



110PAX4 and 170PAX4 Wireless PCMCIA Option Board Assembly Kit

Installation Instructions

This kit includes the parts and documentation necessary to install the Wireless PCMCIA option board assembly into either a 110PAX4 or a 170PAX4 print engine. Read these instructions thoroughly before installing this kit.



Note • You must have *PAX* firmware V60.13.0.4 or higher. Zebra *PAX* firmware is downloadable from the Zebra web site. See www.zebra.com.

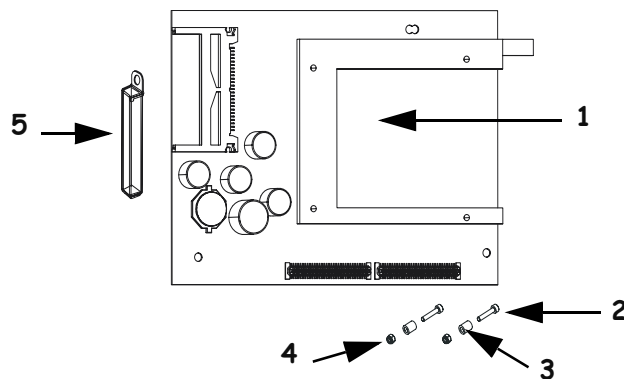
Parts List

✓	Item	Qty	Part Number	Description
	Ref	1	57521	Wireless PCMCIA Option Kit
	1	1	<i>79100</i>	Wireless PCMCIA Option Assembly, PAX
	2	2	<i>57215</i>	Screw
	3	2	<i>33291</i>	Spacer
	4	2	<i>43711</i>	Nut
	5	1	<i>33236</i>	Wireless PCMCIA Card Shield (Plastic)
	6	1	<i>45638-002</i>	ZebraNet Connectivity Solutions User CD

Bold = Part available for purchase.

Italic = Part not available for purchase, listed and shown for reference only.

Figure 1 • Kit Parts



Reference Material

57512L-001	110PAX4 User Guide
57511-001	PAX4 User CD
57515L-001	110PAX4 Print Engine Maintenance Manual
57513L-001	110PAX4 Quick Reference Guide
49560	PAX4 Maintenance Manual CD
57514L-001	PAX4 Safety Guide
57517L-001	170PAX4 Quick Reference Guide
57516L-001	170PAX4 User Guide
57518L-001	170PAX4 Maintenance Manual

Tools Required



- Phillips Screwdriver Set
- Anti-Static Wrist Strap
- Metric Hex Key (Allen Wrench) Set
- Metric Nutdriver Set
- Anti-Static Mat

Installation Instructions

Remove the 110PAX4 and 170PAX4 Print Engine from the Applicator



Caution • Turn OFF (●) the AC power switch and remove the power cord before performing this procedure.



Note • Retain all parts removed during disassembly, unless otherwise directed.

1. Turn Off (●) the print engine and disconnect the AC power cord and interface cables.
2. Open the front cover, unlatch the printhead lever, and remove media and ribbon from the print engine.
3. Close and latch the printhead lever, and then close the front cover.

Wireless PCMCIA Option Board Assembly Kit
Installation Instructions

4. See Figure 2 for the 110PAX4 and Figure 3 for the 170PAX4 print engine. Remove the four corner applicator mounting screws securing the print engine to the applicator.



Note • The keyhole and the center mounting bolt are designed to support the print engine and assist in installing and removing the four mounting screws.

5. Loosen, but do not remove the center mounting bolt.
6. To remove the print engine from the applicator, lift the print engine off the center mounting bolt and place on a workbench.

Figure 2 • Front View of 110PAX4 Print Engine in Applicator (Right-Hand Model Shown)

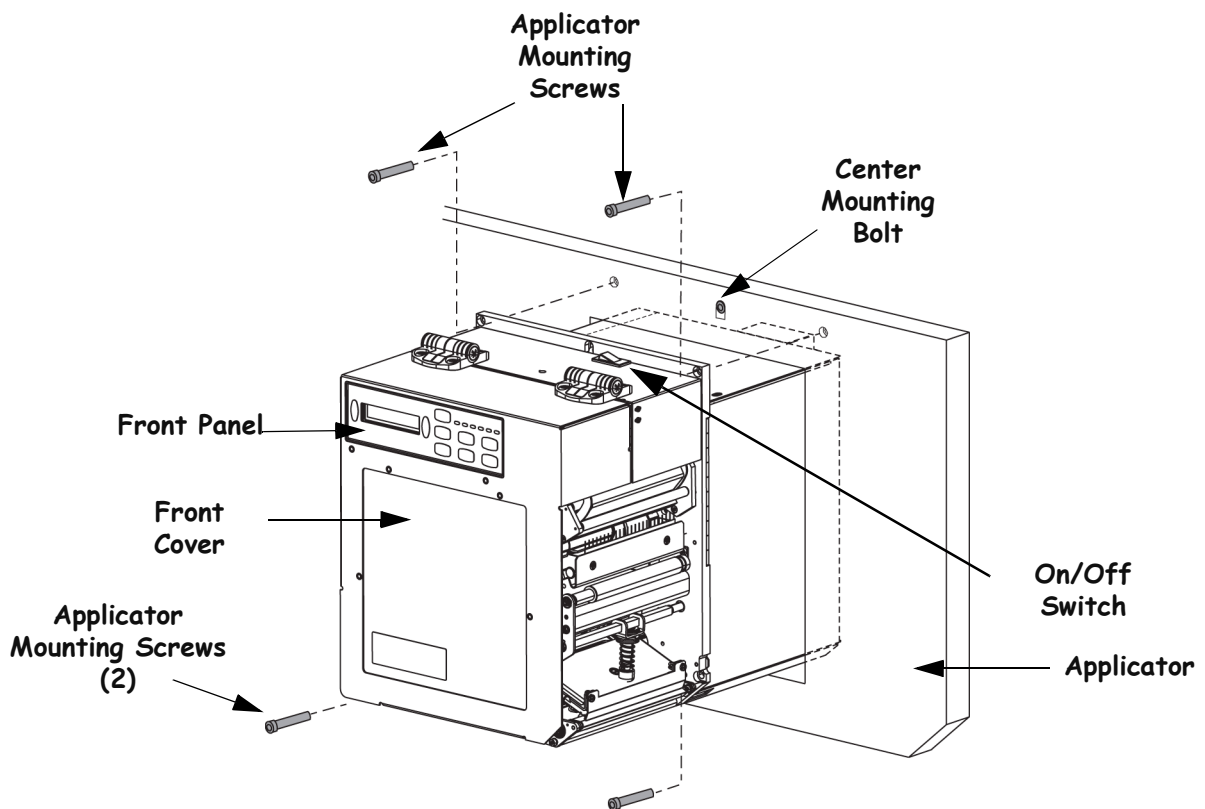
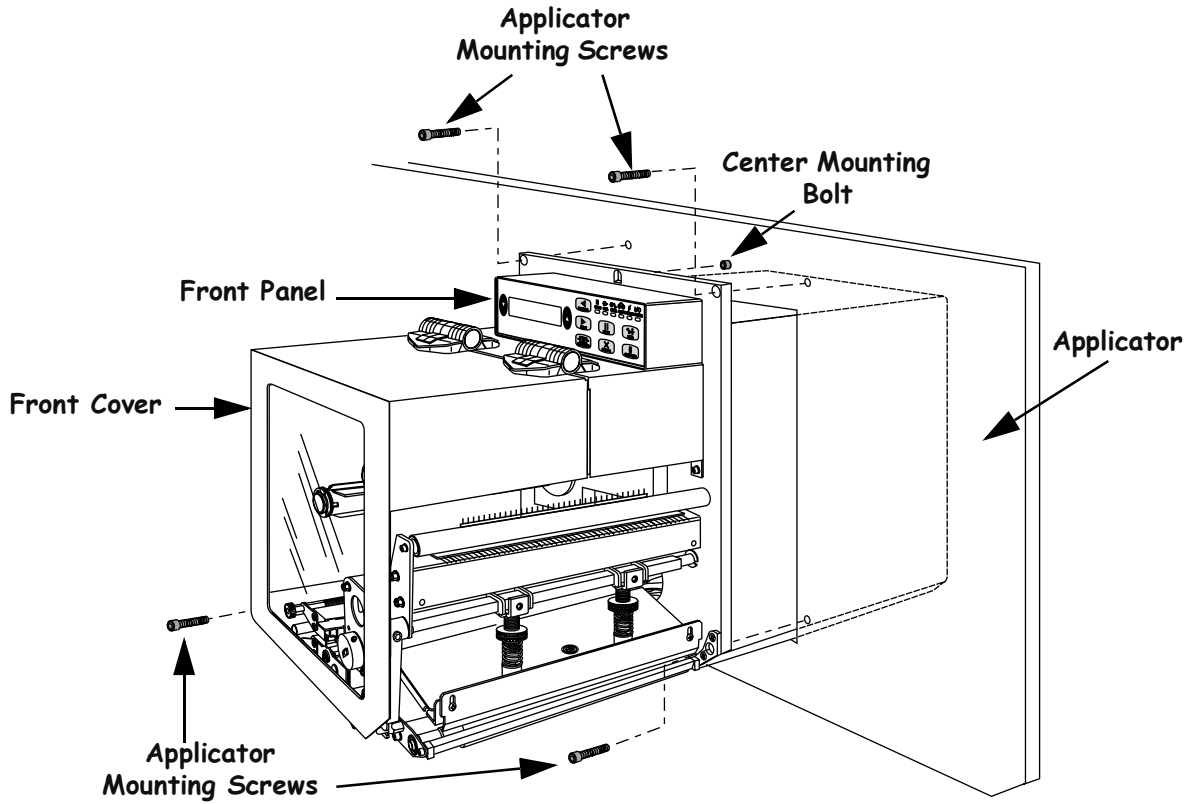


