ZebraNet® Internal Wireless Plus Print Server for 105*SL*™ and *Xi*III*Plus*™

Installation Instructions

This kit includes the parts and documentation necessary to install the ZebraNet® Internal Wireless Plus Print Server into the 105*SL*™ and *Xi*III*Plus*™ printers. Read these instructions thoroughly prior to kit installation.

Caution • A qualified service technician must perform this installation.

Prepare for Installation

Parts List

Before proceeding, verify that your kit contains the items listed below.

Table 1 • Parts List

✓	Item	Qty	Part Number	Description
	Ref	1	**29652-002M**	Internal Wireless Plus Print Server Option Maintenance Kit
	1	1	*29652-002*	Internal Wireless Plus PC Board
	2	1	*39538*	Antenna, 1 in. Stub 802.11G
	3	2	*32411-1*	Screw, 4-40 x 0.25
	4	2	*45970-010*	Screw, 4-40 x 0.625 Pan Ph Zn
	5	2	*33291*	Spacer, 0.25 x 0.14 x 0.313
	6	2	*78114*	Nut, Threaded Hex 4-40 x 0.25 x 0.25
	7	1	*39513*	Internal Wireless Plus PC Board Cover
	8	1	*39526*	Washer, 1/4 in. Internal Lock
	9	1	*39527*	Nut, 1/4 in. 36 Uns 2B Hex
		5	*39545-xxx*	Wireless Agency Labels for 105SL, 110*Xi*III*Plus*, 140*Xi*III*Plus*, 170*Xi*III*Plus*, and 220*Xi*III*Plus* (Not shown)

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

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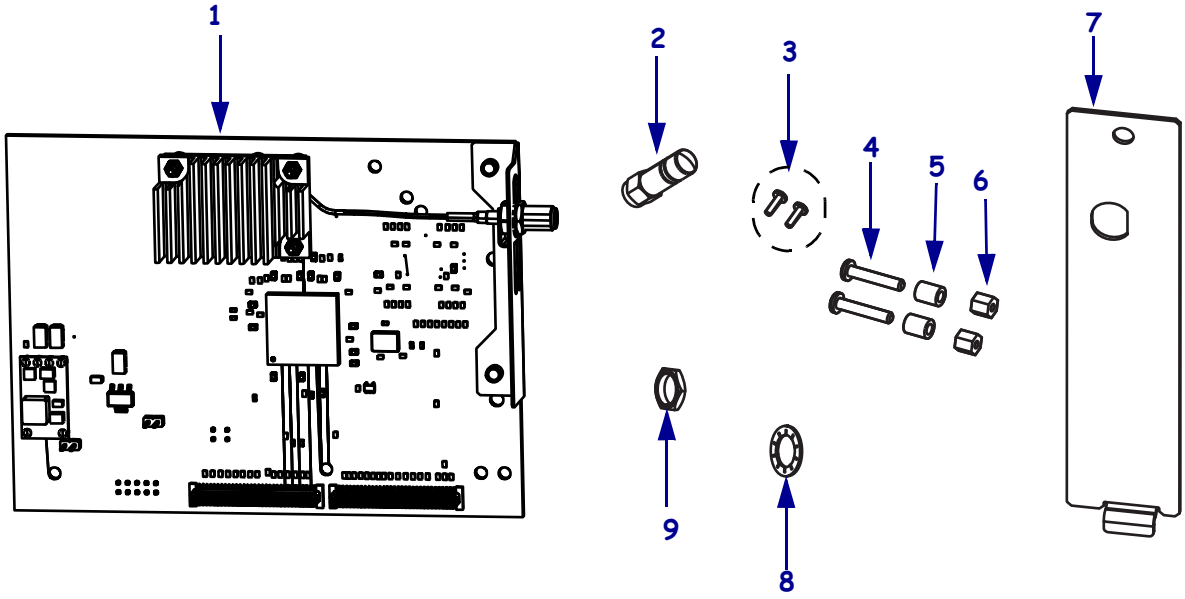
3/13/08

Figure 1 • Kit Contents



Reference Materials

The following manuals and CDs may be helpful references while performing this procedure.

- ZebraNet® Wireless User Guide
- 105*SL* User CD
- 105*SL* Maintenance Manual CD
- 105*SL* User Guide
- 105*SL* Maintenance Manual
- *Xi*III*Plus* Series Maintenance Manual
- *Xi*III*Plus* User Guide
- *Xi*III*Plus* Series User Guide (CD)
- 110*Xi*III*Plus* Maintenance Manual
- *Xi*™ Series Maintenance Manual (CD)

Tools Required

Tools • You need these tools to complete this procedure:

- ❑ Phillips Screwdriver Set
- ❑ Antistatic Wriststrap and Mat
- ❑ Metric Nutdriver Set

Before You Begin

Before starting this installation, you must download firmware version V60.16.x (or later) from: www.zebra.com/firmware.

