

# 2800 Series POS System

## User Guide

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Congratulations on your purchase of UTC RETAIL's innovative 2800 Series POS System! This fully integrated point-of-sale hardware solution, with its modular design flexibility, is ideal for specialty and general retail markets. The 2800 Series POS System conserves counter space and is easy to upgrade and service, due to quick access to internal components.

This guide is designed to acquaint you with the features and functionality of UTC RETAIL's 2800 Series POS System.

**All access to internal components is restricted to Authorized Service Personnel only.**

**The key for this device should be in the possession of Qualified Service Personnel Only and used for access by an Authorized and Qualified Service Person.**



### **WARNING: CMOS Battery Damage**

Replace your system's CMOS RAM battery only with the identical CR-2032 3V Lithium-Ion coin cell (or equivalent) battery type to avoid risk of personal injury or physical damage to your equipment. Always dispose of used batteries according to the manufacturer's instructions, or as required by the local ordinance (where applicable). The damage due to not following this warning will void your motherboard's manufacturer warranty.

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**This User Guide was prepared by UTC RETAIL for use by Qualified Service Personnel only.** All attempts have been made to ensure that the information presented in this manual is correct. No liability, expressed or implied, will be assumed by UTC RETAIL, its dealers, or affiliates, for damage resulting from the use of this information.

If a unit needs to be shipped to UTC RETAIL for repairs, please return it in the original packaging material and shipping container. If you purchased the 2800 Series POS System through a dealer, and the dealer is unable to answer your questions, please call UTC RETAIL Technical Support at 1.800.349.0546.

This equipment has been tested and found to comply with the limits for a Class "A" digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his/her own expense.

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# Product Information

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## **2800 Series POS System Components**

You will find the following components inside the 2800 Series POS System Box:

- 2800 Series POS System unit
- Cables
- Side, front and top plastic cover panels
- A/C power cord

**Note:** *The keyboard, customer display, printer and LCD monitor ship in separate boxes.*

## **Features**

- Logic Module
- Power Supply designed to support all system components
- LCD Monitor
- Keyboard: Custom (or standard) POS, or standard QWERTY
- PD1200 Customer Display
- Printer

## **Peripheral Support**

- The 2800 Series POS System keyboard options are the UTC RETAIL Model M700 or the UTC RETAIL standard PC type keyboard. The M700 keyboard is designed for POS environments; it has a built-in 3-track reader and key switch, and comes in QWERTY layouts.
- The 2800 Series POS System is designed to coordinate with the UTC RETAIL PD1200 Customer Display.
- The 2800 Series POS System supports many different printers, such as the Epson H6000, TMT88, or TMJ7100.
- The 2800 Series POS System supports only the UTC RETAIL 15" or 17" flat panel LCD display. The display is available with a resistive touch screen option.

## Logic Module Specifications

|                       | 2870  | 2850   |
|-----------------------|---|--|
| CPU                   | Pentium® 4 3.4 GHz<br>or<br>Celeron® D 2.93 GHz | Pentium® 4 2.0 GHz<br>or<br>Celeron® 2.0 GHz |
| Bus speed             | 533 MHz / 800 MHz                               | 400 MHz                                      |
| Chip set              | Intel® 915                                      | Intel® 845                                   |
| Memory                | 512 MB (up to 2 GB)                             | 256 MB (up to 2 GB)                          |
| Com ports             | Up to 6   | Up to 6                                      |
| USB 2.0/1.1           | Up to 8   | Up to 6                                      |
| Powered USB           | Up to 2   | Up to 2                                      |
| Keyboard port         | Yes   | Yes  |
| Mouse port            | Yes   | Yes  |
| 10/100 Lan            | Yes   | Yes  |
| Audio                 | Yes   | Yes  |
| MIDI                  | No  | Yes  |
| SVGA                  | Yes   | Yes  |
| PCI /<br>PCI Express® | 3/1   | 3/0  |

## ***Bulkhead Expansion Port Options***

The bulkhead expansion ports include:

- All the power connections for the peripherals
- The communication ports COM, USB, or Powered USB

**Note:** *Other configurations may be available from the factory.*

### **USB Port Options**

The 2800 Series POS System has two standard USB ports on the motherboard, and up to three additional USB ports located on the bulkhead expansion board. An additional USB port is located behind the front access door.

Power to these ports is limited to 500mA.



*Figure 1: USB Ports*

### **USB PlusPower Port Options**

When equipped with the USB PlusPower bulkhead expansion, the 2800 Series POS System supports four USB PlusPower ports. The standard configuration is 1 +5 Volts Direct Current (VDC), 2 +12 VDC and 1 +24 VDC. Each port is limited to 2 Amps maximum current, and has an automatic fuse that can be reset.