Figure 3 • Front View of 170PAX4 Print Engine in Applicator
(Right-Hand Model Shown)



Remove the 110PAX4 and the 170PAX4 PCMCIA Card

1. See Figure 4 for the 110PAX4 and Figure 5 for the 170PAX4 print engine. Remove the PCMCIA card shield by removing the shield screw.
2. Remove any PCMCIA card from the card slot by pressing the card release button, if necessary.

The card release button is located inside the card slot.

Figure 4 • 110PAX4 Rear View of PCMCIA Card and Shield Removal and Installation

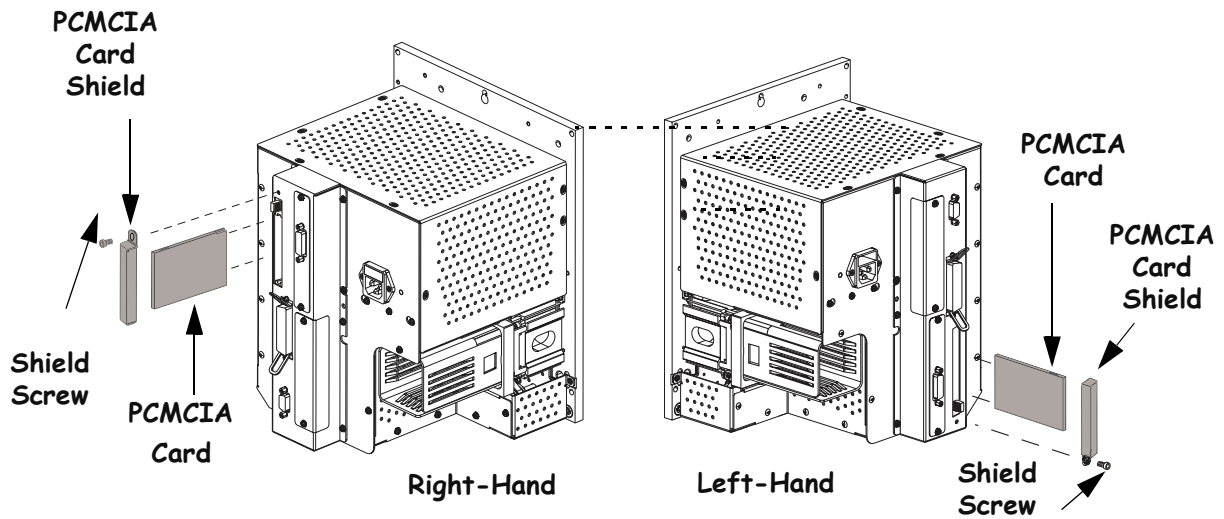
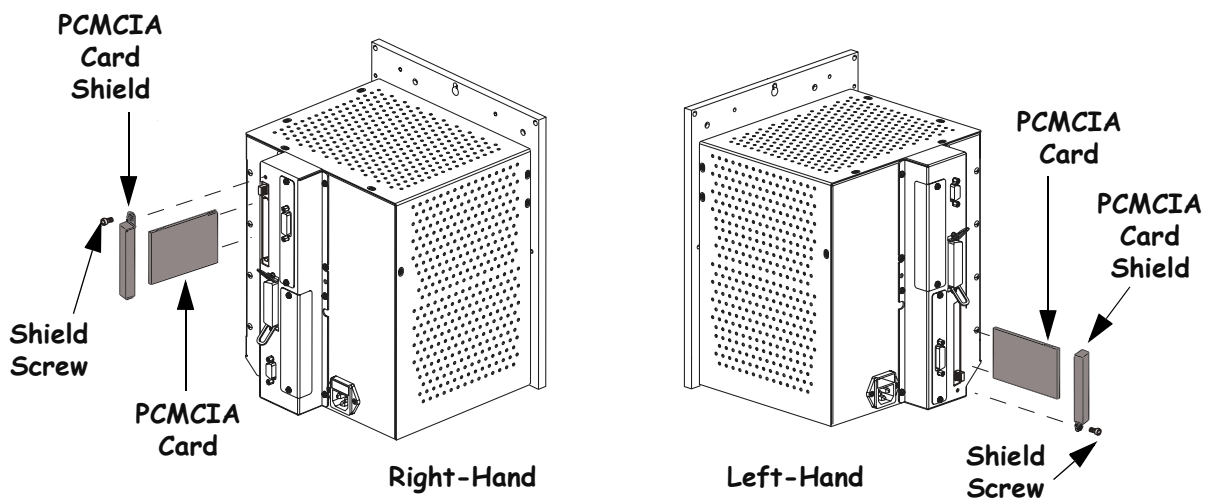