Remove the Electronics Cover

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

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

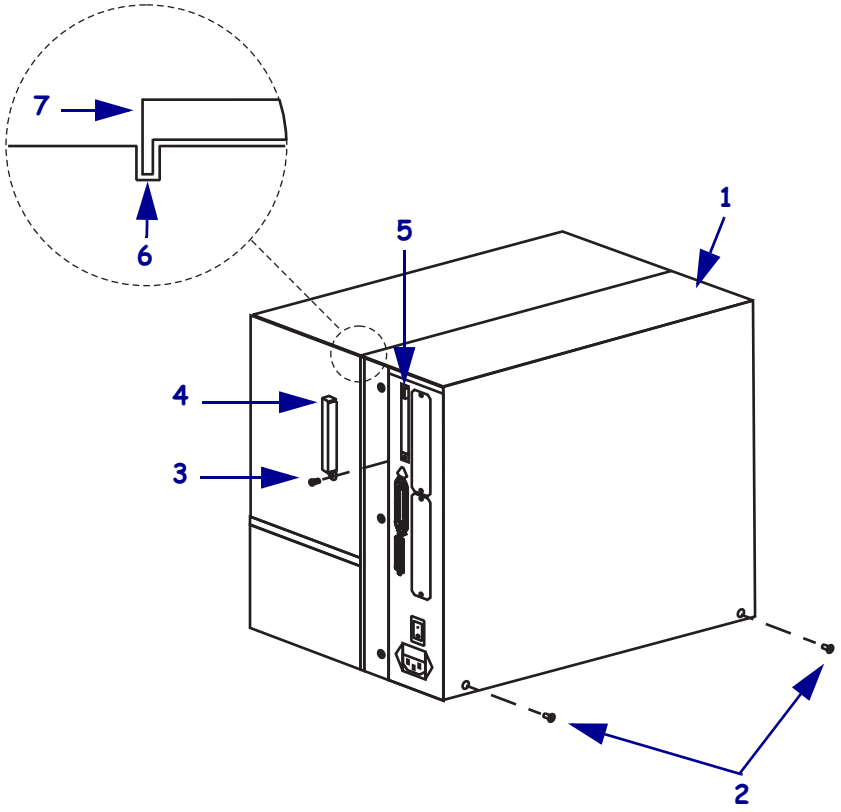
   Connect yourself to an antistatic device.

2. **Caution** • Turn off (**O**) the printer and disconnect it from the power source before performing the following procedure.

   Turn off (**O**) the printer and disconnect the AC power cord and all data cables.

3. See Figure 2. Remove the two screws that secure the electronics cover.
4. Remove the cover.

Figure 2 • Remove or Install the Electronics Cover

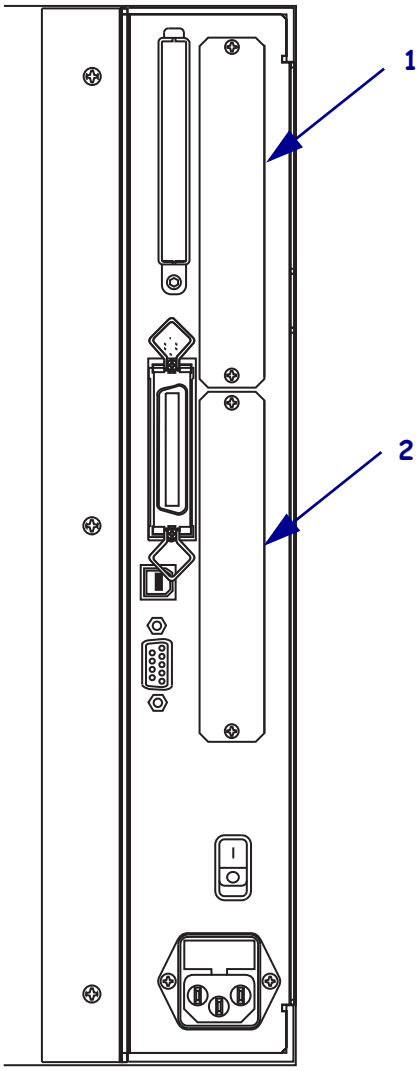


1	Electronics cover
2	Electronics cover mounting screws (2)
3	Option card shield mounting screw
4	Option card shield
5	Eject button
6	Channel
7	Lip of cover

Remove Option Boards

In order to install the Internal Wireless Plus Print Server, you must remove any option boards located in either of the slots shown below. See Figure 3.

Figure 3 • Option Board Locations



1	Applicator option
2	Twinax, Coax, and Print Server options

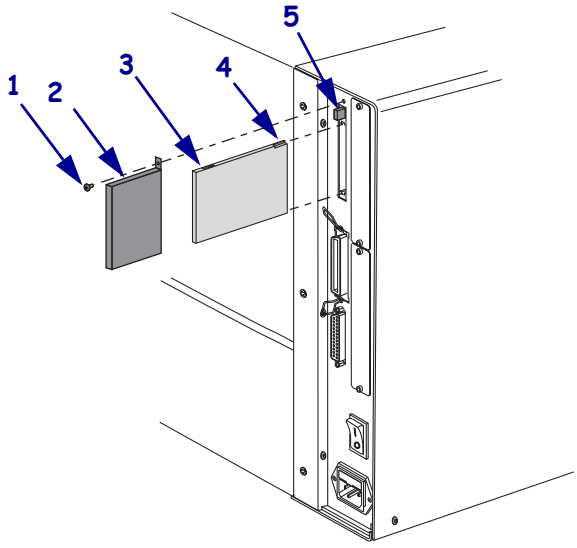
Remove the Existing Internal Wireless Plus, Wireless Plus, or PCMCIA Option Board Assembly

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

1. See Figure 4. Check the rear panel for the RF card cover. Remove the mounting screw and the cover, and then eject either the wireless card or the memory card.

