fail counter and virus detection need to be turned off before installing the card.

1. Power on the xSeries server.
2. The IBM logo display appears.
3. Press F1 after the prompt appears on the display to go to setup.
4. Select **Start Options**. Press Enter.
5. Select **boot fail count** using the down arrow (↓).
6. Change the value to **Disabled** using the right arrow (→).
7. Select **virus detection** using the down arrow (↓).
8. Change the value to **Disabled** using the right arrow (→).
9. Press **Esc** two times to exit.
10. Select **YES** from the *Settings were changed* display.
11. Power off the xSeries server. Go to the information you received with your xSeries for instructions to power off.
12. For the latest system BIOS and Advanced System Management firmware, go to <http://www.pc.ibm.com/support>

Card placement

Refer to the following list for the Integrated Adapter for xSeries card placement in the different servers. For a current list of xSeries servers, go to:

<http://www.ibm.com/servers/eserver/series/windowsintegration>

Server	Card position
7100	1 or 2

7600	1 or 2
xSeries 235	4
xSeries 250	1 or 2
xSeries 255	2
xSeries 350	2
xSeries 360	3
xSeries 440	2

Install the card

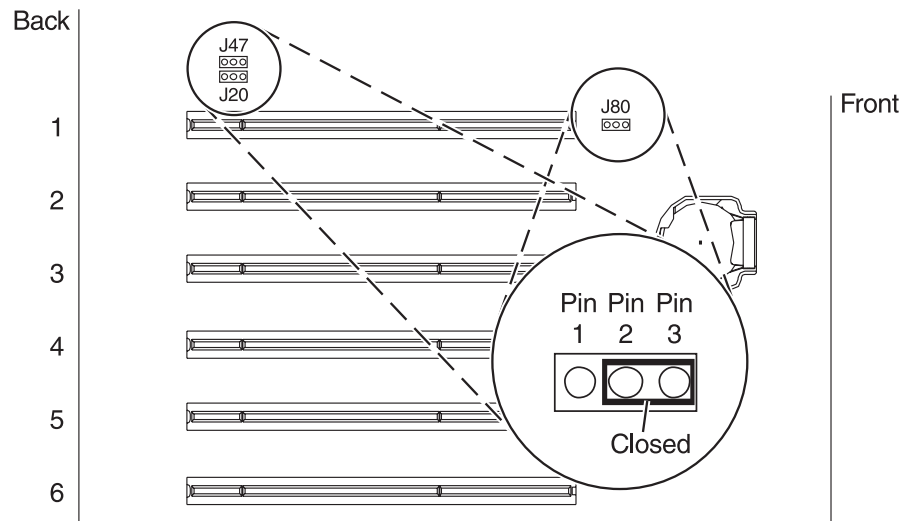
Select your server to install the card:

- ___ “Server 7100, 7600 or xSeries 250”
- ___ “xSeries 235” on page 65
- ___ “xSeries 255” on page 67
- ___ “xSeries 350” on page 70
- ___ “xSeries 360” on page 71
- ___ “xSeries 440” on page 73

Server 7100, 7600 or xSeries 250

To install the card, refer to your xSeries server information when completing the following steps:

- ___ 1. Make sure the server is powered off.
- ___ 2. **Unplug the server power cord from the electrical outlet.**
- ___ 3. Provide 3.3v standby power for the card position. Locate J47 if installing in card position 1, or J20 if installing in card position 2.



RZAQ4515-0

- ___ 4. Move the jumper from pins 2 and 3 to pins 1 and 2.

Note: You may need to remove the memory card to access J47 or J20. Refer to your xSeries server information.

- ___ 5. You may need to move an existing card to install the Integrated xSeries Adapter card in the correct position.