Figure 5 • 170PAX4 Rear View of PCMCIA Card and Shield Removal and Installation



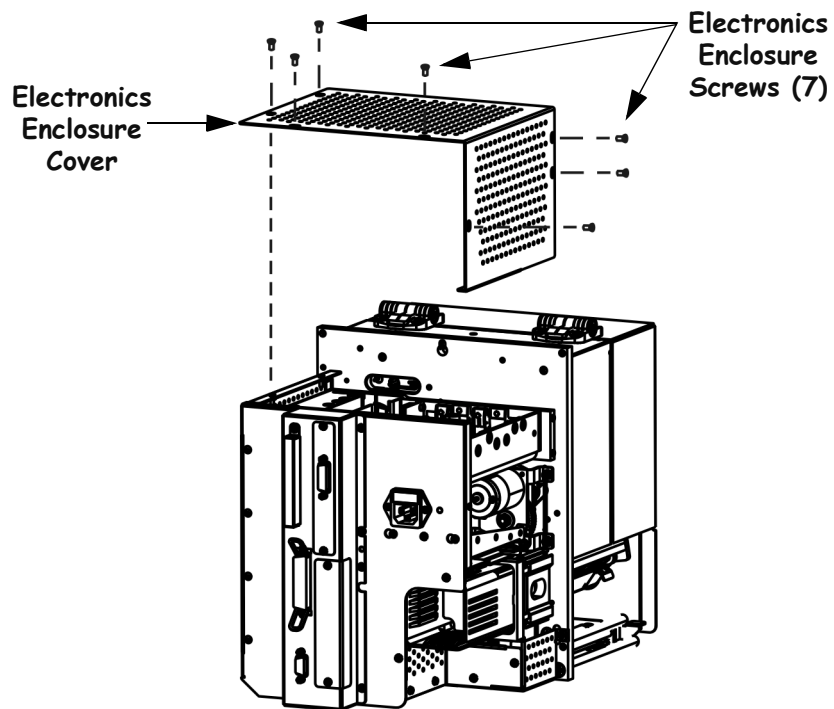
3. Which model print engine do you have?

If you have a...	Then...
A 110PAX4 print engine	Continue with <i>Open the 110PAX4 Rear Enclosure</i> .
A 170PAX4 print engine	Go to <i>Open the 170PAX4 Rear Enclosure</i> on page 13.

Open the 110PAX4 Rear Enclosure

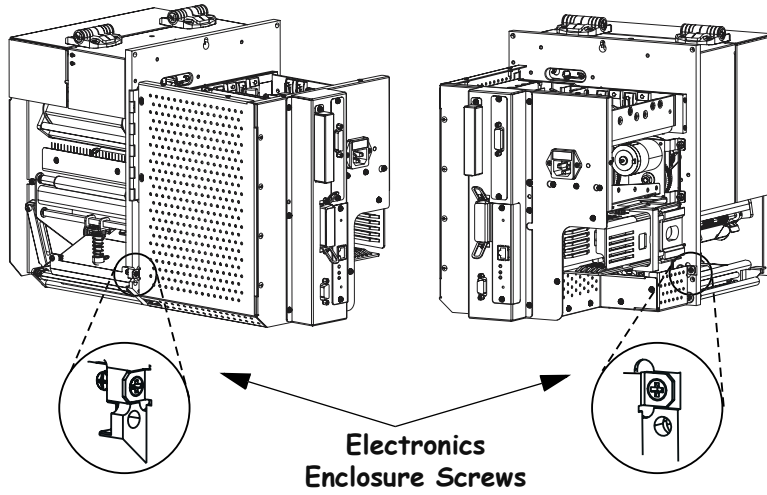
1. See Figure 6. Remove the seven electronics enclosure cover (base back cover) mounting screws. Lift up on the electronics enclosure cover to remove it.

Figure 6 • Rear View of the Removal and Installation of the Electronics Enclosure Cover (Right-Hand Model Shown)



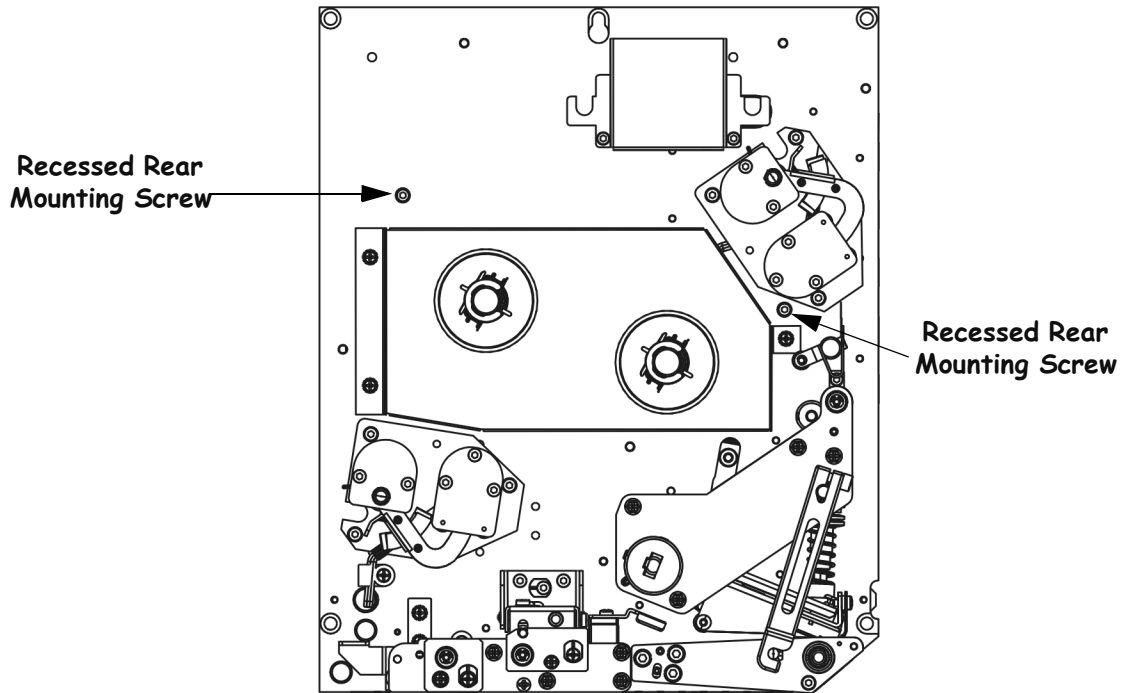
2. See Figure 7. From the back of the print engine, remove the two screws securing the rear enclosure.

**Figure 7 • Rear View of Rear Enclosure Mounting Screw Location
(Right-Hand Model Shown)**



3. See Figure 8. From inside the front of the print engine, remove the two recessed rear enclosure mounting screws with star washers.

**Figure 8 • Front View of Recessed Enclosure Mounting Screw Locations
(Right-Hand Print Engine Shown with Front Cover Open)**

