NCR Voyix 9700

Kaby Lake Motherboard Upgrade Kit

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Issue C

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Preface

Audience

This publication is written for hardware installer/service personnel, system integrators, and field engineers.

> 📝 **Note**
>
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Revision Record

Publication issue	Date	Description of change
A	Dec 2019	First issue
B	Jun 2020	• Added procedures for 7709 R1.2 • Updated kit contents
C	Jul 2025	• Updated to NCR Voyix brand. • Added IP book number.

9700-0075-7709 Kaby Lake Motherboard Upgrade Kit

This publication provides procedures for upgrading the NCR SelfServ™ 90 (7709) Kiosk motherboard to Kaby Lake. For more information, refer to either of the following procedures:

- "**Installing the Motherboard on NCR 7709 R1.0/1.1**" on the next page
- "**Installing the Motherboard on NCR 7709 R1.2**" on page 60

Printer Tray Assembly

Printer Bracket

M4 Flat-head Screw

Power Supply Bracket

Motherboard Assembly

Camera Assembly

Camera Cable

Lock-Catch

Service Cover

Ground Cable, 18 inches

Ground Cable, 12 inches

Ground Cable, 6 inches

CCP-79149

Installing the Motherboard on NCR 7709 R1.0/1.1

Installing the Kaby Lake Motherboard Upgrade kit on an NCR SelfServ™ 90 (7709) R1.0 or R1.1 unit involves the following procedures:

1. Open the NCR 7709 unit and disconnect all cables from the Motherboard. Keep these cables secure inside the kiosk cabinet. For more information, refer to "**Opening the R1.0/1.1 Kiosk**" on page 11.

2. Remove the following devices:
   a. PIN Pad. Depending on the PIN Pad, refer to either of the following procedures:
      - "**Removing the Ingenico IPP320/350 PIN Pad**" on page 12
      - "**Removing the Verifone VX805/820 PIN Pad**" on page 14
   b. Imaging Scanner. For more information, refer to "**Removing the Imaging Scanner**" on page 16
   c. Receipt Printer. For more information, refer to "**Removing the Receipt Printer**" on page 17.
   d. Supervisor Switch. For more information, refer to "**Removing the Supervisor Switch**" on page 74.
   e. Coupon Sensors. For more information, refer to "**Removing the Coupon Sensors**" on page 30.
   f. Sensormatic Antenna, if present. For more information, refer to "**Removing the Sensormatic Antenna**" on page 20.
   g. Display Head. For more information, refer to "**Removing the Display Head**" on page 22.
   h. Rear Head Cover. For more information, refer to "**Removing the Rear Cover**" on page 24.
   i. Remove the Old Motherboard. For more information, refer to "**Removing the Old Motherboard**" on page 26.
   j. Remove the Old LVDS and Touch USB cables, and then remove the Camera Blank. For more information, refer to "**Removing Camera Blank and Old Cables**" on page 82.

3. Install the following devices:
   a. New cables and the Camera Assembly. For more information, refer to "**Installing Camera and New Cables**" on page 83
   b. Kaby Lake Motherboard Upgrade kit. For more information, refer to "**Installing the Motherboard**" on page 33

c. Rear Head Cover. For more information, refer to "**Installing the Rear Display Enclosure**" on page 36.

d. Upgrade Label. For more information, refer to "**Attaching the Upgrade Label**" on page 41.

e. Display Head. For more information, refer to "**Installing the Display Head**" on page 42.

f. Sensormatic Antenna, if present. For more information, refer to "**Installing the Sensormatic Antenna**" on page 43

g. Coupon Sensors. For more information, refer to "**Installing the Coupon Sensors**" on page 45.

h. Supervisor Switch. For more information, refer to "**Installing the Supervisor Switch**" on page 104.

i. Receipt Printer. For more information, refer to "**Installing the Receipt Printer**" on page 48

j. Imaging Scanner. For more information, refer to "**Installing the Imaging Scanner**" on page 51.

k. PIN Pad. Depending on the PIN Pad, refer to either of the following procedures:
   - "**Installing the Ingenico IPP320/350 PIN Pad**" on page 106
   - "**Installing the Verifone VX805/820 PIN Pad**" on page 53

4. Secure the grounding cables. For more information, refer to "**Securing Grounding Cables**" on page 56.

5. Connect all cables to the Motherboard. For more information, refer to "**Connecting Cables**" on page 58.

6. Calibrate the Touch Screen. For more information, refer to "**Calibrating the Touch Screen**" on page 126.

Opening the R1.0/1.1 Kiosk

To access the kiosk components, insert the key into the lock at the back of the kiosk and then, carefully open the front of the kiosk.

> ⚠️ **Caution**
>
> Do NOT abruptly open and release the front of the kiosk. Hold and support the front of the kiosk until fully extended.

Key Lock

ATL-33789

Removing the Ingenico IPP320/350 PIN Pad

1. While holding the PIN Pad from outside of the kiosk, pull on the tab on the upper portion of the Mounting Bracket (accessed from the inside of the kiosk), and then remove the PIN Pad.