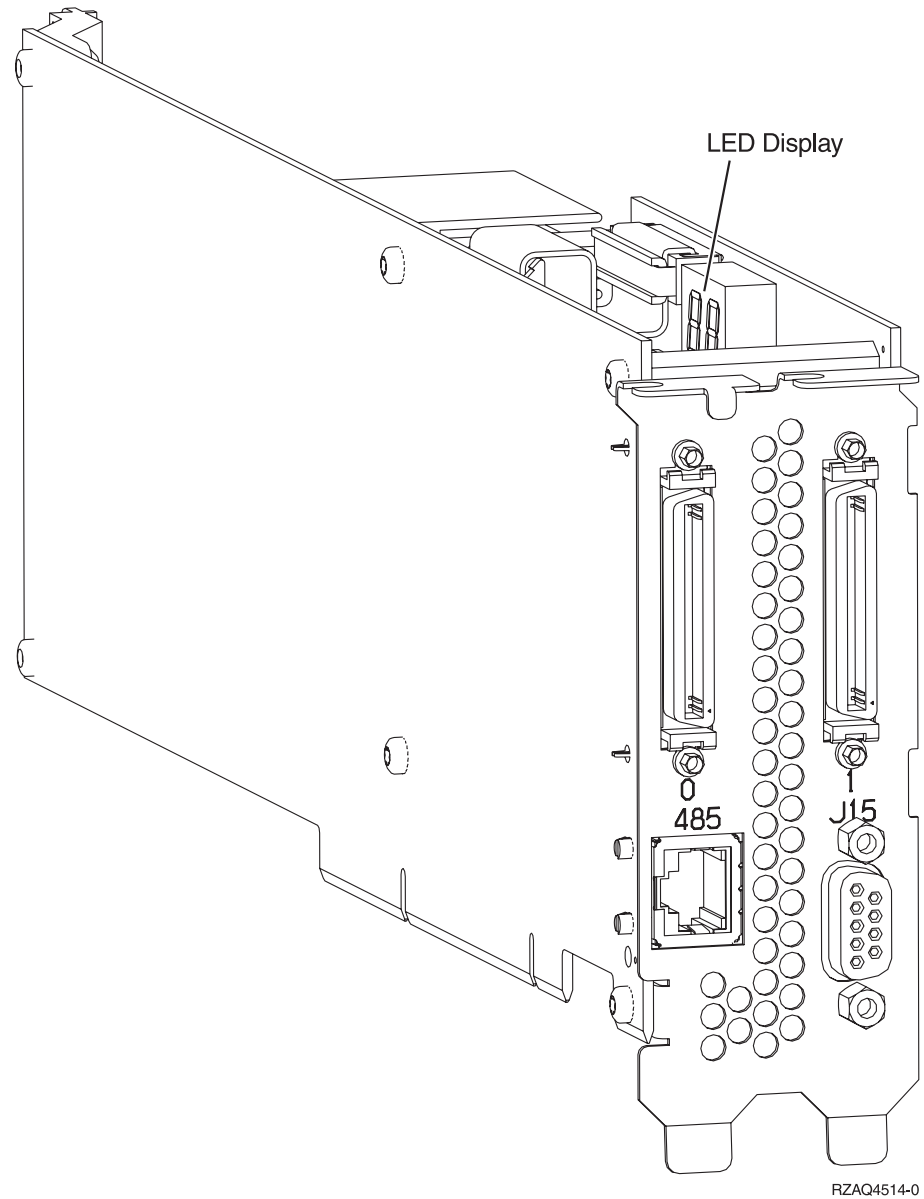
- ___ 6. Two card positions are used by the card.
- ___ 7. Refer to the xSeries information to install the card.
- ___ 8. Install the card in card position 1 or 2.
- ___ 9. Make sure the card is securely latched.
- ___ 10. After the card is installed, return to these instructions.
- ___ 11. Go to “Connect the cables” on page 76.

xSeries 235

To install the card, refer to your xSeries server information when completing the following steps:

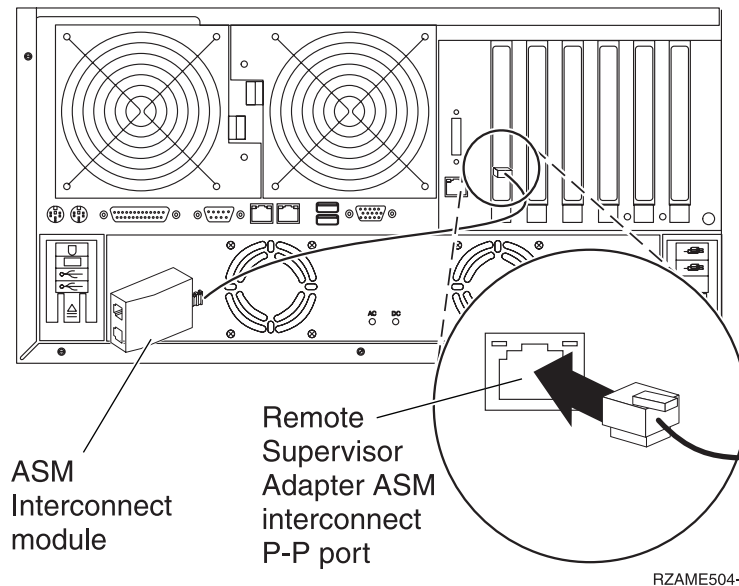
- ___ 1. A Remote Supervisor Adapter option (PN 09N7585) must be installed in this server before installing the IXA card. This includes updating the Remote Supervisor Adapter’s firmware to the latest level. Go to <http://www.pc.ibm.com/support>. Then return to these instructions.
- ___ 2. Make sure the server is powered off.
- ___ 3. **Unplug the server power cord from the electrical outlet.**
- ___ 4. You may need to move an existing card to install the Integrated xSeries Adapter card in the correct position.
- ___ 5. Two card positions are used by the card.
- ___ 6. Refer to the xSeries information to install the card.
- ___ 7. Install the card in card position 4. (Install in card position 4 even though card position 5 is specified in other documentation.)
- ___ 8. Make sure the card is securely latched.
- ___ 9. After the card is installed, return to these instructions.
- ___ 10. Connect PN 04N2652 to the 2689 card J15 label. Connect the cable to the SPCN network of your iSeries system. Make sure the cable is routed so

that it does not come into contact with any AC power cord.



- ___ 11. Connect cable PN 21P4162 to the card 485 label.
- ___ 12. Connect the other end of the cable to one of the two ports on the ASM (Advanced System Management) Interconnect Module. The ASM Interconnect Module, PN 03K9315, was shipped with the machine type

1519.