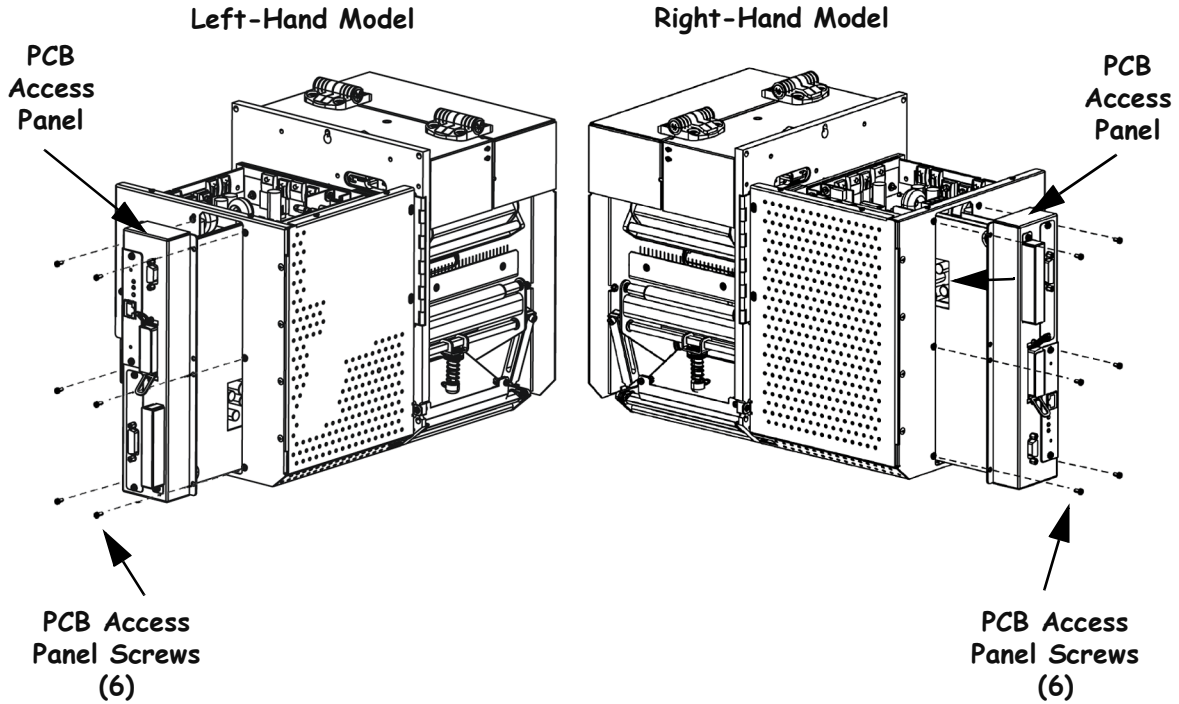


4. Carefully swing the electronics enclosure open.

Remove the 110PAX4 PCB Access Panel

1. See Figure 9. Remove the six screws and star washers that hold the printed circuit board (PCB) access panel in place.

Figure 9 • Removal and Installation of PCB Access Panel from Print Engine



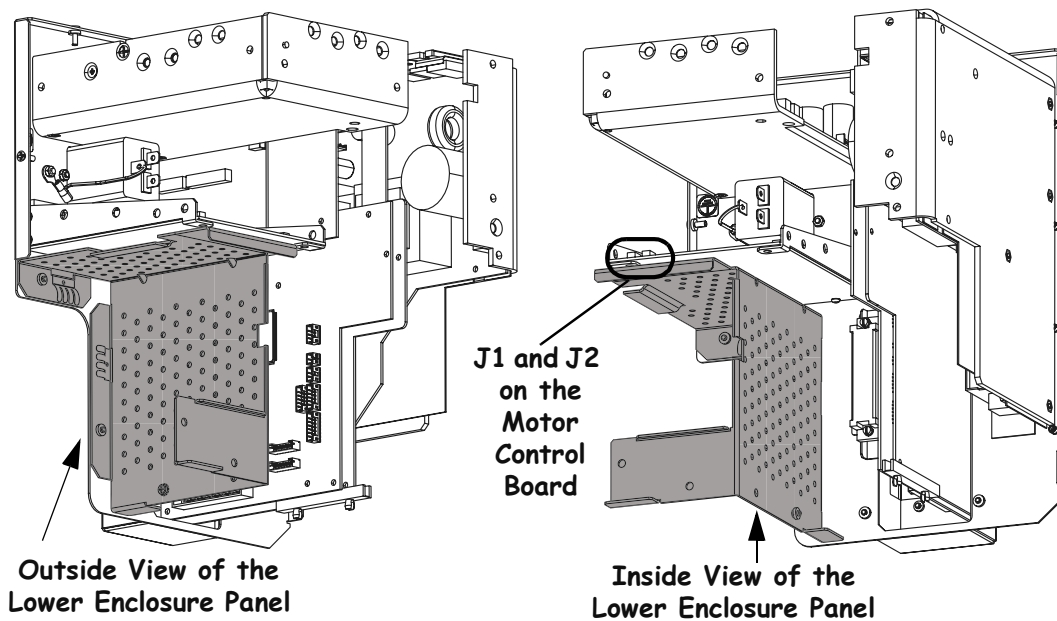
2. Which model print engine do you have?

If you have a...	Then...
A right-hand print engine	Continue with <i>For the 110PAX4 Right-Hand Print Engine</i> on page 11.
A left-hand print engine	Go to <i>For the 110PAX4 Left-Hand Print Engine</i> on page 12.

For the 110PAX4 Right-Hand Print Engine

1. See Figure 14 on page 17. If you have a 10/100 PrintServer installed, you must remove the two screws securing the 10/100 PS board and unplug the ribbon cable attached to P21 on the main logic board. (See Figure 16 on page 19 for main logic board electrical connections.)
2. See Figure 10. Disconnect the cables from J1 and J2 of the motor control board.
Note the orientation of the wires: yellow is J1 and white is J2.
3. Remove the six screws and star washers on the lower enclosure panel.

Figure 10 • View of 110PAX4 Lower Enclosure Panel on Right-Hand Model Only



4. Pull out the lower enclosure panel and swing the panel to the right to gain access to the main logic board connectors.
The two cables, which were disconnected from J1 and J2 of the motor control board, will remain attached to the lower enclosure panel.
5. See Figure 14 on page 17. Disconnect the J3 power cable on the applicator interface board.
6. See Figure 16 on page 19. Note the location of the main logic board cables and connectors.
7. Disconnect cables from the main logic board.
8. Skip to *Remove the 110PAX4 and 170PAX4 Applicator Interface Board* on page 16.