Pull on this tab

Printer

MSR

PIN Pad Cradle

CCP-60091

2. Disconnect the PIN Pad Cable from the PIN Pad.

3. Loosen the two screws that secure the Mounting Bracket to the PIN Pad Cradle.

Cradle

Mounting Bracket

Screws

CCP-60090

4. Slide up and remove the Mounting Bracket.

Removing the Verifone VX805/820 PIN Pad

1. Disconnect the PIN Pad Cable from the Motherboard and cut off cable ties as necessary.

Cable tie at bracket holes

CCP-61345

2. While holding the PIN Pad from outside the Kiosk, loosen the two thumb screws securing the PIN Pad Cradle to the Display Head and then remove the PIN Pad and PIN Pad Cradle Assembly.

Printer

Thumb screws

PIN Pad Cradle

CCP-60091

3. Remove the two screws securing the PIN Pad to the PIN Pad Cradle. The VX805 and VX820 are secured to the plate bracket with two screws but different mounting hole sets as shown below.

Set A Mounting
Holes for VX805

Set A Mounting
Holes for VX820

CCP-73058

4. Disconnect the PIN Pad Cable from the PIN pad.

Removing the Imaging Scanner

Remove the two nuts that secure the Imaging Scanner Assembly to the kiosk and then, remove the assembly from the studs.

Imaging Scanner
and Bracket Assembly

Nuts

CCP-61361

Removing the Receipt Printer

1. Disconnect the Printer USB and Power Cables from the Receipt Printer.

Power Cable

USB Cable

CCP-60042

2. To remove the Printer Assembly from the kiosk, remove the six screws (three on each side) that secure the Printer Assembly to the Z—shaped Brackets, and then gently lift the Printer Assembly off the kiosk.

> **Note**
>
> Be careful not to damage the Printer Chute and the areas around the Printer Opening.

Printer Assembly

Screws (3 on each side)

Z-shaped Bracket

CCP-60039

Removing the Supervisor Switch

1. Remove the two M4 screws securing the Supervisor Switch assembly to the Display Head and route out the cable from under the two Display Head Brackets shown below.

Supervisor Switch Cable

Display Head Brackets

Supervisor Switch Assembly

CCP-73837

2. Remove cable tie that secures the Supervisor Switch cable to the Display Head, and then temporarily place the Supervisor Switch assembly inside the main cabinet.

Removing the Coupon Sensors

Remove the Coupon Sensors from the Cable Snaps and route the cable out of the bracket.

CCP-78473

Removing the Sensormatic Antenna

> ⚠️ **Caution**
>
> Make sure that the Sensormatic Controller is powered OFF. Do NOT connect or disconnect the Sensormatic Cables or Antenna from the Sensormatic Controller when power is ON as this could damage the controller.

1. Disconnect the Sensormatic Antenna Pigtail cable from the Antenna Cable.

CCP-60853

2. Remove the top and side brackets securing the antenna to the Display Head.

Screws

Top Bracket

Sensormatic Antenna
and Pigtail Cable

Side Bracket

CCP-60832

3. Remove the antenna from the Display Head.

Removing the Display Head

1. While supporting the Kiosk Display Head, remove the two nuts securing the Display Head Chain to the Kiosk cabinet and remove the chain from the stud.

> **⚠ Warning**
>
> Make sure to properly support the display head so as not to accidentally drop it.

Nuts

Chain

CCP-60828

2. While supporting the display head, remove the four screws that attach the hinge to the kiosk cabinet.

> ⚠️ **Warning**
>
> Make sure to properly support the display head so as not to accidentally drop nor damage it.

Screws

Opened Display Head

CCP-60824

3. Carefully place the front the kiosk on a flat surface cushioned with bubble wrap or soft cloth.

> ⚠️ **Caution**
>
> Be careful not to scratch nor damage the display.

Removing the Rear Cover

1. If the kiosk has an MSR, disconnect the MSR Cable from the MSR Extension Cable. These two cables are found under the Motherboard Bracket.

CCP-78472

2. Remove the four screws that secure the hinge to the Rear Cover.

CCP-78497

3. Remove the four screws and two nuts that secure the Rear Cover to the Display Head.

CCP-78496

4. Carefully lift off the Rear Cover from the Display Head.

Removing the Old Motherboard

1. Remove the Motherboard Bracket.

    a. Remove the nine screws that secure the Motherboard Bracket to the Display Head.

CCP-78461

    b. Slide and lift the Motherboard Bracket from the Display Head.

CCP-78460

2. Remove the ten screws that secure the two Z—shaped brackets to the Display Head.

CCP-78457

3. Carefully disconnect the LVDS and the Touch USB cables from the Motherboard.

LVDS Cable   USB Touch Cable

CCP-78456

4. Remove the 15 screws that secure the Motherboard Tray to the Display Head.

CCP-73686

Removing Camera Blank and Old Cables

Camera Blank

LVDS Cable

USB Touch Cable

CCP-78489

1. Remove the three strips of tape securing the LVDS and USB Touch cables to the back of the Display panel, and then remove the cables from the display panel.

2. Remove the Camera Blank by peeling the cable management tape from the back of the display carrier.

Removing the Coupon Sensors

Remove the Coupon Sensors from the Cable Snaps and route the cable out of the bracket.

Cable Snaps

Coupon Sensors

CCP-78473

Installing Camera and New Cables

1. Connect the Camera Cable to the Camera.

> **❗ Important**
>
> The white dot indicator on the cable connector should be facing upward and on the left-hand side.