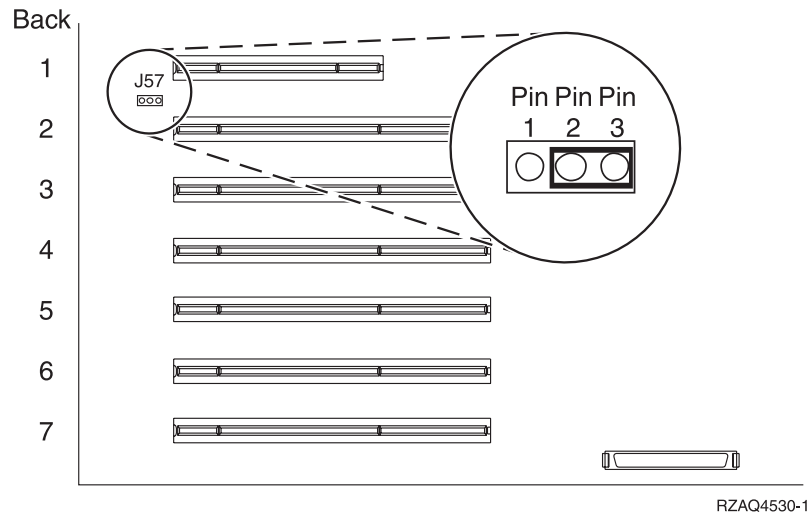
- ___ 13. Connect the terminator plug, PN 59P2951, to the unused port on the ASM Interconnect Module.
- ___ 14. Connect the plug end of the ASM Interconnect Module to the Remote Supervisor Adapter ASM interconnect (P-P) port.
- ___ 15. Connect any high-speed link (HSL) cables that you ordered to the card 0 and 1 label. For more information, refer to High-speed link (HSL) information in the *Information Center*.
- ___ 16. Plug the server into an electrical outlet.
- ___ 17. To complete the installation, go to Windows server on iSeries in the *Information Center*.

xSeries 255

To install the card, refer to your xSeries server information when completing the following steps:

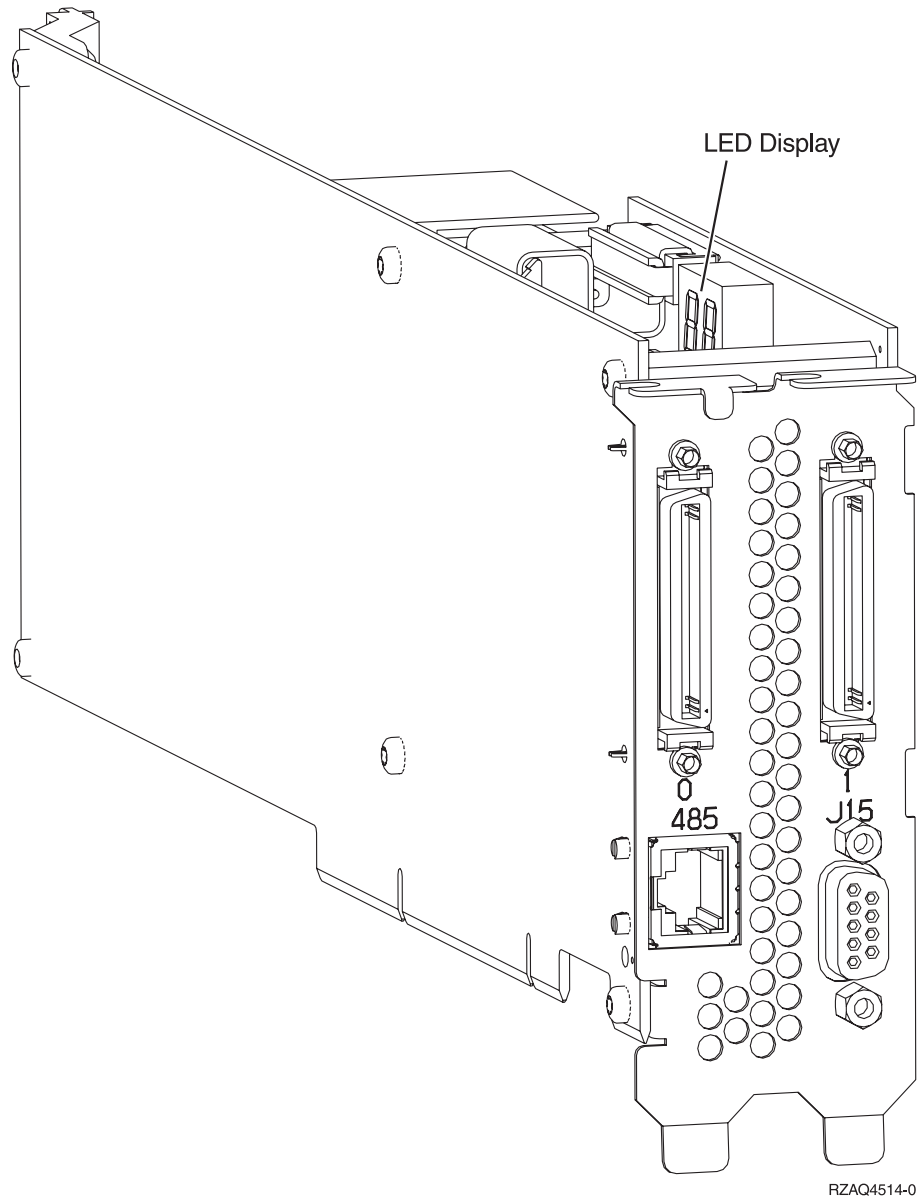
- ___ 1. A Remote Supervisor Adapter option (PN 09N7585) must be installed in this server before installing the IXA card. This includes updating the Remote Supervisor Adapter's firmware to the latest level. Go to <http://www.pc.ibm.com/support>. Then return to these instructions.
- ___ 2. Make sure the server is powered off.
- ___ 3. **Unplug the server power cord from the electrical outlet.**

- ___ 4. Provide 3.3v standby power for the card position. Locate J57.