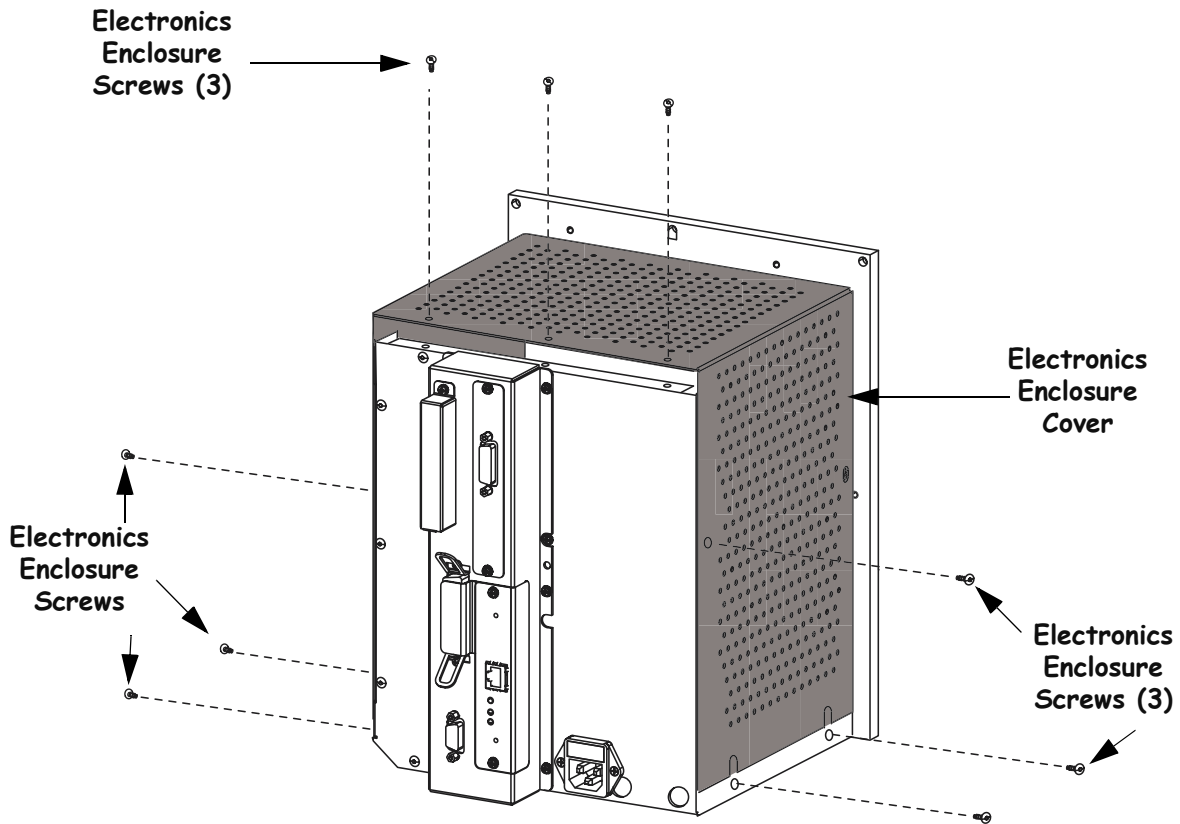
For the 110PAX4 Left-Hand Print Engine

1. See Figure 14 on page 17. If you have a 10/100 PrintServer installed, remove the two screws securing the 10/100 PS board and unplug the ribbon cable attached to P21 on the main logic board. (See Figure 16 on page 19 for main logic board electrical connections.)
2. See Figure 16 on page 19. Unplug the 34-pin ribbon cable from P19 on the main logic board.
3. See Figure 14 on page 17. Unplug the cable connected to J3 on the applicator interface board.
4. See Figure 16 on page 19. Remove the SPI cables, P30-P35, and then pull the PCB access panel partially out of the opening.
5. Remove the remaining cables connected to the main logic board.
6. Skip to *Remove the 110PAX4 and 170PAX4 Applicator Interface Board* on page 16.

Open the 170PAX4 Rear Enclosure

1. See Figure 11. Remove the nine electronics enclosure cover mounting screws.
2. Lift up on the electronics enclosure cover to release it from the guide.
The cover has a flange that fits into a guide and snugs it to the main frame.

Figure 11 • Rear View of the Removal and Installation of the Electronics Enclosure Cover (Right-Hand Print Engine Shown)



Remove the 170PAX4 PCB Access Panel



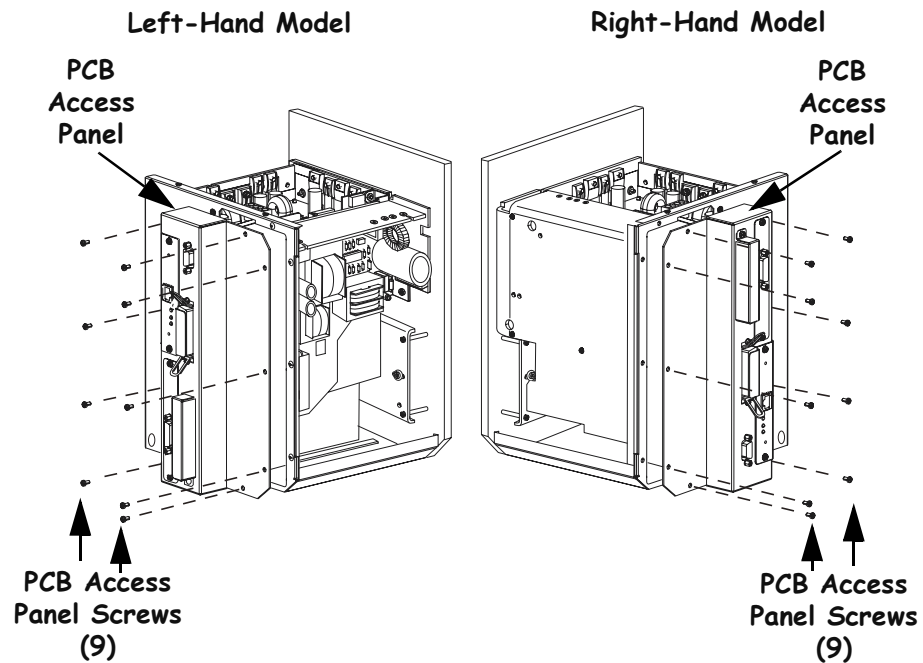
Electrostatic Discharge Caution • Observe proper electrostatic safety precautions when handling any static-sensitive components such as circuit boards and printheads.



Caution • Turn OFF (O) the AC power switch and remove the power cord before performing this procedure.

1. See Figure 12. Remove the nine screws with star washers that hold the printed circuit board (PCB) access panel in place.

Figure 12 • Removal and Installation of PCB Access Panel from 170PAX4 Print Engine



2. Which model print engine do you have?

If you have a...	Then...
A right-hand print engine	Continue with <i>For the 170PAX4 Right-Hand Print Engine</i> .
A left-hand print engine	Go to <i>For the 170PAX4 Left-Hand Print Engine</i> .

For the 170PAX4 Right-Hand Print Engine

1. See Figure 14 on page 17. If you have a 10/100 PrintServer installed, remove the two screws securing the 10/100 PS board and unplug the ribbon cable attached to P21 on the main logic board. (See Figure 16 on page 19 for main logic board electrical connections.)
2. See Figure 14 on page 17. Disconnect the cable connected to J3 on the applicator interface board.
3. Carefully pull the PCB access panel partially out of the rear enclosure with the main logic board still attached.
4. See Figure 17 on page 19. Note the location of the main logic board connectors and cables.
5. Unplug all remaining cables from the main logic board.
6. Go to *Remove the 110PAX4 and 170PAX4 Applicator Interface Board* on page 16.

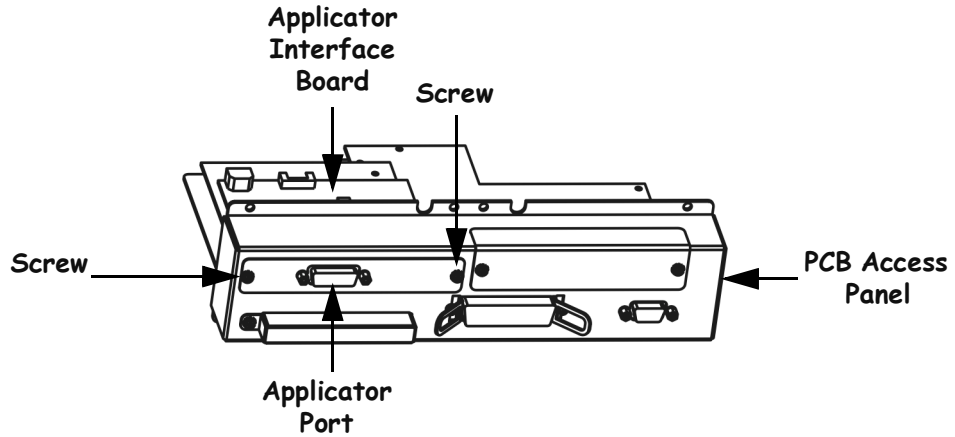
For the 170PAX4 Left-Hand Print Engine

1. See Figure 17 on page 19. Note the location of the main logic board connectors and cables.
2. See Figure 14 on page 17. If you have a 10/100 PrintServer installed, remove the two screws securing the 10/100 PS board and unplug the ribbon cable attached to P21 on the main logic board. (See Figure 16 on page 19 for main logic board electrical connections.)
3. See Figure 17 on page 19. Unplug the 20-pin ribbon cable connected to P20 on the main logic board.
4. Carefully pull the PCB access panel partially out of the rear enclosure with the main logic board still attached.
5. See Figure 14 on page 17. Disconnect the cable connected to J3 on the applicator interface board.
6. See Figure 17 on page 19. Note the location of the main logic board connectors and cables.
7. Unplug all remaining cables from the main logic board.
8. Continue with *Remove the 110PAX4 and 170PAX4 Applicator Interface Board*.