White Dot
Marker

CCP-73691

2. Mount and secure the Camera assembly to the Display Head using two screws.

CCP-73689

3. Secure the Camera Cable to the Display Panel together with the LVDS and USB Touch cable using three strips of tape.

CCP-73687

Installing the Motherboard

1. Position the Motherboard Tray on the Display Head and secure with 15 screws.

CCP-73686

2. Connect the LVDS, Touch USB, and Camera cables to the Motherboard.

LVDS Cable

USB Touch Cable

Camera Cable

CCP-78455

3. Mount the two Z—shaped brackets using five screws for each bracket.

CCP-78457

4. Re—install the Motherboard Bracket.

   a. Position the Motherboard Bracket onto the Display Head and slide it into place.

CCP-78454

b. Re—install the nine screws that secure the Motherboard Bracket to the Display Head.

CCP-78461

5. Attach an 18-inch grounding cable to the Motherboard Sled using a new M3 screw.

CCP-78488

Installing the Rear Display Enclosure

1. Using a new M4 nut, mount a 12-inch grounding cable on the inner right side of the Display enclosure as shown in the following image.

> **📝 Note**
>
> Units with PID 7709-2200-8090, 7709-2300-8090, 7709-8600-0001, 7709-8600-0002 do not need to perform this procedure. Skip to the next step.

CCP-78445

2. Lower the Rear Display Enclosure onto the Display Head and secure it with four screws and two nuts.

> ⚠ **Caution**
>
> Be careful not to pinch the Grounding Cable.

CCP-78496

3. Using the four screws, attach the hinge to the Rear Display Enclosure.

CCP-78497

4. If the kiosk has an MSR, connect the MSR Cable to the MSR Extension Cable.

CCP-78472

5. Using an 8-mm long M4 screw and nut found inside the accessories bag, attach a 12-inch grounding cable to right bracket hole on the left Z-bracket.

CCP-78444

> **📝 Note**
>
> If a PIN Pad cable is already installed, remove the cable tie that secures the PIN Pad cable to the right bracket hole.
>
>
>
> Bundled PIN Pad Cable   Remove this cable tie
>
> CCP-78700

Attaching the Upgrade Label

Place the Upgrade Label to the left of the Product ID Label.

Upgrade Label — Product ID Label

CCP-78705

Installing the Display Head

1. Position the display head against the bottom part of the cabinet.

2. Attach and secure the hinge to the cabinet with four screws..

Screws

Opened Display Head

CCP-60824

3. Attach the chain to the stud and secure with two nuts.

Nuts

Chain

CCP-60828

Installing the Sensormatic Antenna

1. Place the Sensormatic antenna over the imager funnel with its pigtail cable sticking out at the lower-right hand corner of the Display Head Assembly. Secure the antenna with the top and side brackets.

CCP-60832

2. Route the antenna Pigtail Cable into the cabinet at the space on the left-hand side of the coupon bin and plug the Pigtail Cable to the Sensormatic Antenna Cable. Cable tie the pig tail cable as shown below.

Sensormatic
Antenna
Cable

Antenna Pigtail
Cable

CCP-60853

Installing the Coupon Sensors

Place the Coupon Sensors in the Cable Snaps.

Cable Snaps

Coupon Sensors

CCP-78473

Installing the Supervisor Switch

1. Route the Supervisor Cable from the PIN Pad side towards the Imager side, passing the cable under the two Display Head Brackets shown below. Using a cable tie, secure the Supervisor Switch cable to the Display Head.

Secure with a cable tie

Supervisor Switch Cable

Display Head Brackets

Supervisor Switch Assembly

CCP-78498

2. Mount and secure the Supervisor Switch assembly to the Display Head using two screws.

> **ℹ Important**
>
> Make sure that the Supervisor assembly is mounted parallel with its mounting bracket and secured to the top side of the mounting slots.
>
> This position provides the appropriate space for the assembly and properly aligns the Supervisor Switch to its external access hole.

Installing the Receipt Printer

1. Install the Printer Assembly to the kiosk, aligning the Printer Chute with the Printer Opening.

> **Note**
>
> Be careful not to damage the Printer Chute and the areas around the Printer Opening.

Printer Opening
Printer Chute

CCP-60041

2. Using the six screws (three on each side), secure the Printer Assembly to the Z shaped Bracket.

Printer Assembly

Screws (3 on each side)

Z-shaped Bracket

CCP-60039

3. Connect the Printer USB and Power Cables.

Power Cable

USB Cable

CCP-60042

4. Install the Grounding Cable for the Receipt Printer.

> 📝 **Note**
>
> Units with PID 7709-2200-8090, 7709-2300-8090, 7709-8600-0001, 7709-8600-0002
> do not need to perform this procedure. Skip to the next step.

a. From the right side of the Receipt Printer, remove the screw indicated in the following image.

CCP-78701

b. Mount a 6-inch grounding cable using the same screw that was previously detached.

CCP-78702

Installing the Imaging Scanner

Mount the Imaging Scanner Assembly to the two studs and secure with two nuts.

Imaging Scanner
and Bracket Assembly

Nuts

CCP-61361

Installing the Ingenico IPP320/350 PIN Pad

1. Position the Mounting Bracket onto the screws, and then tighten the screws.

2. Connect the PIN Pad Cable to the PIN Pad.

3. Mount the PIN Pad to the Mounting Bracket by aligning the slot on the lower back of the PIN Pad with the small tab on the lower portion of the Mounting Bracket.