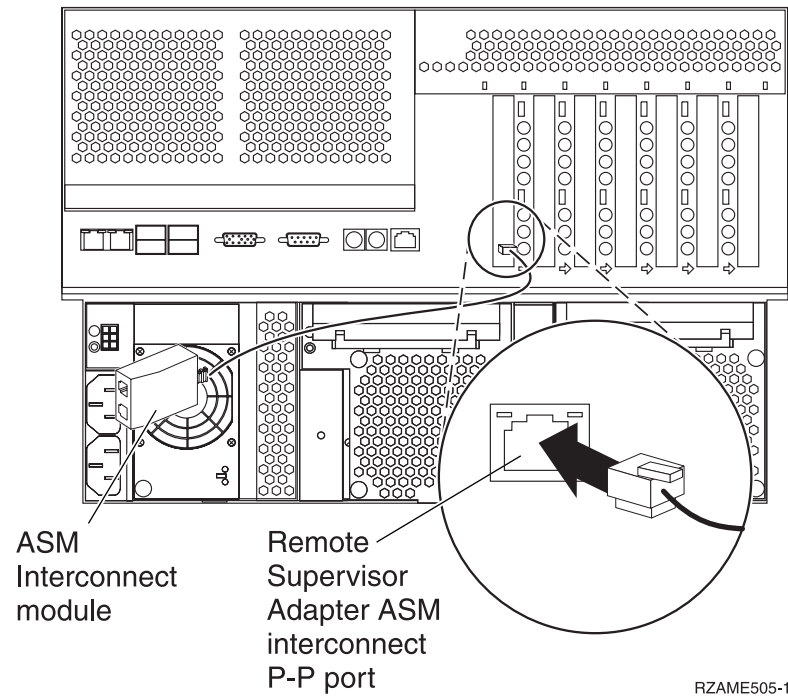
- ___ 5. Move the jumper from pins 1 and 2 to pins 2 and 3.
- ___ 6. You may need to move an existing card to install the Integrated xSeries Adapter card in the correct position.
- ___ 7. Two card positions are used by the card.
- ___ 8. Refer to the xSeries information to install the card.
- ___ 9. Install the card in card position 2.
- ___ 10. Make sure the card is securely latched.
- ___ 11. After the card is installed, return to these instructions.
- ___ 12. Connect PN 04N2652 to the 2689 card J15 label. Connect the cable to the SPCN network of your iSeries system. Make sure the cable is routed so

that it does not come into contact with any AC power cord.



- ___ 13. Connect cable PN 21P4162 to the card 485 label.
- ___ 14. Connect the other end of the cable to one of the two ports on the ASM (Advanced System Management) Interconnect Module. The ASM Interconnect Module, PN 03K9315, was shipped with the machine type

1519.



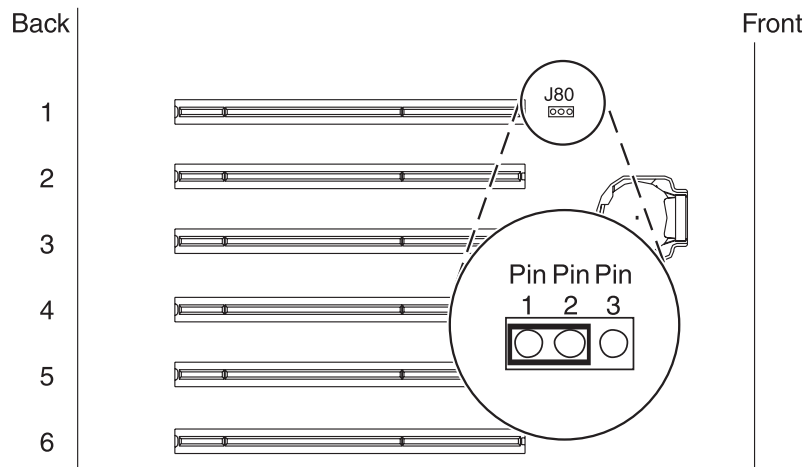
- ___ 15. Connect the terminator plug, PN 59P2951, to the unused port on the ASM Interconnect Module.
- ___ 16. Connect the plug end of the ASM Interconnect Module to the Remote Supervisor Adapter ASM interconnect (P-P) port.
- ___ 17. Connect any high-speed link (HSL) cables that you ordered to the card 0 and 1 label. For more information, refer to High-speed link (HSL) information in the *Information Center*.
- ___ 18. Plug the server into an electrical outlet.
- ___ 19. To complete the installation, go to Windows server on iSeries in the *Information Center*.

xSeries 350

To install the card, refer to your xSeries server information when completing the following steps:

- ___ 1. Make sure the server is powered off.
- ___ 2. **Unplug the server power cord from the electrical outlet.**

- ___ 3. Provide 3.3v standby power for the card position. Locate J80.