## COM Port Options

The additional RS232 ports that are found on the bulkhead expansion supply power to pin 9 of the DB9 connector. The power options are +5 VDC or +12 VDC (the factory default is +5 VDC). The current is limited to 700mA for each port.

**Note:** COM1 does not support power. However, the power can be changed on each individual port via jumper selection.

### COM2

There is a power selection jumper located on the bulkhead PCB. To change the power selection on COM2:

- Jump X to X to select +5VDC on pin 9 of the DB9.
- Jump X to X to select +12VDC on pin 9 of the DB9.

### COM3

There is a power selection jumper located on the appropriate PCI card. The table below summarizes the RS232 DB9 pin definitions:

| PIN NO. | 1  | 2  | 3  | 4   | 5   | 6   | 7   | 8   | 9                   |
|---------|----|----|----|-----|-----|-----|-----|-----|---------------------|
| Signal  | CD | RX | TX | DTR | GND | DSR | RTS | CTS | RI or 5V/12V output |

- JP1: Select RI/VOLTAGE output for DB9 pin 9 of Port 1.
- JP2: Select RI/VOLTAGE output for DB9 pin 9 of Port 2.
- JP3: Select 5V/12V when the setting is VOLTAGE output.

### COM Port Jumper Settings (COM3 through COM6)

| OPTION | 0V            | 5V        | 12V       |
|--------|---------------|-----------|-----------|
| JP1    | No connection | 1-2 short | 2-3 short |
| JP2    | No connection | 1-2 short | 2-3 short |

## Peripheral Power Port Options

The 2800 Series POS system's bulkhead extension has two 4-pin peripheral power connections. These 4-pin ports have three voltages available: +5 VDC, +12 VDC, or +24 VDC. The current is limited to 2 Amps, and has a fuse that can be reset. These ports can be used for the printer, customer display, LCD monitor, and other devices that meet the voltage and current requirements. The appropriate peripheral power cable(s) have been shipped with the system.

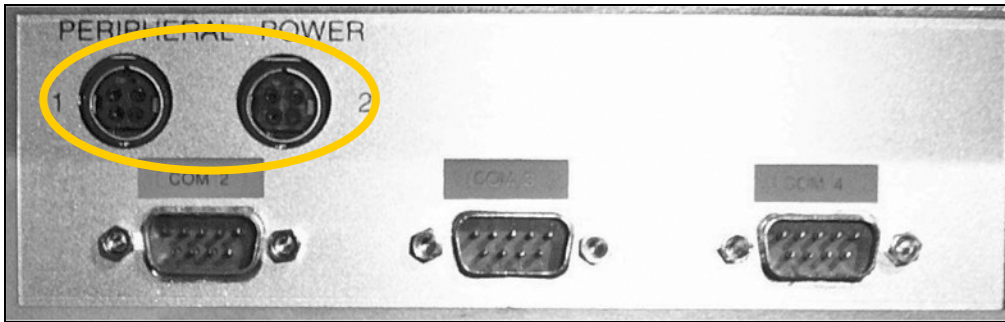


Figure 2: Peripheral Power Ports (view does not represent all expansion options)

## Typical Power Connectivity

In a typical system configuration, peripherals are provided power through UTC RETAIL standard cables and standard power ports on the 2800 Series POS system.

- The 15" LCD monitor obtains power via a 4-pin cable that connects to the barrel jack.
- The 17" LCD monitor obtains power via an AC patch cord.
- The PD1200 customer display obtains power via pin 9 on the DB9 connector.
- The printer obtains power via one of two methods, depending upon specific configuration. Either power is supplied via a 4-pin to 3-pin DC cable (UTC RETAIL part number 11029513), or an AC patch cord (UTC part number 11029317). The type of printer determines the type of cable.



## ***Peripheral Options***

### **LCD Screen Options**

- 15" LCD
- 17" LCD
- 15" LCD resistive touch (serial or USB)
- 17" LCD resistive touch (serial or USB)

### **Printer Options**

- H6000 serial
- H6000 USB
- TMT88 serial
- TMT88 parallel
- TMJ7100 serial
- TMJ7100 USB

### **Keyboard Options**

- UTC RETAIL M700 QWERTY
- UTC RETAIL Standard PC keyboard

**Note:** M700 keyboards come with a 3-track MSR, key switch and LEDs.

### **PD 1200 Customer Display Options**

- Serial DB9 female power on pin 9
- USB

## ***Power Requirements***

The 2800 Series POS System has one power cord to the AC outlet. A dedicated, clean power source is recommended.