Note • See Figure 2. If you have a PCMCIA Option Board and PCMCIA card, your printer will have a metal option card shield instead of the plastic RF cover.

Figure 4 • RF Card and Cover



1	RF card cover mounting screw
2	RF card cover (plastic)
3	Wireless option card
4	Notch
5	Card eject button

2. What type of option board do you currently have?

If you have…	Then…
PCMCIA, Wireless PrintServer, or Wireless Plus Print Server board	Continue with *Remove the PCMCIA/Wireless Standoffs*.
Internal Wireless Plus Print Server board	Go to *Remove the Internal Wireless Plus Print Server Board* on page 8.

Remove the PCMCIA/Wireless Standoffs

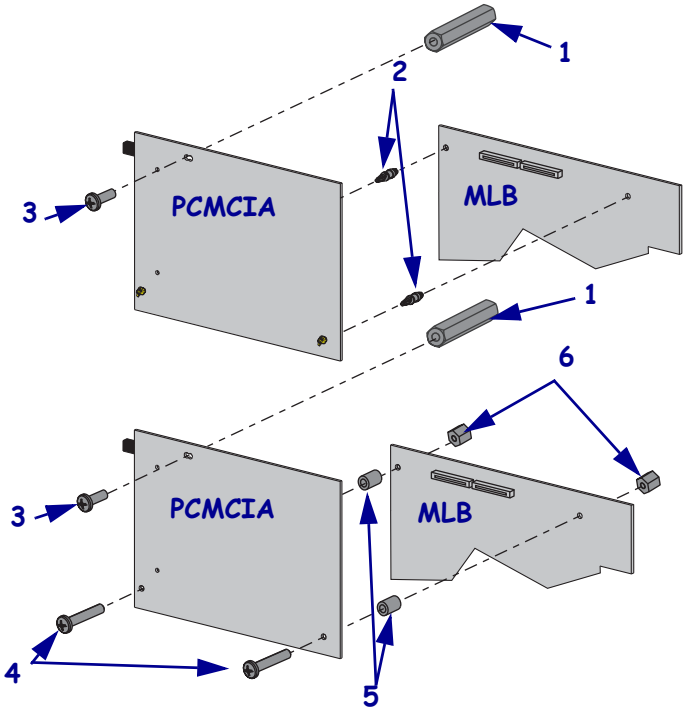
The 105*SL* and the *Xi*III*Plus* have used two different means of securing the PCMCIA/wireless board to the main logic board (MLB).

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

1. See Figure 5. How does your PCMCIA/wireless board connect to the MLB?

If you have…	Then…
Two plastic locking standoffs	**a.** Remove the screw securing the PCMCIA/wireless board to a metal standoff on the printer chassis. **b.** Disconnect the PCMCIA/wireless board from two plastic standoffs. **c.** Gently pull the PCMCIA/wireless board away from the MLB to disconnect the two connectors, P24 and P23, on the MLB. **d.** Go to *Remove the MLB* on page 9.
Two screws, spacers, and nuts	**a.** Remove the screw securing the PCMCIA/wireless board to a metal standoff on the printer chassis. **Note** • You must remove the MLB and PCMCIA/wireless boards from the printer together, and then separate them. You will complete this in the next section. **b.** Go to *Remove the MLB* on page 9.

Figure 5 • Standoffs



1	Standoff to main frame	4	Mounting screws (2)
2	Plastic standoffs (2)	5	Spacers (2)
3	Mounting screw	6	Threaded spacers (2)

Remove the Internal Wireless Plus Print Server Board

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

1. From the back of the printer, unscrew the RF antenna.
2. Remove the nut and washer from the RF connector.
3. Remove the top mounting screw securing the Internal Wireless Plus cover.
4. Remove the cover and set aside.

Remove the MLB

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

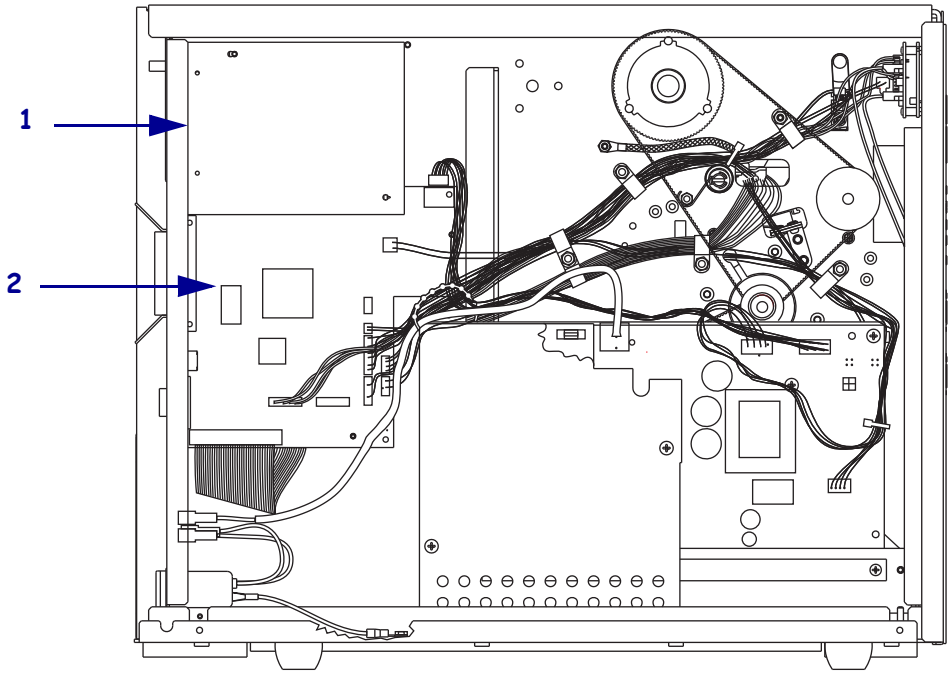
   Connect yourself to an antistatic device.