PIN Pad

Mounting Bracket

CCP-60071

4. Push the PIN Pad until it snaps to the upper portion of the Mounting Bracket.

Installing the Verifone VX805/820 PIN Pad

1. Connect the PIN Pad Cable to the PIN pad and route the cable through the access hole on the PIN Pad cradle.

Access hole

CCP-61344

2. Align the PIN pad mounting holes to the appropriate mounting holes set on the PIN pad cradle as shown below and secure the PIN Pad with two screws.

- Use Set A mounting holes for VX 805 PIN pad.

- Use Set B mounting holes for VX820 PIN pad.

Set A

Set B

CCP-61346

3. Mount the PIN Pad and Cradle Assembly on the Display head and secure with two thumbscrews.

Printer

Thumb screws

PIN Pad Cradle

CCP-60091

4. Connect the PIN Pad Cable to the PIN Pad. Cable tie the extra length of the cable as shown below.

Cable tie at bracket holes

CCP-61345

Securing Grounding Cables

1. Secure the other end of the Motherboard Sled Grounding Cable.

> **📑 Note**
>
> The Motherboard Sled Grounding Cable is attached during installation of the Motherboard.

   a. Route the cable beside the Imaging Scanner.

   b. Using a new M4 nut, secure the other end of the Motherboard Grounding Cable to the metal stud on the inner left wall of the bucket.

   c. Use a cable tie to secure the Grounding Cable to the Imaging Scanner.

Cable tie

Imaging Scanner

CCP-78703

2. Connect the other end of the following grounding cables to the grounding stud on the inner right wall of the bucket, right beside the Power Supply Brick.

- Z-bracket Grounding Cable
- Rear Display Enclosure Grounding Cable
- Receipt Printer Grounding Cable

From Z-bracket

From Rear Display Enclosure

From Receipt Printer

Power Supply Brick

CCP-78481

Connecting Cables

The NCR SelfServ™ 90 (7709) Kiosk provides labels that show the connectors of the Motherboard and the Adapter. The tables below indicate the type of device or of cable for each connector.

I/O Motherboard

CCP-61343

Connector	Device/Cable
COM 1	Ingenico IPP350 PIN Pad
LAN	LAN Ethernet Cable
24V	Power Supply Cable
Line Out	Dual Speaker
USB A	Sensormatic Controller
USB B	Imaging Scanner
USB C	Verifone VX805, VX820, or MX915 PIN Pad
USB D	Security Scale
USB E	I/O Adapter
USB F	Receipt Printer

I/O Adapter

CCP-61349

Connector	Device/Cable
USB A	Handheld Scanner
Tri Light	Indicator Light
TAB I/F	Checkpoint Signal Cable
Coupon Sensor	Coupon Sensor Cable
I/O Power	P2 of the I/O Cable
I/O USB Hub	P3 of the I/O Cable

Installing the Motherboard on NCR 7709 R1.2

Installing the Kaby Lake Motherboard Upgrade kit on an NCR SelfServ™ 90 (7709) R1.2 unit involves the following procedures:

1. Open the NCR 7709 unit and disconnect all cables from the Motherboard. For more information, refer to "**Opening the R1.2 Kiosk**" on page 62.

2. Remove the following devices:

   a. Receipt Printer. For more information, refer to "**Removing the Receipt Printer**" on page 63

   b. Imaging Scanner. For more information, refer to "**Removing the Imaging Scanner**" on page 66

   c. Sensormatic Antenna, if present. For more information, refer to "**Removing the Sensormatic Antenna**" on page 67.

   d. PIN Pad. For more information, Depending on the PIN Pad, refer to either of the following procedures:

      • "**Removing the Ingenico IPP320/350 PIN Pad**" on page 70

      • "**Removing the Verifone VX805/820 PIN Pad**" on page 72

   e. Supervisor Switch. For more information, refer to "**Removing the Supervisor Switch**" on page 74.

   f. Remove the Coupon Sensors. For more information, refer to "**Removing the Coupon Sensors**" on page 75.

   g. Old Service Cover. For more information, refer to "**Removing the Service Cover**" on page 76.

   h. Display Head. For more information, refer to "**Removing the Display Head**" on page 77.

3. Install the following devices:

   a. New cables and the Camera Assembly. For more information, refer to "**Installing Camera and New Cables**" on page 83

   b. Kaby Lake Motherboard Upgrade kit. For more information, refer to "**Installing the Motherboard**" on page 85

   c. Printer Bracket. For more information, refer to "**Replacing the Printer Bracket**" on page 88.

   d. Power Supply Bracket. For more information, refer to "**Replacing the Power Supply Bracket**" on page 94.

e. Upgrade Label. For more information, refer to "**Attaching the Upgrade Label**" on page 98.

f. Display Head. For more information, refer to "**Installing the Display Head**" on page 99.

g. Lock-Catch. For more information, refer to "**Replacing the Lock-Catch**" on page 101.

h. New Service Cover. For more information, refer to "**Installing the New Service Cover**" on page 102

i. Coupon Sensors. For more information, refer to "**Installing the Coupon Sensors**" on page 103.

j. Supervisor Switch. For more information, refer to "**Installing the Supervisor Switch**" on page 104.

k. PIN Pad. Depending on the PIN Pad, refer to either of the following procedures:

   - "**Installing the Ingenico IPP320/350 PIN Pad**" on page 106
   - "**Installing the Verifone VX805/820 PIN Pad**" on page 107

l. Sensormatic Antenna, if present. For more information, refer to "**Installing the Sensormatic Antenna**" on page 110.

m. Imaging Scanner. For more information, refer to "**Installing the Imager Scanner**" on page 115.

n. Receipt Printer. For more information, refer to "**Installing the Receipt Printer**" on page 117

4. Connect all cables to the Motherboard. For more information, refer to "**Connecting Cables**" on page 124.

5. Calibrate the Touch Screen. For more information, refer to "**Calibrating the Touch Screen**" on page 126.

Opening the R1.2 Kiosk

To access the kiosk components, insert the key into the lock at the right-hand side of the kiosk, turn the key clockwise and then, carefully open the front of the kiosk.