- Voltage: 110 VAC  $\pm$  10%
- Current: 5 Amps maximum, with all peripherals connected

## ***Fuse Replacement***

The AC power inlet has a built-in 5x20mm 5 Amp fuse. We recommend that you replace it with the same type and rating.

## ***I/O Connections***

The 2800 Series POS System ports are divided into three sections:

- Standard ports on the motherboard
- PCI expansion slots
- Bulkhead port expansion section
- The ports located on the motherboard are defined as follows:
  - PS2 Keyboard
  - PS2 Mouse
  - DB9 serial COM1
  - Audio
  - Parallel
  - SVGA
  - 10/100 LAN
  - USB

## ***PCI Slot Support Options***

The PCI slots support standard low-profile PCI cards. Depending on the UTC RETAIL product purchased, expansion cards may already be installed in these slots. Some models may include a standard low-profile PCI Express® slot.

## 2800 Series POS System Installation

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Please refer to the 2800 Series POS System Installation Guide, which may be downloaded from the UTC RETAIL website at [www.utcretail.com](http://www.utcretail.com).

### System Access Panels

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The 2800 Series POS System allows two levels of access, and various panels that can be removed to ease cable routings. The first level allows access to the hard drive, floppy drive, and CD-ROM drive. The second level allows access to the logic module and cables.