2. What printer do you have?

If you have a…	Then…
105*SL*	See Figure 6 and Figure 7.
110*Xi*III*Plus*	See Figure 8.
All other *Xi*III*Plus* models	See Figure 9.

3. Unplug the ribbon cable and small wire connectors. Note the wire connector positions.

Figure 6 • 105*SL* Main Logic Board Location



1	PCMCIA board
2	Main logic board

Figure 7 • 105*SL* Main Logic Board Location and Interconnection

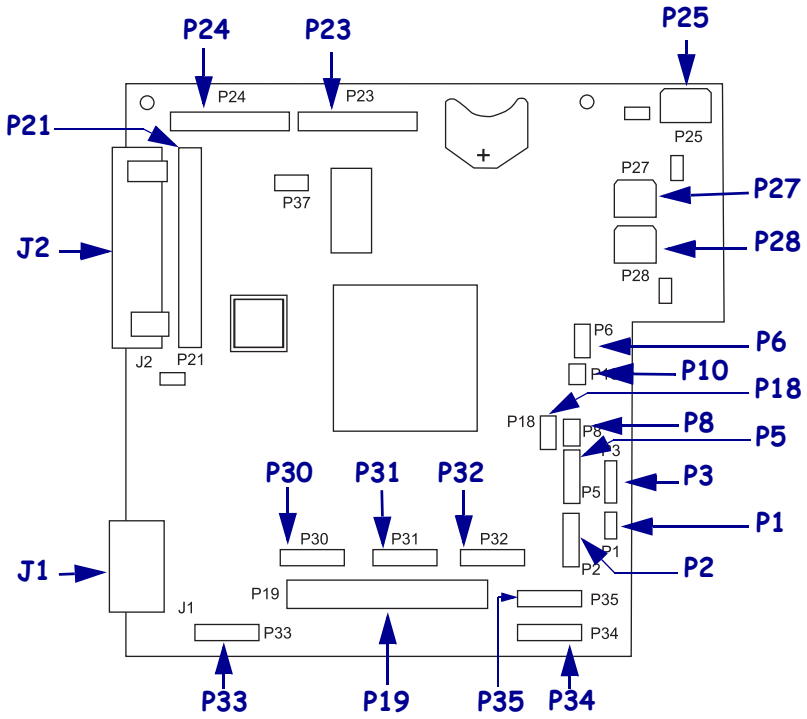


Table 2 • 105*SL* Main Logic Board Location and Interconnection

Conn.	Description	Conn.	Description
J1	Serial port	P23	PCMCIA board connector
J2	Parallel port	P24	PCMCIA board connector
P1	Lower take-label sensor	P25	Power-in
P2	Upper take-label sensor	P27	LCD display control board power
P3	Head-open sensor	P28	DC Power (Only available on the Custom 4MB board)
P5	Ribbon sensor	P30	SPI connector*
P6	Reflective media sensor	P31	SPI connector*
P8	Transmissive media sensor	P32	SPI connector LCD display board*
P10	Transmissive media sensor	P33	SPI connector cutter board*
P18	Custom interface connector (Only available on the Custom 4MB board)	P34	SPI connector DC power supply J11*
P19	Printhead data	P35	SPI connector*
P21	Internal parallel connector		

*SPI—Serial Peripheral Interface

Figure 8 • Wireless PCMCIA and Main Logic Board Locations—110*Xi*III*Plus* Models Only