> ⚠️ **Caution**
>
> Do NOT abruptly open and release the front of the kiosk. Hold and support the front of the kiosk until fully extended.

CCP-73618

Removing the Receipt Printer

1. Slide up Receipt Printer into service position.

   a. Push the printer assembly release rod upward.

CCP-73621

b. Pull the printer assembly backward until fully extended and secured by the green plunger.

> ⚠️ **Caution**
>
> Ensure that the green plunger holds the printer assembly in place. Do not release the
> printer assembly if it is not yet secured by the green plunger.

CCP-73622

2. Disconnect the USB and Power cables from the printer. Remove the cable tie securing the cables to the printer bracket encircled below.

USB Connector

Power Connector

CCP-78447

3. Slide the printer back down and remove the four nuts securing the Receipt Printer assembly to the kiosk.

CCP-73169

Removing the Imaging Scanner

1. Disconnect the Imaging Scanner Cable from the motherboard, and cut off the cable ties securing the cables routed at the back of the scanner.

CCP-78446

2. Remove the three nuts securing the Imager to the kiosk and then lift the imager out of its mounting area.

CCP-73637

Removing the Sensormatic Antenna

> ⚠️ **Caution**
>
> Make sure that the Sensormatic Controller is powered OFF. Do NOT connect or disconnect the Sensormatic Cables or Antenna from the Sensormatic Controller when power is ON as this could damage the controller.

1. Disconnect and remove the Sensormatic Cables.

    a. Disconnect the Sensormatic Antenna Pigtail cable from the Antenna Cable, and remove the cables ties.

Sensormatic Antenna Cable

Antenna Pigtail Cable

CCP-79150

    b. Route the Sensormatic Antenna Cable out of the kiosk.

2. Remove three screws and washers securing the Imager Shield assembly and then remove the assembly from the kiosk.

> **❗ Important**
>
> Do not throw away the washers. Keep the washers and use these when re-installing the Imager Shield.

Imager Shield

CCP-73178

3. Remove the antenna top bracket by removing two screws.

Antenna Top Bracket

CCP-73179

4. Slide the Sensormatic antenna away from its side bracket and lift it out of the kiosk head.

Sensormatic Antenna

Side Bracket

CCP-73647

Removing the Ingenico IPP320/350 PIN Pad

1. While holding the PIN Pad from outside of the kiosk, pull on the tab on the upper portion of the Mounting Bracket (accessed from the inside of the kiosk), and then remove the PIN Pad.

Pull on this tab

CCP-77992

2. Disconnect the PIN Pad Cable from the PIN Pad.

3. Loosen the two screws that secure the Mounting Bracket to the PIN Pad Cradle.

Cradle

Mounting Bracket

Screws

CCP-60090

4. Slide up and remove the Mounting Bracket.

Removing the Verifone VX805/820 PIN Pad

1. Disconnect the PIN Pad Cable from the Motherboard and cut off cable ties as necessary.

PIN Pad Cable

Route PIN Pad cable bundle on top side of bracket and route other cables at bottom side of bracket to avoid damage from sharp edges

Cable Ties

CCP-73740

2. While holding the PIN Pad from outside the Kiosk, loosen the two thumb screws securing the PIN Pad Cradle to the Display Head and then remove the PIN Pad and PIN Pad Cradle Assembly.

PIN Pad Cradle Thumbscrews

CCP-78706

3. Remove the two screws securing the PIN Pad to the PIN Pad Cradle.

4. Disconnect the PIN Pad Cable from the PIN pad.

Removing the Supervisor Switch

1. Remove the two M4 screws securing the Supervisor Switch assembly to the Display Head and route out the cable from under the two Display Head Brackets shown below.

Supervisor Switch Cable

Display Head Brackets

Supervisor Switch Assembly

CCP-73837

2. Remove cable tie that secures the Supervisor Switch cable to the Display Head, and then temporarily place the Supervisor Switch assembly inside the main cabinet.

Removing the Coupon Sensors

Remove the Coupon Sensors from the Cable Snaps and route the cable out of the bracket.

Snaps

Coupon Sensors

Route Cable
Under Bracket

CCP-73659

Removing the Service Cover

Loosen the two thumbscrews, slide the cover downward and lift it up to remove from the Display Head.

CCP-73679

Removing the Display Head

1. Underneath the left-hand motherboard cover bracket, disconnect the MSR cable from its extension cable.

CCP-73181

2. While supporting the Motherboard and Display assembly on the front side, remove the following:

- two nuts on the right-hand side bracket

- two nuts on the left-hand side bracket

- two screws on the bottom brackets.