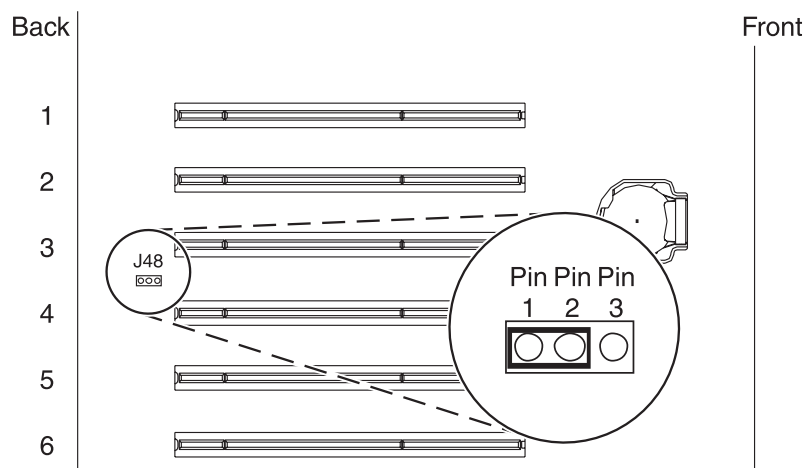
RZAQ4527-1

- ___ 4. Move the jumper from pins 2 and 3 to pins 1 and 2.
- ___ 5. You may need to move an existing card to install the Integrated xSeries Adapter card in the correct position.
- ___ 6. Two card positions are used by the card.
- ___ 7. Refer to the xSeries information to install the card.
- ___ 8. Install the card in card position 2.
- ___ 9. Make sure the card is securely latched.
- ___ 10. After the card is installed, return to these instructions.
- ___ 11. Go to “Connect the cables” on page 76.

xSeries 360

To install the card, refer to your xSeries server information when completing the following steps:

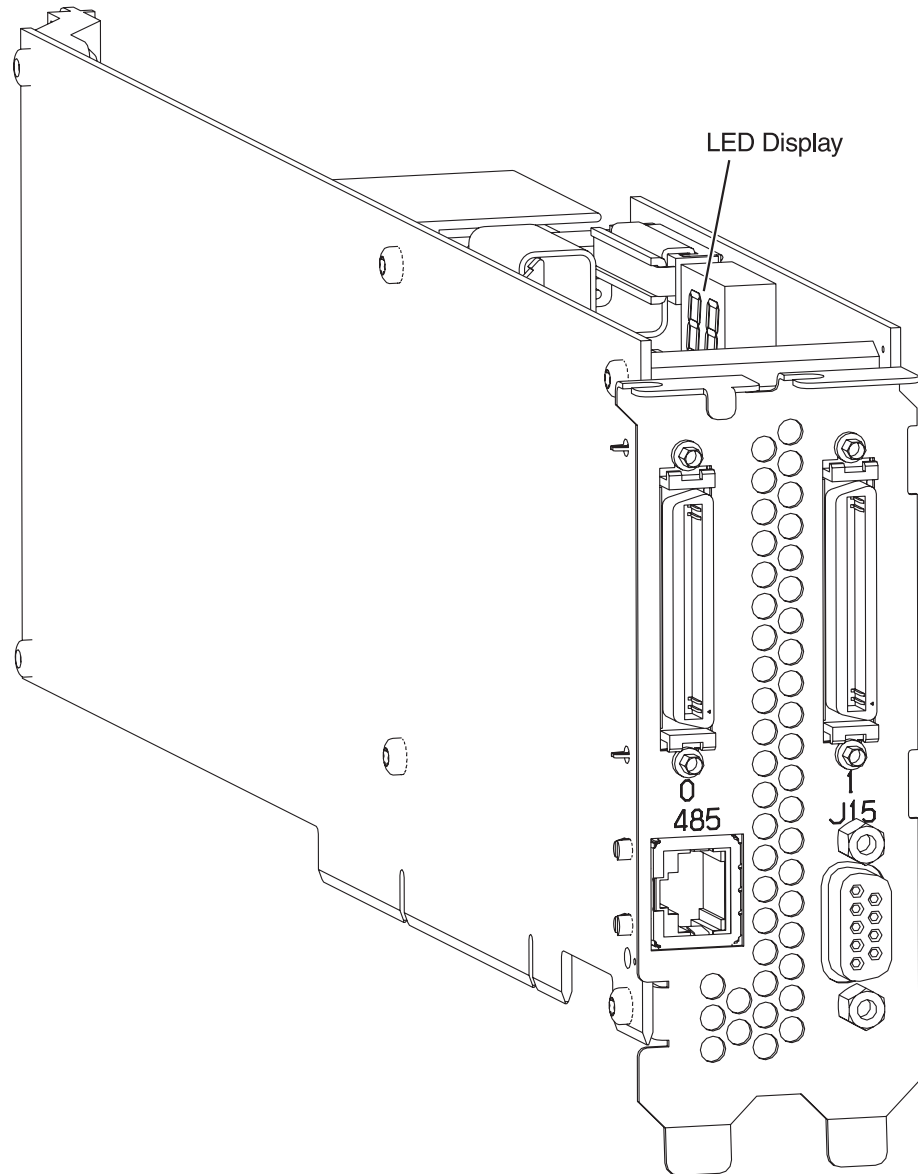
- ___ 1. Make sure the server is powered off.
- ___ 2. **Unplug the server power cord from the electrical outlet.**
- ___ 3. Provide 3.3v standby power for the card position. Locate J48.