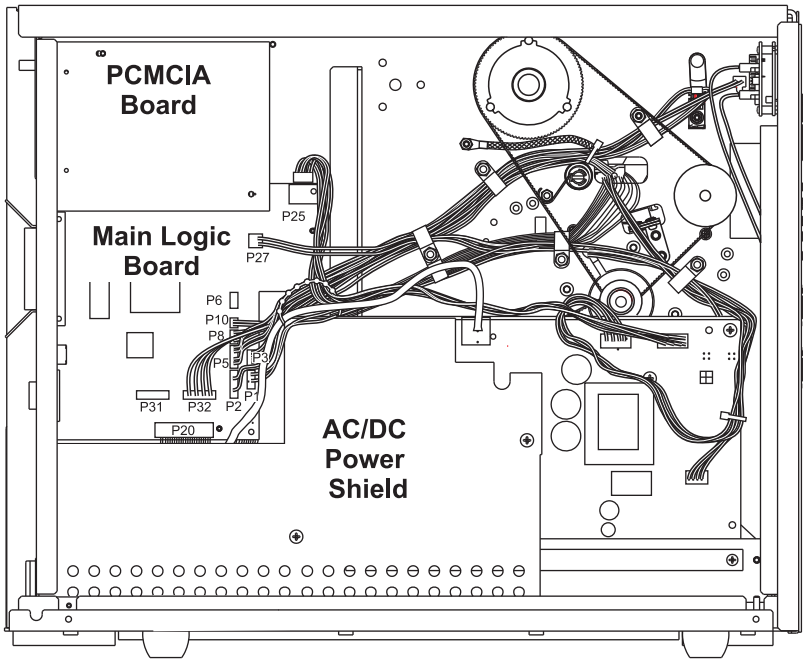


Table 3 • 110*Xi*III*Plus* Models Only

Connector	Description	Connector	Description
P1	Lower take-label sensor	P24	PCMCIA board connector
P2	Upper take-label sensor	P27	LCD display control board power
P3	Head-open sensor	P30	SPI connector*
P5	Ribbon sensor	P31	SPI connector*
P6	Reflective media sensor	P32	SPI connector LCD display board*
P8	Transmissive media sensor	P33	SPI connector cutter board*
P10	Transmissive media sensor	P34	SPI connector DC power supply J11*
P20	Printhead data	P35	SPI connector*
P21	Internal parallel connector	P36	USB port
P23	PCMCIA board connector		

*SPI—Serial Peripheral Interface

Figure 9 • Wireless PCMCIA and Main Logic Board Locations—All Models Except 110*Xi*III*Plus*

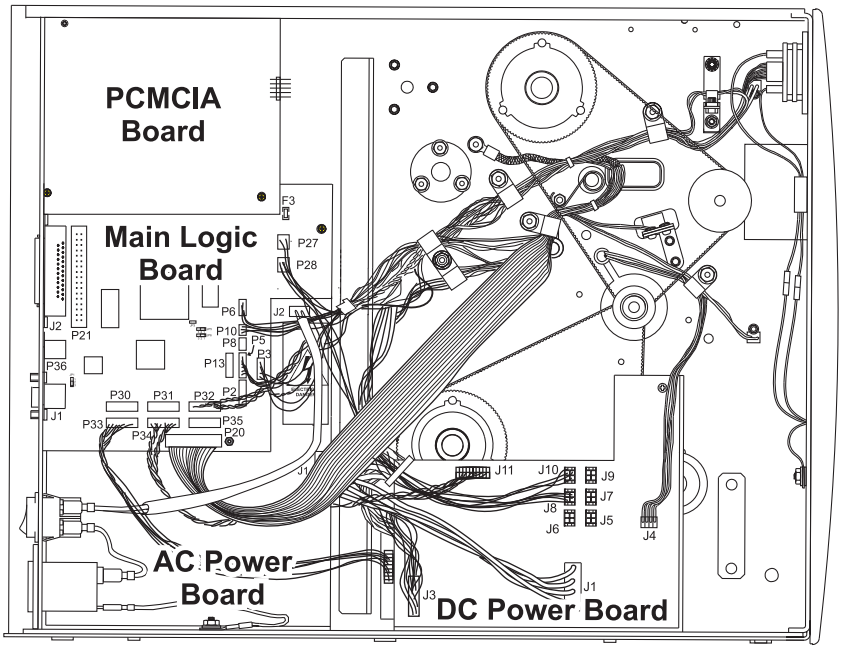


Table 4 • All Models Except 110*Xi*III*Plus*

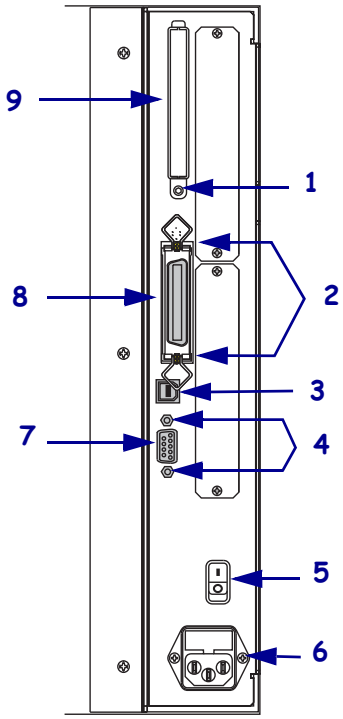
Connector	Description	Connector	Description
P1	Lower take-label sensor	P24	PCMCIA board connector
P2	Upper take-label sensor	P27	LCD display control board power
P3	Head-open sensor	P28	DC power supply J10
P5	Ribbon sensor	P30	SPI connector*
P6	Reflective media sensor	P31	SPI connector*
P8	Transmissive media sensor	P32	SPI connector LCD display board*
P10	Transmissive media sensor	P33	SPI connector cutter board*
P20	Printhead data	P34	SPI connector DC power supply J11*
P21	Internal parallel connector	P35	SPI connector*
P23	PCMCIA board connector	P36	USB port