CCP-73650

3. Carefully place the front the kiosk on a flat surface cushioned with bubble wrap or soft cloth.

> ⚠️ **Caution**
>
> Be careful not to scratch nor damage the display.

Removing the Old Motherboard

1. Remove the Motherboard Bracket.

    a. Remove the nine screws that secure the Motherboard Bracket to the Display Head.

CCP-73652

b. Slide and lift the Motherboard Bracket from the Display Head.

CCP-73653

2. Remove the left and right hand Z-shaped support brackets by removing screws as shown below.

Left-Hand Bracket

Right-Hand Bracket

CCP-73684

3. Carefully disconnect the LVDS and the Touch USB cables from the Motherboard.

LVDS Cable   USB Touch Cable

CCP-78456

4. Remove the 15 screws that secure the Motherboard Tray to the Display Head.

CCP-73686

Removing Camera Blank and Old Cables

Camera Blank

LVDS Cable

USB Touch Cable

CCP-78489

1. Remove the three strips of tape securing the LVDS and USB Touch cables to the back of the Display panel, and then remove the cables from the display panel.

2. Remove the Camera Blank by peeling the cable management tape from the back of the display carrier.

Installing Camera and New Cables

1. Connect the Camera Cable to the Camera.

> **ⓘ Important**
>
> The white dot indicator on the cable connector should be facing upward and on the left-hand side.

White Dot
Marker

CCP-73691

2. Mount and secure the Camera assembly to the Display Head using two screws.

CCP-73689

3. Secure the Camera Cable to the Display Panel together with the LVDS and USB Touch cable using three strips of tape.

CCP-73687

Installing the Motherboard

1. Position the Motherboard Tray on the Display Head and secure with 15 screws.

CCP-73686

2. Connect the LVDS, Touch USB, and Camera cables to the Motherboard.

LVDS Cable

USB Touch Cable

Camera Cable

CCP-78455

3. Mount the two Z—shaped brackets using five screws for each bracket.

Left-Hand Bracket

Right-Hand Bracket

CCP-73684

4. Install the Motherboard Bracket.

   a. Slide the Motherboard Bracket as shown.

CCP-73654

b. Secure the Motherboard Bracket to the Display Head using the nine screws.

CCP-73652

5. Install the Grounding Cable for the Motherboard Sled using a new M3 screw, as shown in the image below.

CCP-78791

Replacing the Printer Bracket

1. Disassemble the printer assembly by removing the parts shown in the following image. These parts will be reused later when installing the upgrade kit.

> 📝 **Note**
>
> The old printer tray and printer bracket will no longer be used in the installation of this kit.

Plunger mount
QTY 1

M4X6 Hex drive screws
QTY 6

M4 Nylon-insert locknuts
QTY 2

M4 Shoulder screw
QTY 1

M4X6 Flat head screws
QTY 4

M4 Nuts
QTY 4

M3X6 Flat head screws
QTY 3

IGUS Slides
QTY 2

IGUS Carriage
QTY 2

OR

Old Slides
QTY 2

Old Carriage
QTY 2

Note:
The slide and carriage design used may vary due to the recent change in the supplier. There are no issues with using either of the 2 designs.

2. Install the two Carriages on the New Printer Tray that comes with the kit, and then secure them with four M4X6 flat head screws.

Printer Tray

Carriages

M4X6 Flat Head Screws (4)

Bottom View   **Top View**

CCP-79151

3. Install the Plunger Mount on the New Printer Bracket and secure it with two M4 lock nuts.

Printer Bracket

Plunger Mount

M4 Lock Nuts

CCP-79152

4. Install the two Slides on the New Printer Bracket.

   • Align the mounting holes on the Slides with the mounting holes on the New Printer Bracket, and secure them with six M4X6 hex drive screws.

Slides

Printer Bracket

M4X6 Hex
Drive Screws (6)

CCP-79153

📝 **Note**

Ensure that all six mounting holes on the Slides are properly aligned with the six mounting holes on the Printer Bracket and that the two Slides are parallel to each other. This is also to ensure that the Printer Tray slides smoothly on the bracket.

5. Install the New Printer Tray on the Printer Bracket assembly and check if it slides smoothly. If it does not, the Slides are not parallel and therefore need to be adjusted.

Printer Tray

Printer Bracket

Open Position　　　　　　　　**Closed Position**

CCP-79154

6. Install the Receipt Printer on its tray.

CCP-79138

a. Remove the Printer Tray from the Printer Bracket.

b. Mount the Receipt Printer onto the tray and secure with three M3X6 flat head screws.

7. With the Printer Tray in closed position, install the M4 shoulder screw to secure the Printer Assembly to the Printer Bracket.

M4 Shoulder Screw

CCP-79139

Replacing the Power Supply Bracket

1. Disconnect the AC Power Cable from the Power Supply Unit.

2. Unfasten the two cinch straps that secure the Power Supply Unit to the Power Supply Bracket, remove the Power Supply Unit, and then remove the two cinch straps from the bracket.

Power Supply Unit

Cinch Straps

CCP-78794

3. To remove the Old Power Supply Bracket, remove the two M4 flat-head screws that secure the bracket to the kiosk.

Old Power Supply Bracket

CCP-78795

4. Install one of the cinch straps to the New Power Supply Bracket, mount the assembly onto the kiosk, and then secure the assembly using two M4 flat-head screws.