RZAQ4528-1

- ___ 4. Move the jumper from pins 1 and 2 to pins 2 and 3.

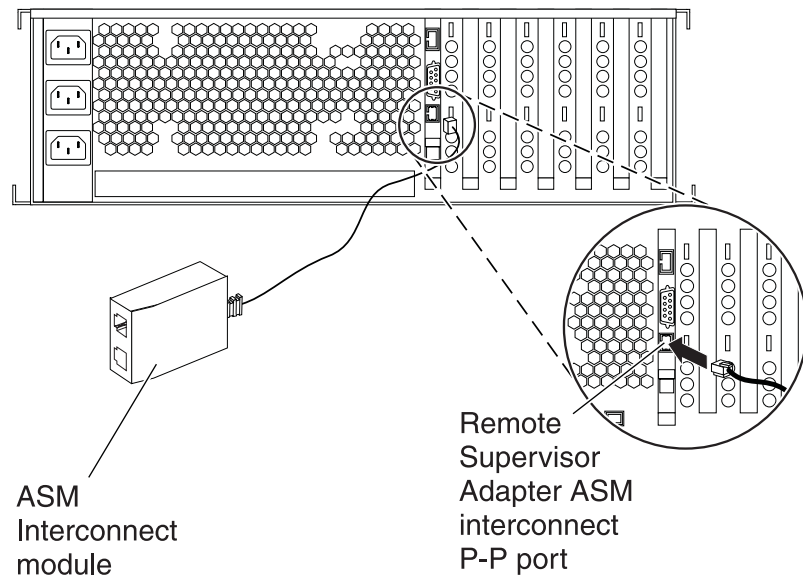
- ___ 5. You may need to move an existing card to install the Integrated xSeries Adapter card in the correct position.
- ___ 6. Two card positions are used by the card.
- ___ 7. Refer to the xSeries information to install the card.
- ___ 8. Install the card in card position 3.
- ___ 9. Make sure the card is securely latched.
- ___ 10. After the card is installed, return to these instructions.
- ___ 11. Connect PN 04N2652 to the 2689 card J15 label. Connect the cable to the SPCN network of your iSeries system. Make sure the cable is routed so that it does not come into contact with any AC power cord.



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- ___ 12. Connect cable PN 21P4162 to the card 485 label.
- ___ 13. Connect the other end of the cable to one of the two ports on the ASM (Advanced System Management) Interconnect Module. The ASM Interconnect Module, PN 03K9315, was shipped with the machine type

1519.



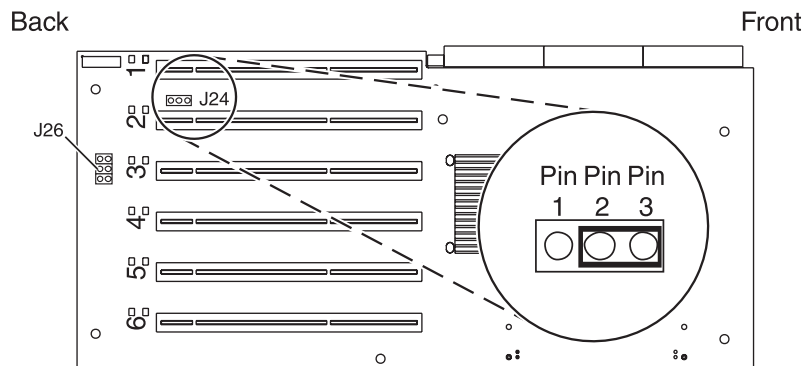
RZAME501-1

- ___ 14. Connect the terminator plug, PN 59P2951, to the unused port on the ASM Interconnect Module.
- ___ 15. Connect the plug end of the ASM Interconnect Module to the Remote Supervisor Adapter ASM interconnect (P-P) port.
- ___ 16. Connect any high-speed link (HSL) cables that you ordered to the card 0 and 1 label. For more information, refer to High-speed link (HSL) information in the *Information Center*.
- ___ 17. Plug the server into an electrical outlet.
- ___ 18. To complete the installation, go to Windows server on iSeries in the *Information Center*.