*SPI—Serial Peripheral Interface

4. See Figure 10. At the rear panel, remove the two screws that secure the 36-pin parallel port connector.

5. Remove the two standoffs and washers securing the 9-pin serial port connector.

Figure 10 • Rear View of Rear Panel



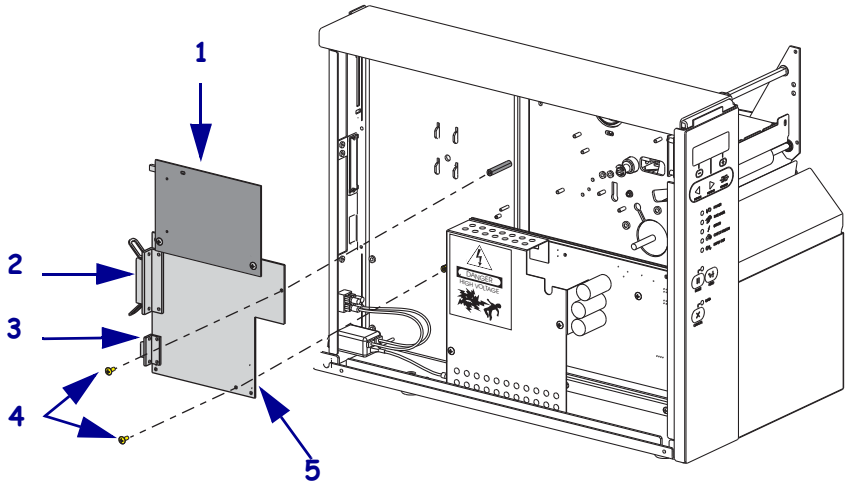
1	RF cover mounting screw
2	Parallel interface mounting screws (2)
3	USB connector (only available on *Xi*III*Plus* models)
4	DB-9 serial interface mounting studs and washers (2)
5	AC power on/off switch
6	AC power cable connection
7	DB-9 serial interface connector
8	Parallel interface connector
9	RF cover

6. What printer do you have?

If you have a…	Then…
105*SL*	See Figure 11.
All *Xi*III*Plus* models	See Figure 12.

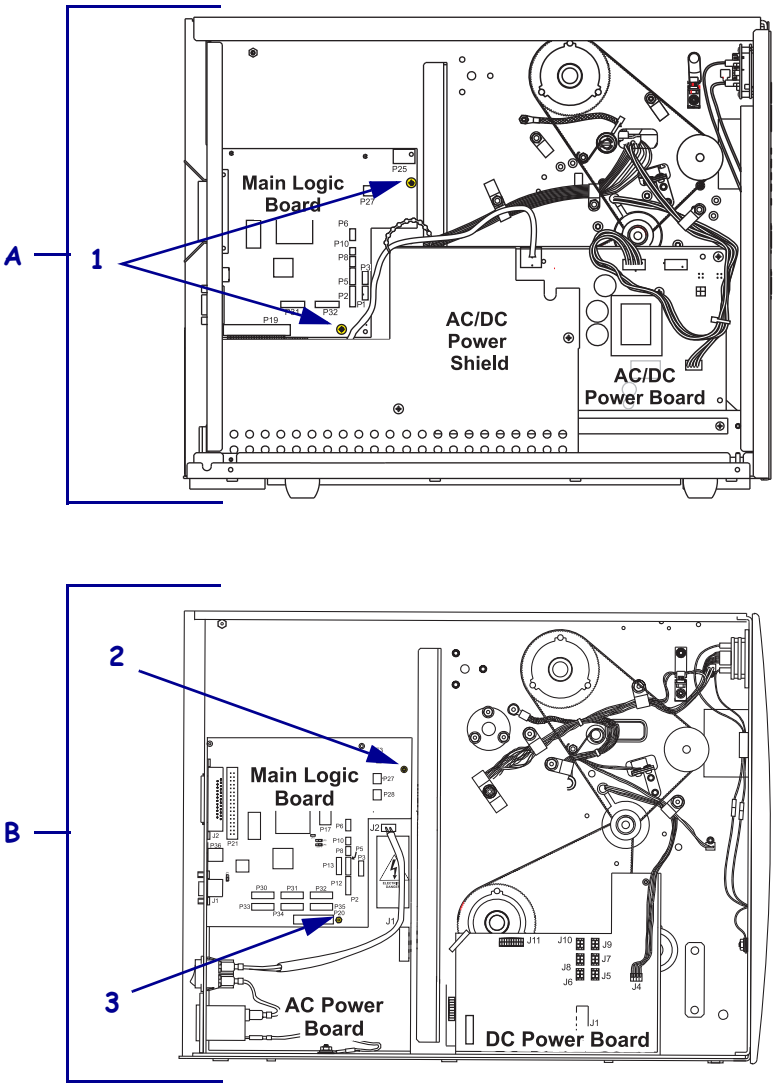
7. On the electronics side of the printer, remove the MLB by removing the mounting screw in the upper right and the mounting screw (or nut) at the bottom right.
8. To remove the MLB/PCMCIA assembly, pull out the top of the assembly and guide its three (serial, parallel, and RF) connectors out of the rear panel openings.
9. Place the assembly on an antistatic mat.
10. If your boards were connected using plastic locking standoffs, remove and discard the standoffs.
11. If your boards are connected using screws, spacers and nuts, hold the nut on the back of the MLB while removing the screw from the front of the PCMCIA board. Repeat for both screws, standoffs, and nuts.
12. Separate the MLB and PCMCIA boards.
13. Continue with *Install the New Internal Wireless Plus and MLB Boards* on page 16.