New Power Supply Bracket

Cinch Strap

CCP-79131

5. Mount the Power Supply Unit onto the bracket and secure it using the cinch strap.

Power Supply Unit

Cinch Strap

CCP-79132

6. Reconnect the AC Power Cable to the Power Supply Unit.

7. Install the Grounding Cable for the Power Supply Bracket.

   a. Attach one end of the 6—inch grounding cable to the mounting stud on the Power Supply Bracket and secure the cable using an M4 nut.

   b. Attach the other end of the grounding cable to the grounding stud right beside the Power Supply Unit.

> 📋 **Note**
>
> Route the Power Supply Grounding Cable behind the Power Supply Bracket.

CCP-79133

Attaching the Upgrade Label

Place the Upgrade Label to the left of the Product ID Label.

Upgrade Label

Product ID Label

CCP-79134

Installing the Display Head

1. Position the Display Head assembly in front of the Display Rear Cover, inserting the MSR cable into the access hole of the Motherboard Bracket.

CCP-73181

2. Secure the Display Head assembly to the cover using the following:

   - two nuts on the right-hand side bracket

   - two nuts on the left-hand side bracket

   - two screws on the bottom brackets

CCP-73650

Replacing the Lock-Catch

1. Remove the two nuts that secure the Old Lock-Catch to the Display Rear Cover.

Lock-Catch

CCP-79135

2. Position the New Lock-Catch onto its mounting studs on the Display Rear Cover and re-install the two nuts to secure the New Lock-Catch.

New Lock-Catch

CCP-79137

Installing the New Service Cover

Slide the cover upward and tighten the two thumbscrews.

CCP-79136

Installing the Coupon Sensors

On the Display Head, route the cable under the Imager Bracket and snap the Coupon Sensors near the coupon entry slot.

Snaps

Coupon Sensors

Route Cable
Under Bracket

CCP-73659

Installing the Supervisor Switch

1. Route the Supervisor Cable from the PIN Pad side towards the Imager side, passing the cable under the two Display Head Brackets shown below. Using a cable tie, secure the Supervisor Switch cable to the Display Head.

Secure with a cable tie Supervisor Switch Cable

Display Head Brackets

Supervisor Switch Assembly

CCP-78498

2. Mount and secure the Supervisor Switch assembly to the Display Head using two screws.

> 🛈 **Important**
>
> Make sure that the Supervisor assembly is mounted parallel with its mounting bracket and secured to the top side of the mounting slots.
>
> This position provides the appropriate space for the assembly and properly aligns the Supervisor Switch to its external access hole.

Installing the Ingenico IPP320/350 PIN Pad

1. Position the Mounting Bracket onto the screws, and then tighten the screws.

2. Connect the PIN Pad Cable to the PIN Pad.

3. Mount the PIN Pad to the Mounting Bracket by aligning the slot on the lower back of the PIN Pad with the small tab on the lower portion of the Mounting Bracket.

PIN Pad

Mounting Bracket

CCP-60071

4. Push the PIN Pad until it snaps to the upper portion of the Mounting Bracket.

Installing the Verifone VX805/820 PIN Pad

1. Connect the PIN Pad Cable to the PIN pad and route the cable through the access hole on the PIN Pad cradle.

Access hole

CCP-61344

2. Align the PIN pad mounting holes to the appropriate mounting holes set on the PIN pad cradle as shown below and secure the PIN Pad with two screws.

- Use Set A mounting holes for VX 805 PIN pad.
- Use Set B mounting holes for VX820 PIN pad

Set A

Set B

CCP-61346

3. Mount the PIN Pad and Cradle Assembly on the Display head and secure with two thumbscrews.

PIN Pad Cradle
Thumbscrews

CCP-78706

4. Connect the PIN Pad Cable to the PIN Pad. Cable tie the extra length of the cable as shown below.

PIN Pad Cable

Route PIN Pad cable bundle on top side of bracket and route other cables at bottom side of bracket to avoid damage from sharp edges

Cable Ties

CCP-73740

Installing the Sensormatic Antenna

1. Slide the Sensormatic Antenna under the side bracket. The pigtail cable shoud stick out at the lower right-hand corner of the display head assembly and the coil lump on the right-hand side of the antenna.

Antenna Side Bracket

Antenna

Coil Lump

Antenna Pig Tail Cable

CCP-73649

2. Mount and secure the Antenna Top Bracket using two screws.

Antenna Top Bracket

CCP-73179

3. Install the Imager Shield assembly.

    a. Mount the Imager Shield assembly over the antenna.

> **! Important**
>
> On the front side of the fascia, make sure that there is no gap between the Imager
> Shield and Fascia panel. All sides of the Imager Shield should be flush against the
> Fascia Panel. Adjust the alignment of the Imager Shield accordingly.

Imager Shield

Sensormatic
Antenna

Rear View

Fascia Panel Hole

Imager Shield

Front View - Make sure that all sides of the Imager Shield
is flush against the Fascia panel hole edges.

CCP-73893

b. Secure the Imager Shield assembly using three M3 screws and plastic washers.

> ⚠️ **Caution**
>
> Make sure that the plastic washers are installed with the screws. These washers help protect the Imager from electromagnetic waves given off by the antenna.

Screws

Plastic Washers

CCP-73894

4. Reconnect the Sensormatic Antenna Pigtail cable to the Antenna Cable, and secure the pigtail cable with two cables ties.