Remove the 110PAX4 and 170PAX4 Applicator Interface Board

1. See Figure 13. Remove the two screws that hold the applicator interface board in place.

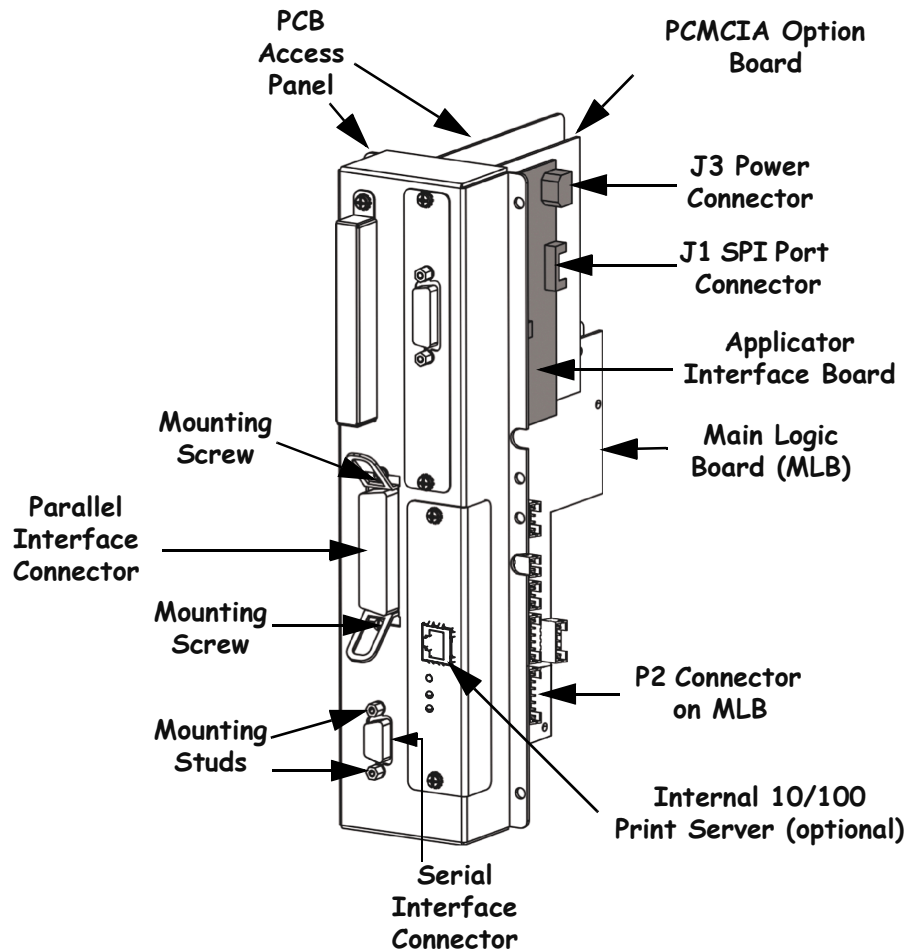
Figure 13 • Removal and Installation of Applicator Interface Board



2. Slide the applicator interface board out.
The cable connected to J1 will remain connected to the board.

3. See Figure 14. Remove the two mounting studs and washers on either side of the serial interface connector.
4. Remove the two mounting screws and washers on either side of the parallel interface connector.

Figure 14 • 10/100 Print Server, Main Logic Board, and Applicator Interface Board Electrical Connections



Wireless PCMCIA Option Board Assembly Kit Installation Instructions

- See Figure 15. Carefully remove the three hex screws, spacers, and nuts that secure the MLB and the PCMCIA board to the PCB access panel.



Note • The longer screw and two spacers separate the PCMCIA option board from the PCB access panel.

- Separate the PCMCIA board from the main logic board by removing the two hex screws, spacers, and nuts.
- Disconnect the PCMCIA board from the MLB using the following technique:



Note • The circuit boards may withstand a small amount of flexing; however, they are not designed to bend.

- Grasp the boards by their edges.
- With a gentle rocking and pulling motion, separate the two connectors.