Figure 11 • Remove the 105*SL* PCMCIA/Wireless Board and Main Logic Board



1	PCMCIA/wireless board
2	Parallel port
3	Serial port
4	Mounting screws (2)
5	Main logic board

Figure 12 • Remove the XiIIIPlus MLB

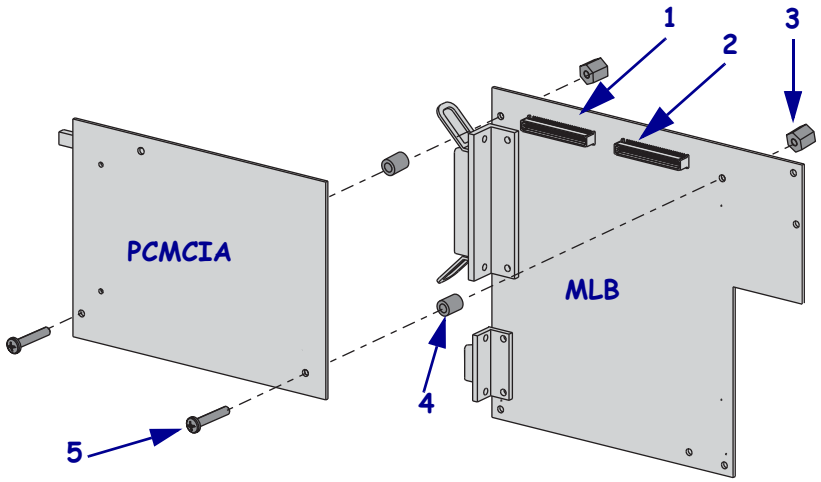


A	110*Xi*IIIPlus
B	All models except 110*Xi*IIIPlus
1	Mounting screws (2)
2	Mounting screw
3	Mounting nut

Install the New Internal Wireless Plus and MLB Boards

1. See Figure 13. Align the two connectors on the Internal Wireless Plus board with P23 and P24 on the MLB and then push them together.
2. Slide one of the new spacers between the Internal Wireless Plus board and the MLB at either one of the mounting holes.

Figure 13 • Install New Spacers



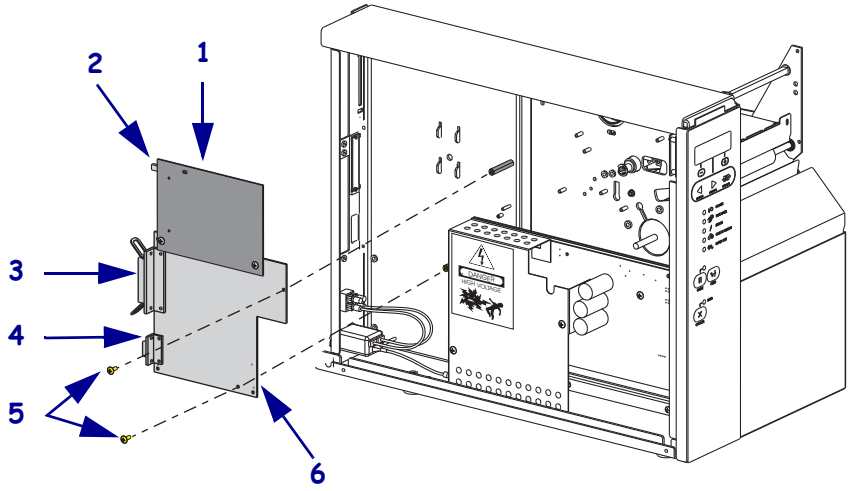
1	P24 connector
2	P23 connector
3	Nuts (2)
4	Spacers (2)
5	Screws (2)

3. Insert one of the screws through the mounting hole in the Internal Wireless Plus board, spacer, and MLB.
4. Secure the screw with one of the plastic nuts.
5. Repeat step 2, step 3, and step 4 for the other mounting hole.
6. Ensure that the Internal Wireless Plus board is seated into the MLB connectors, P23 and P24.

7. See Figure 14. Starting with the top edge of the Internal Wireless Plus board assembly, install the assembly using the hardware previously removed.

   Ensure that the connectors (RF, parallel, and serial) align with the appropriate openings in the rear panel.

Figure 14 • Install the Internal Wireless Plus Print Server Board and MLB



1	Internal wireless plus print server board
2	RF antenna
3	Parallel port
4	Serial port
5	Mounting screws (2)
6	Main logic board

8. See Figure 10 on page 13. Reinstall the screws and studs for the serial and parallel interface connectors.

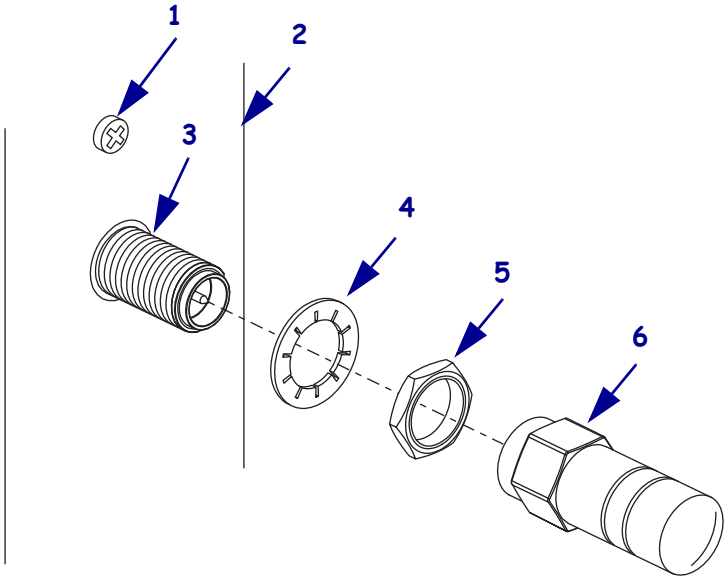
9. See Figure 6 on page 9 and Table 2 on page 10. Reconnect all ribbon and small wire connections to the MLB.