Sensormatic
Antenna Cable

Antenna Pigtail
Cable

CCP-79150

Installing the Imager Scanner

1. Mount the Imager assembly over the Imager Shield.

> **ⓘ Important**
>
> On the front side of the fascia, make sure that the bottom side of the Imager Scan Window is flush against the bottom side of the Imager Shield. Adjust the alignment of the Imager accordingly.

Imager Assembly

Rear View

Imager Scan Window

Imager Shield

Front View - Make sure that the bottom side of the Imager Scan Window is flush against the bottom side of the shield.

CCP-73895

2. Secure the Imager assembly to the kiosk using three nuts and then connect the Imager USB cable to the Imager.

Imager
Cable

CCP-73896

Installing the Receipt Printer

1. Mount the printer assembly onto its four mounting studs on the back of the display, and secure it with four M4 nuts.

CCP-79140

2. Using two M4 serrated nuts, connect one end of the 6-inch Ground Cable to the stud on the Printer Bracket and the other end to the stud on the Printer Tray.

Printer Bracket Stud

Printer Tray Stud

CCP-79141

3. Install the 12-inch Ground Cable.

    a. Using an M4 serrated nut, connect one end of the 12-inch Ground Cable to the mounting stud on the Printer Bracket.

CCP-79142

    b. Secure the other end of the 12-inch Ground Cable to the metal stud on the inner right wall of the bucket, right beside the Power Supply Brick.

> **📑 Note**
>
> There may be other ground cables attached to the same metal stud.

Power Supply Brick

CCP-79143

4. Slide the printer assembly upward into service position.

    a. Push the green release rod upward.

Green Release Rod

CCP-79145

    b. Pull the printer assembly backward until fully extended and until the green plunger snaps into place.

> ⚠ **Caution**
>
> Ensure that the green plunger holds the printer assembly in place. Do not release the printer assembly if it is not yet secured by the green plunger.

Green Plunger

CCP-79146

5. Connect the Printer USB Power Cable.

USB Connector   Power Connector

CCP-79144

a. Connect the Printer USB and Power Connector to the printer, route the cable towards the motherboard, and connect it to **Port F** of the motherboard.

b. Use two cable ties to secure the Printer USB and Power Cable to the Printer Bracket and to the Printer Tray.

> 📝 **Note**
>
> There should be enough slack to allow the Printer Tray to slide upward.

c. Bundle the Printer USB Power Cable together with other cables and use two cable ties to secure them to the Imager Bracket.

6. Bundle the following cables together and use two cable ties to secure them to the Imager bracket:

- Imager USB cable

- Printer USB and Power cable

- I/O Daughter Card Power cable

- Motherboard Grounding cable

CCP-79148

7. Slide the printer assembly downward into operating position.

8. While holding the green release rod, pull the green plunger and slowly slide the printer assembly downward until the green release rod latches onto the printer tray.

> ⚠️ **Caution**
>
> Do not abruptly release the printer assembly when pulling out the green plunger. Hold and guide the printer assembly downward until it is fully seated on the printer tray.

Green Plunger

CCP-79147

Green Release Rod

CCP-79145

9. Using a new M4 nut, secure the other end of the Motherboard Grounding cable to the metal stud on the inner left wall of the cabinet.

CCP-78451

Connecting Cables

The NCR SelfServ™ 90 (7709) Kiosk provides labels that show the connectors of the Motherboard and the Adapter. The tables below indicate the type of device or of cable for each connector.

I/O Motherboard

CCP-61343

Connector	Device/Cable
COM 1	Ingenico IPP350 PIN Pad
LAN	LAN Ethernet Cable
24V	Power Supply Cable
Line Out	Dual Speaker
USB A	Sensormatic Controller
USB B	Imaging Scanner
USB C	Verifone VX805, VX820, or MX915 PIN Pad
USB D	Security Scale
USB E	I/O Adapter
USB F	Receipt Printer

I/O Adapter

CCP-61349

Connector	Device/Cable
USB A	Handheld Scanner
Tri Light	Indicator Light
TAB I/F	Checkpoint Signal Cable
Coupon Sensor	Coupon Sensor Cable
I/O Power	P2 of the I/O Cable
I/O USB Hub	P3 of the I/O Cable

Calibrating the Touch Screen

PCap touch displays rarely need to be re-calibrated. However, if the need should arise, use the procedures below.

- "**Proper Touch Screen Methods**" on the next page
- "**Calibrating the Touch Screen**" on page 129

Proper Touch Screen Methods

Before performing the calibration procedure please observe the following guidelines for proper/improper methods of touching the screen.

- Face the monitor directly.
- Perform the calibration in the position (sitting or standing) that you normally expect to use the touch screen.
- Touch the calibration target firmly and precisely with your fingertip. During calibration, be careful to keep your fingernails and other fingers away from the touch screen as you touch each target.
- The hand and calibration finger should be perpendicular (straight up) from the touch-screen during touch down and removal of the calibration finger. Keep the other fingers closed and away from the touch-screen.

32833

- Do NOT touch the bezel with your other fingers.

32835

Calibrating the Touch Screen

1. Run the calibration program by selecting **Start** >> **Programs** >> **UPDD** >> **Calibrate**

2. Touch the center of the cross-hair target. When the target is touched, it switches to a green check mark.

3. Repeat the procedure for each target as they appear.

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