Figure 15 • Spacer Locations on PCB Access Panel

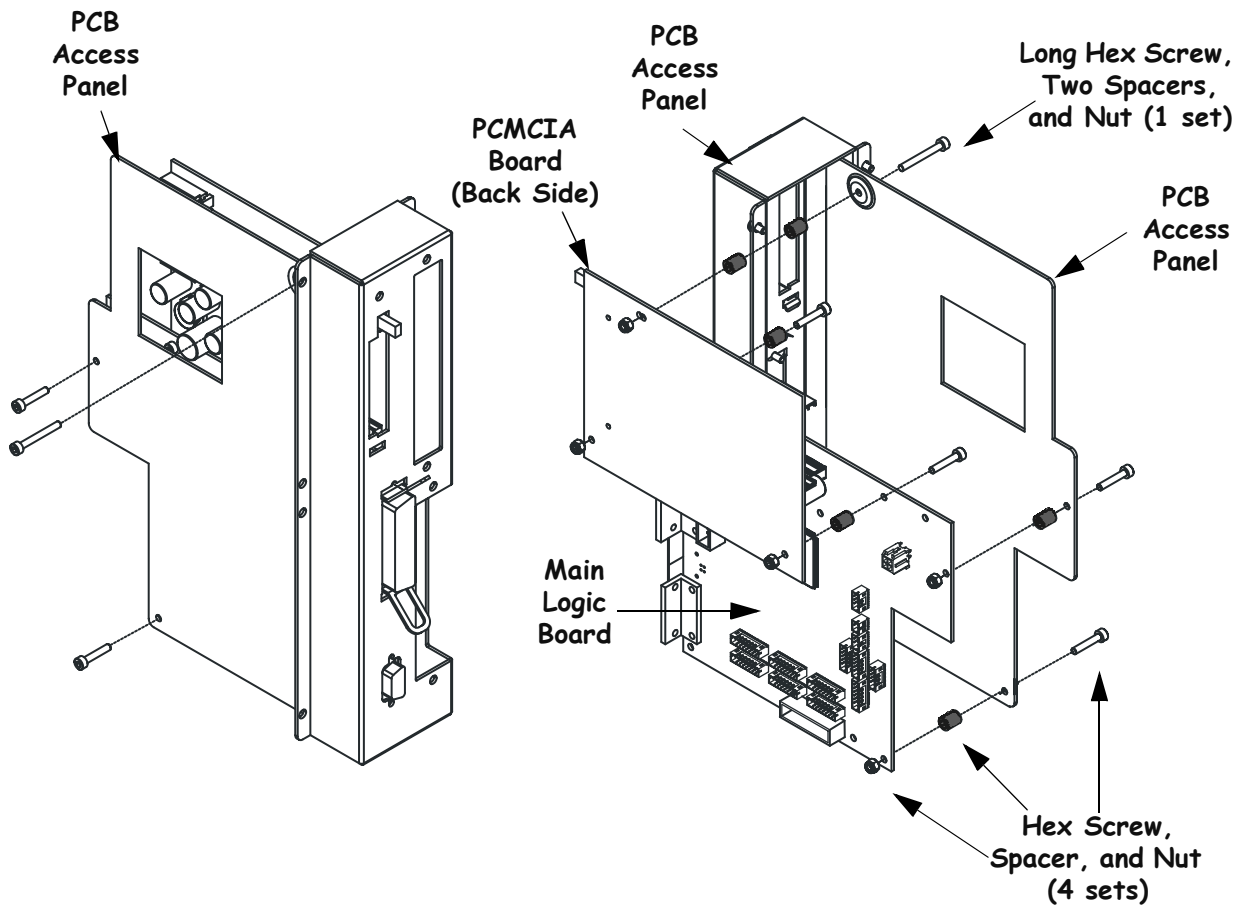


Figure 16 • 110PAX4 Main Logic Board Electrical Connections

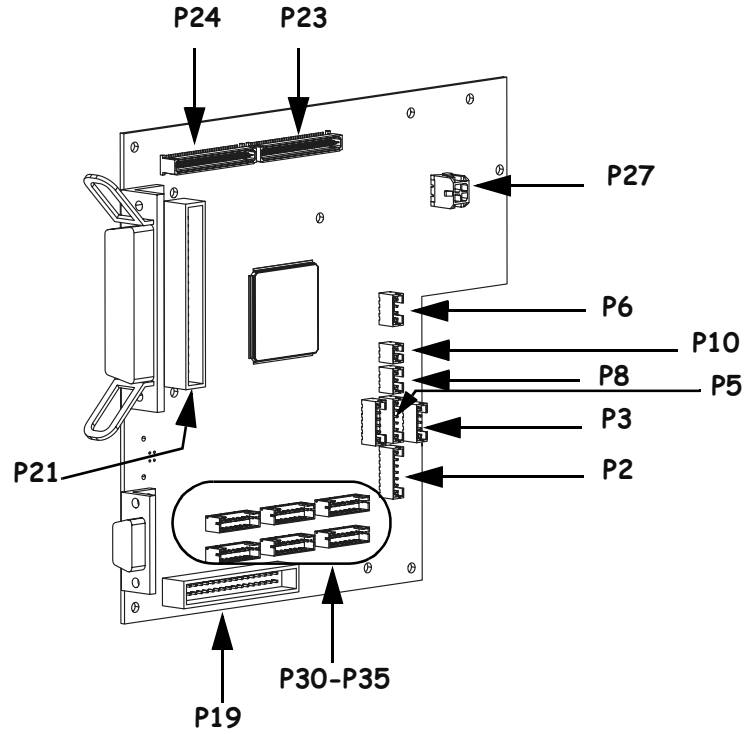


Figure 17 • 170PAX4 Main Logic Board Electrical Connections

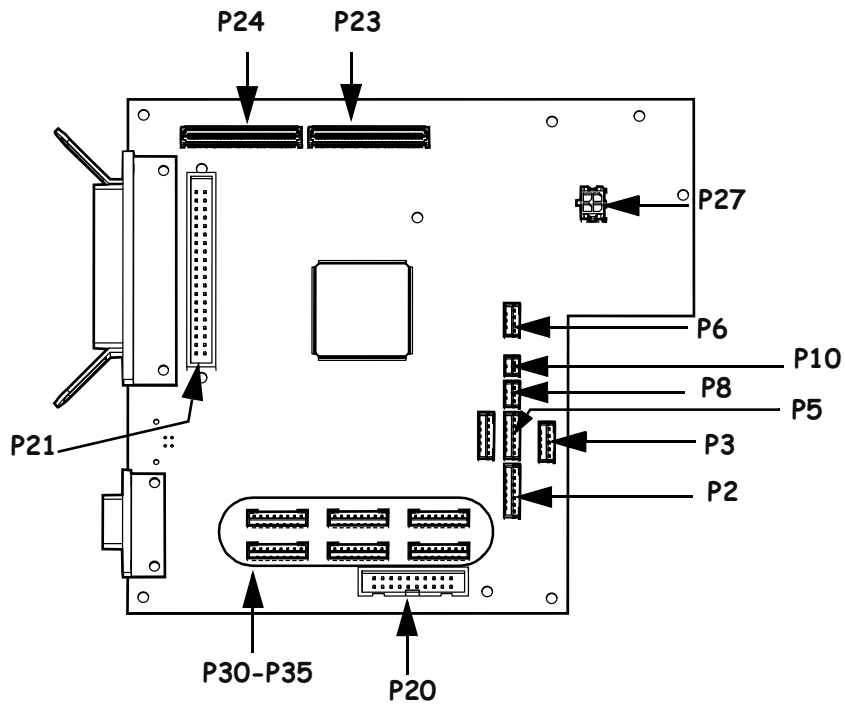


Table 1 • 110PAX4 and 170PAX4 Main Logic Board Electrical Connections

Connector	Description
P2	Door-Open Sensor
P3	Head-Open Sensor
P5	Ribbon Sensor
P6	Reflective Media Sensor
P8	Transmissive Media Sensor
P10	Transmissive Media Sensor
P19	Printhead Data Cable (110PAX4)
P20	Printhead Data Cable (170PAX4)
P21	Internal 10/100 PS Connector
P23	PCMCIA Option Board Interface
P24	PCMCIA Option Board Interface
P27	Power Connector
P30	SPI Peripheral
P31	SPI Peripheral
P32	SPI Peripheral
P33	SPI Peripheral
P34	SPI Peripheral
P35	SPI Peripheral

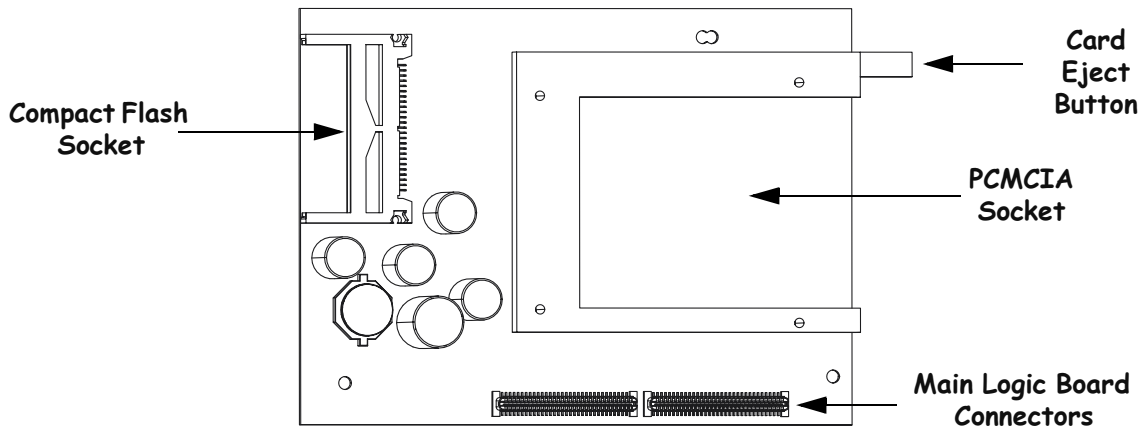
Install the Wireless PCMCIA Board



Electrostatic Discharge Caution • Observe proper electrostatic safety precautions when handling any static-sensitive components such as circuit boards and printheads.

1. See Figure 18. To attach the PCMCIA board to the MLB, align the two connectors, supporting both boards under the connectors, and gently press the two connectors together until fully seated.

Figure 18 • Wireless PCMCIA Option Board Components



2. Reinstall the two hex screws, spacers, and nuts to secure the PCMCIA board to the main logic board.
3. See Figure 15 on page 18. Reattach the main logic board and the new wireless PCMCIA board to the PCB access panel by reinstalling two of the hex screws, spacers, and nuts. Snug the screws, but do not tighten at this time.
4. See Figure 15 on page 18. Install the longer hex screw and two spacers that separate the PCB access panel and the PCMCIA board. Snug the screw, but do not tighten at this time.
5. See Figure 14 on page 17. Install the screws, studs, and washers for the parallel interface and serial interface connectors and tighten.
6. Tighten the three hex screws that secure the boards to the PCB access panel.
7. See Figure 15 on page 18. Reattach the applicator interface board to the PCB access panel.
8. Which model print engine do you have?