10. See Figure 3 on page 5. Reinstall any other option boards previously removed.

Install the Cover and External Antenna

1. From the back of the printer, remove the sticker located alongside of the option card slot.
2. Using isopropyl alcohol, remove all of the sticker's glue.
3. Insert the bottom edge of the cover in the small slot below the option card slot.
4. See Figure 15. Fasten the top of the cover into place using one of the screws provided in the kit.
5. From the back of the printer, place the lock washer and nut on the RF connector and hand tighten.

Figure 15 • Closeup of Antenna Installation



1	Cover mounting screw
2	Right edge of the cover
3	RF connector
4	Lock washer
5	Nut
6	RF antenna

6. Using an open-end wrench, tighten the brass nut by turning it clockwise one quarter of a turn.
7. To install the external antenna, screw the antenna onto the RF connector extending out from the back plate of the printer.

Reinstall the Electronics Cover

1. See Figure 2 on page 4. Reinstall the electronics cover by lowering the cover so the lip goes into the channel on the top of the printer.
2. Secure the cover by reinstalling the two screws on the bottom the cover.
3. Reconnect the data cables and the AC power cord.

Resume Printer Operation

1. Refer to the *Wireless User Guide* to configure the Internal Wireless Plus Print Server for operation.
2. Turn on (**I**) the printer.

After You Complete the Installation

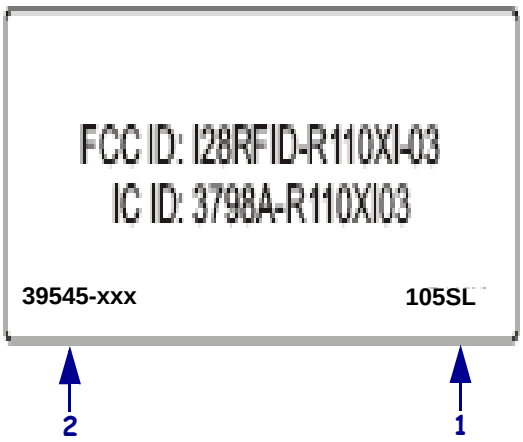
Firmware

After you have completed this installation, you must download firmware version V60.16.x (or later) a second time from: www.zebra.com/firmware.

Attach Labels

1. See Figure 16. Examine the labels included with the kit.
   There may be several labels included with your kit.

Figure 16 • Sample Label



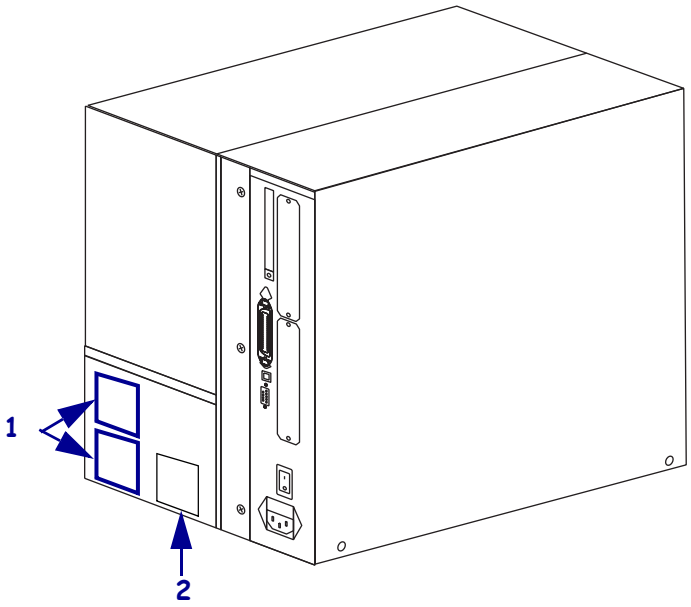
1	Printer model
2	Zebra part number

2. Locate your printer model in the lower right-hand corner of the label.

3. See Figure 17. If present, remove the old plastic label with part number 39545-xxx affixed to the back of your printer.

Note • Do not remove the electrical ratings label, also known as the model plate. The model plate contains essential user information.

Figure 17 • Label Location



1	Affix label to the lowest available open spot.
2	Model plate (Do not remove)

4. See Figure 16. Remove the backing from the new label (part number 39545-xxx included in this kit) for your specific printer.

5. See Figure 17. Affix the new printer label in the area to the left of the model plate.

6. Discard any additional labels included in the kit.

7. The installation is complete.

Compliance Information

FCC Compliance Statement

This device complies with Part 15 rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

The user is cautioned that any changes or modifications not expressly approved by Zebra Technologies Corporation could void the user's authority to operate the equipment. To ensure compliance, this printer must be used with Shielded Communication Cables.

FCC Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Canadian DOC Compliance Statement

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.