xSeries 440

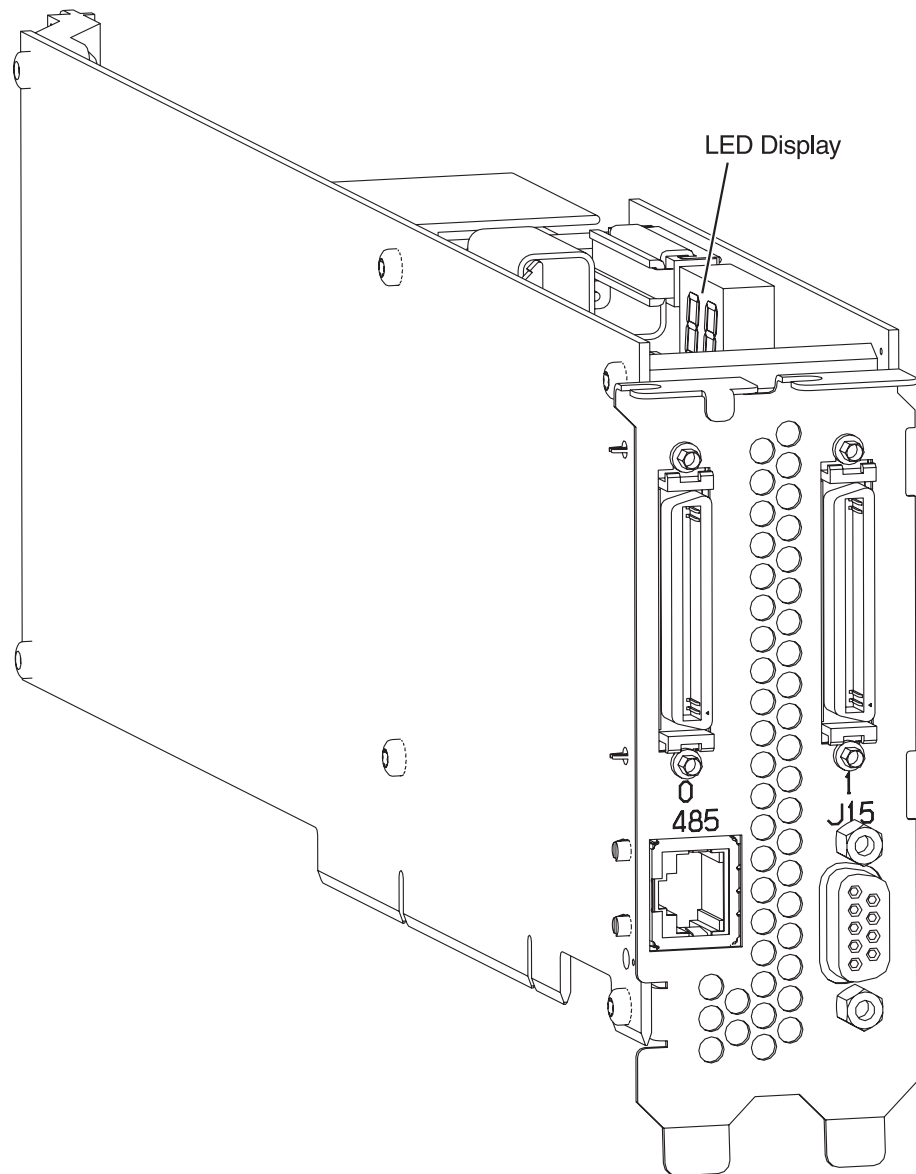
To install the card, refer to your xSeries server information when completing the following steps:

- ___ 1. Make sure the server is powered off.
- ___ 2. **Unplug the server power cord from the electrical outlet.**
- ___ 3. Provide 3.3v standby power for the card position. Locate J24.



RZQA4529-0

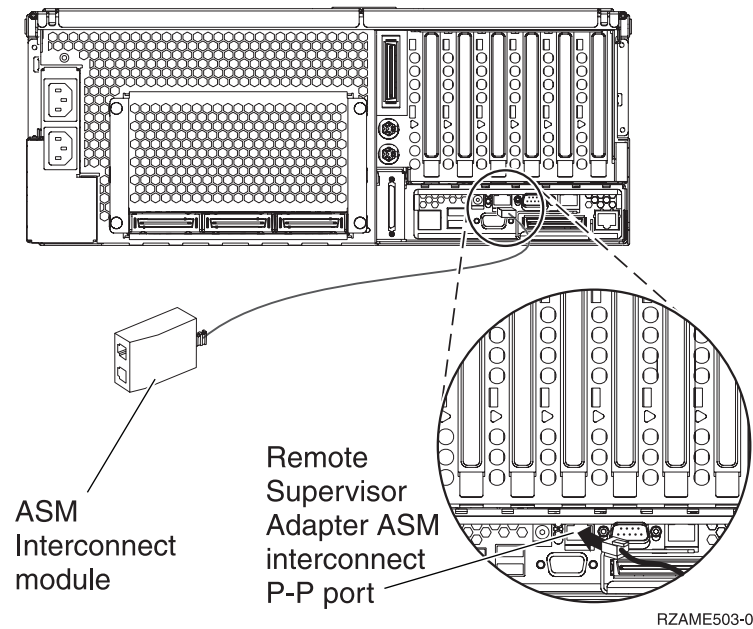
- ___ 4. Move the jumper from pins 1 and 2 to pins 2 and 3.
- ___ 5. You may need to move an existing card to install the Integrated xSeries Adapter card in the correct position.
- ___ 6. Locate J26 and install a jumper on pins 1 and 2.
- ___ 7. Two card positions are used by the card.
- ___ 8. Refer to the xSeries information to install the card.
- ___ 9. Install the card in card position 2.
- ___ 10. Make sure the card is securely latched.
- ___ 11. After the card is installed, return to these instructions.
- ___ 12. Connect PN 04N2652 to the 2689 card J15 label. Connect the cable to the SPCN network of your iSeries system. Make sure the cable is routed so that it does not come into contact with any AC power cord.