If you have a...	Then...
110PAX4	Continue with <i>110PAX4 Installation</i> on page 22.
170PAX4	Go to <i>170PAX4 Installation</i> on page 23.

110PAX4 Installation

1. See Figure 16 on page 19 and Table 1 on page 20 . Reinsert the PCB access panel, and reconnect all of the cables to the main logic board.



Note • The SPI connectors are all the same electrically, and the components that plug into a SPI connector can plug into any of the SPI connectors, P30-P35. At this time, only four of the six SPI connectors are used.

2. See Figure 14 on page 17. Reconnect J1, if required, and J3 cables to the applicator interface board.



Important • Ensure that all logic board cable leads are tucked in without being pinched and the access panel's metal frame slides into plastic guide on the bottom of the rear enclosure.

3. See Figure 9 on page 10. Secure the PCB access panel using the six screws with star washers.
4. See Figure 14 on page 17. If you had an internal 10/100 Print Server installed, complete the following steps:
 - a. Plug the ribbon cable into the main logic board connector, P21. The connector is polarized with a center key. Ensure the center key aligns with the slot in the main logic board connector.
 - b. Insert the 10/100 PS into the opening while guiding the ribbon cable into the printer.
 - c. Secure the print server cover plate to the PCB access panel by reinstalling the two cover plate mounting screws.



Note • Do not force the PCB access panel into position. If required, reroute wire leads to ensure the PCB access panel is properly positioned.

5. For the right-hand model only, replace the lower enclosure panel.



Note • The removable lower enclosure cover has two tabs that fit on top and inside of the bottom stationary cover. Refer to Figure 10 on page 11 for the proper position of the panel in the lower enclosure.

6. See Figure 10 on page 11. For the right-hand model only, reinstall the six screws with star washers to secure the lower enclosure cover.
7. See Figure 10 on page 11. For the right-hand model only, reconnect cables to J1 and J2 on the motor control board.
The cable with the yellow wire connects to J1; the cable with the white wire connects to J2.

Close the 110PAX4 Print Engine

1. Carefully swing the electronics enclosure closed.
Ensure that wires are routed properly and are not causing any obstructions.
2. See Figure 8 on page 9. From inside the front of the print engine, replace the two recessed rear enclosure mounting screws with star washers.
3. See Figure 7 on page 8. From the back of the print engine, replace the two screws securing the rear enclosure.
4. See Figure 6 on page 7. Replace the electronics cover and the seven mounting screws.
Ensure that the wires are routed properly and are not causing any obstructions.
5. Go to *Resume Operation for the 110PAX4 and 170PAX4 Print Engine* on page 25.

170PAX4 Installation

For the 170PAX4 Right-Hand Print Engine

1. Partially reinsert the PCB access panel into the electronics enclosure.
2. See Figure 17 on page 19 and Table 1 on page 20. Reconnect all cables to the main logic board.



Note • The SPI connectors are all the same electrically, and the cables that plug into a SPI connector can plug into any of the SPI connectors, P30-P35. At this time, only four of the six SPI connectors are used.

3. See Figure 14 on page 17. Reconnect J1, if required, and J3 cables to the applicator interface board.
4. Slide the PCB access panel the rest of the way into the rear enclosure.



Important • Ensure that all logic board cable leads are tucked in without being pinched and the access panel's metal frame slides into plastic guide on the bottom of the rear enclosure.

5. Go to *Install the 170PAX4 PCB Access Panel* on page 24.

For the 170PAX4 Left-Hand Print Engine

1. Partially reinsert the PCB access panel into the rear enclosure.
2. See Figure 14 on page 17. Reconnect J1, if required, and J3 cables to the applicator interface board.
3. See Figure 17 on page 19 and Table 1 on page 20. Reconnect the cables to the main logic board.



Note • The SPI connectors are all the same electrically, and the cables that plug into a SPI connector can plug into any of the SPI connectors, P30-P35. At this time, only four of the six SPI connectors are used.

4. Slide the PCB access panel the rest of the way into the rear enclosure.



Important • Ensure that all logic board cable leads are tucked in without being pinched, and the access panel's metal frame slides into plastic guide on the bottom of the rear enclosure.

5. Continue with *Install the 170PAX4 PCB Access Panel*.

Install the 170PAX4 PCB Access Panel

1. See Figure 9 on page 10. Secure the PCB access panel using the nine screws with star washers.
2. See Figure 14 on page 17. If you had an internal 10/100 Print Server installed, complete the following steps:
 - a. Plug the ribbon cable into the main logic board connector, P21. The connector is polarized with a center key. Ensure the center key aligns with the slot in the main logic board connector.
 - b. Insert the 10/100 PS into the opening while guiding the ribbon cable into the printer.
 - c. Secure the print server cover plate to the PCB access panel by reinstalling the two cover plate mounting screws.



Note • Do not force the PCB access panel into position. If required, reroute wire leads to ensure the PCB access panel is properly positioned.

Close the 110PAX4 Print Engine

1. Carefully swing the electronics enclosure closed.
Ensure that wires are routed properly and are not causing any obstructions.
2. See Figure 8 on page 9. From inside the front of the print engine, replace the two recessed rear enclosure mounting screws with star washers.
3. See Figure 7 on page 8. From the back of the print engine, replace the two screws securing the rear enclosure.
4. See Figure 6 on page 7. Replace the electronics cover and the seven mounting screws.
Ensure that the wires are routed properly and are not causing any obstructions.
5. Go to Reinstall the Print Engine in the Applicator on page 25

Close the 170PAX4 Print Engine

1. See Figure 6 on page 7. Replace the electronics cover, ensuring the flange fits into the guide against the main frame.
Ensure that the wires are routed properly and are not causing any obstructions.
2. See Figure 11 on page 13. Reinstall the nine mounting screws.
3. Continue with Reinstall the Print Engine in the Applicator on page 25.

Reinstall the Print Engine in the Applicator

1. See Figure 2 on page 4 for the 110PAX4 and Figure 3 on page 5 for the 170PAX4 print engine. To reinstall the print engine into the applicator, carefully place the keyhole on the center mounting bolt.



Note • The keyhole and the center mounting bolt are designed to support the print engine and assist in installing and removing the four mounting screws.

2. See Figure 2 on page 4 for the 110PAX4 and Figure 3 on page 5 for the 170PAX4 print engine. Replace and tighten the four corner mounting screws securing the print engine to the applicator.
3. Tighten the center mounting bolt.

Resume Operation for the 110PAX4 and 170PAX4 Print Engine

1. Open the front cover, unlatch the printhead lever, and reinsert the media and ribbon in the print engine.
2. Close and latch the printhead lever.
3. See Figure 4 on page 6 for the 110PAX4 and Figure 5 on page 6 for the 170PAX4 print engine. Insert the wireless PCMCIA card into the card slot in the back of the print engine.



Note • For the right-hand PAX printers, install the PCMCIA card with the product label facing to the left. The L-shaped notch will be facing down.

Note • For the left-hand PAX print engine, install the PCMCIA card with the product label facing to the right. The L-shaped notch will be facing up.

4. Install the clear plastic PCMCIA cover using the cover shield mounting screw.
5. Reconnect the AC power cord and interface cables.
6. Turn On (I) the print engine.



Note • If the wireless PCMCIA **board** is not installed properly, the wireless link status indicator does not appear at the bottom left of the front panel LCD.

Note • If the wireless PCMCIA **card** is not installed or operating properly, the wireless link status indicator will appear as an underscore at the bottom left of the front panel LCD.

Refer to the *Wireless Print Server User Guide* (PN 13422L-001) to configure and verify proper operation of the wireless PCMCIA card.