RZAQ4514-0

- ___ 13. Connect cable PN 21P4162 to the card 485 label.
- ___ 14. Connect the other end of the cable to one of the two ports on the ASM (Advanced System Management) Interconnect Module. The ASM

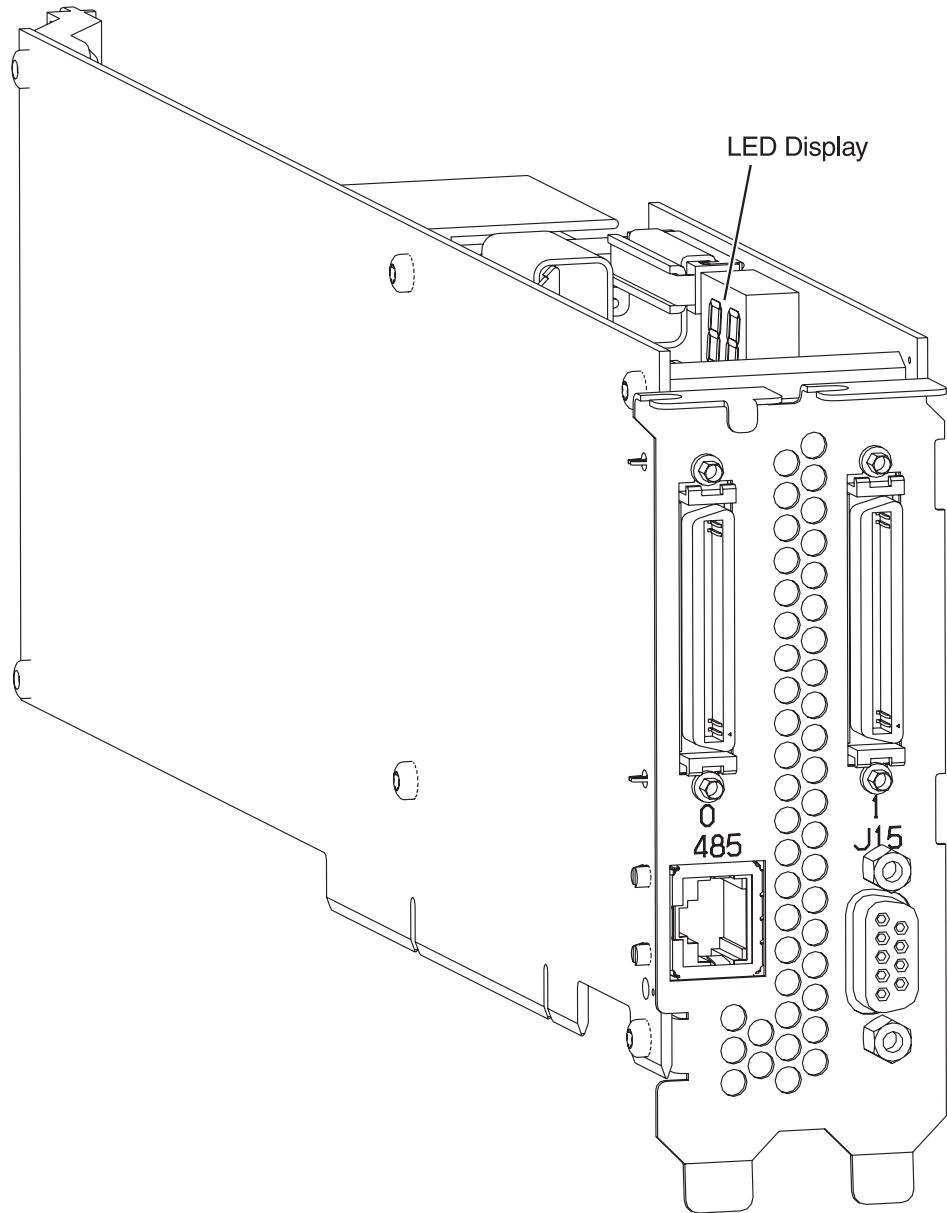
Interconnect Module, PN 03K9315, was shipped with the machine type 1519.



- ___ 15. Connect the terminator plug, PN 59P2951, to the unused port on the ASM Interconnect Module.
- ___ 16. Connect the plug end of the ASM Interconnect Module to the Remote Supervisor Adapter ASM interconnect (P-P) port.
- ___ 17. Connect any high-speed link (HSL) cables that you ordered to the card 0 and 1 label. For more information, refer to High-speed link (HSL) information in the *Information Center*.
- ___ 18. Plug the server into an electrical outlet.
- ___ 19. To complete the installation, go to Windows server on iSeries in the *Information Center*.

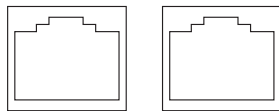
Connect the cables

1. Connect PN 04N2652 to the 2689 card J15 label. Connect the cable to the SPCN network of your iSeries system. Make sure the cable is routed so that it does not come into contact with any AC power cord.



RZAQ4514-0

2. Connect cable PN 21P4162 to the card 485 label.
3. Connect the other end of the cable to either RS-485 port on the server.



A RS485 B

RZAQ4517-0

4. Connect any high-speed link (HSL) cables that you ordered to the card 0 and 1 label. For more information, refer to High-speed link (HSL) information in the *Information Center*.
5. Plug the server into an electrical outlet.
6. Power on the iSeries.
7. To complete the installation, go to Windows server on iSeries in the *Information Center*.



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