#### ***First Level Access***

1. Unlock front access door with access key.
2. Open front access door.



*Figure 3: Front Door Access*

## Second Level Access

3. Loosen the front bezel access captive screw.

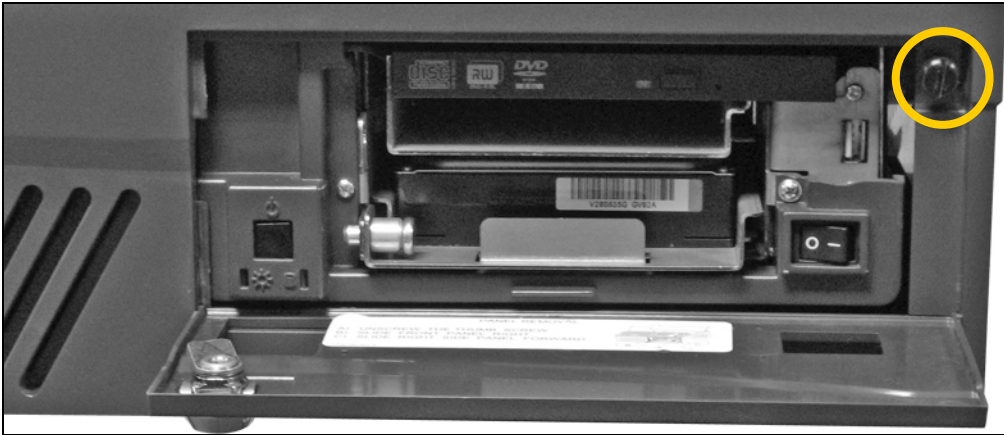


Figure 4: Front Bezel Access Captive Screw

**Note:** The captive screw does not come all the way out of the bezel.

4. Slide the front bezel to the right.
5. Pull the bezel toward you to remove.

## Cable Channel Access

6. Slide the right side panel toward the front of the unit.
7. Pull it toward the right of the unit.

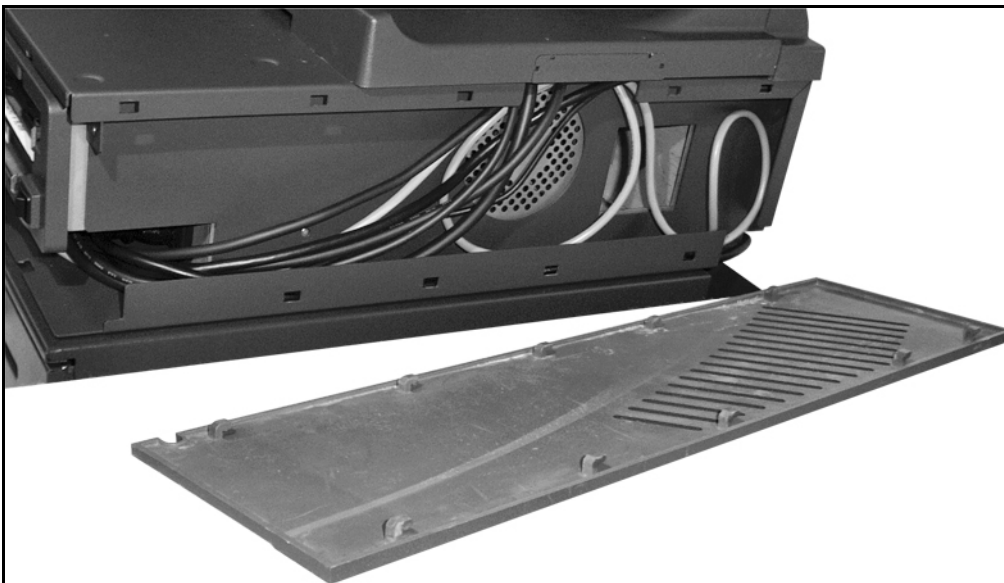


Figure 5: Right Side Panel Removal

## Peripheral Cabling Access

8. Loosen the captive screw(s) on the top back of the 2800 Series POS System.
9. Remove the printer tray and/or monitor tray as required.

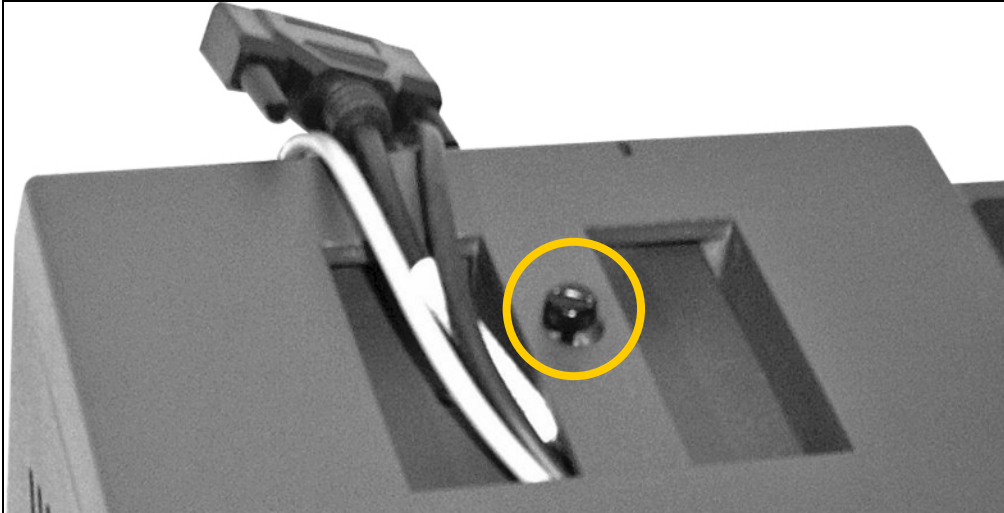


Figure 6: Printer Tray Captive Screw, top back of 2800 Series POS System

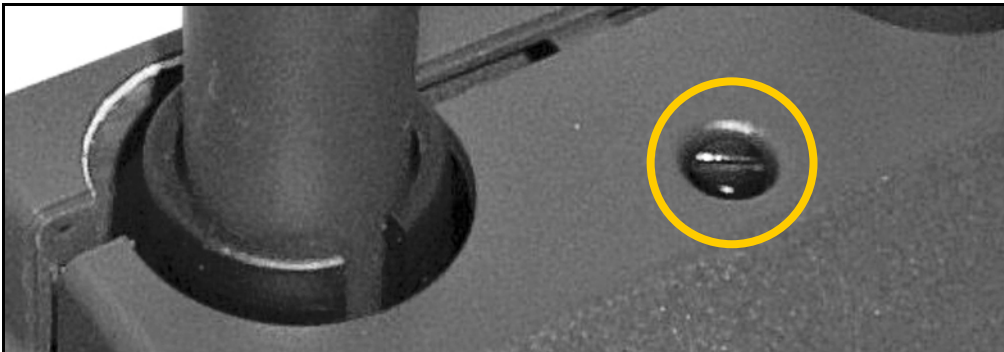


Figure 7: Monitor Tray Captive Screw, top back of 2800 Series POS System

## Logic Module Removal

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The 2800 Series POS System logic module can easily be removed for an upgrade or for servicing.

To remove the logic module:

1. Remove the required panels to get to the second access level (refer to steps 1-7 in the System Access Panels section of this document).
2. Make sure the unit is unplugged from the AC outlet.
3. Disconnect all I/O cables and power cords from the logic module.
4. Remove the (2) wing nuts (shipping locks) from the right side of the cable channel.
5. Carefully slide the logic module out of the chassis by pulling the logic unit toward the front of the chassis.
6. Upgrade or service the logic module as required.
7. Reinstall the logic unit by reversing the steps above.

## Hard Drive Removal

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The 2800 Series POS System is equipped with one or two removable hard drives, depending on configuration.

**Note:** Prior to installing a replacement hard drive in this unit, ensure that the proper jumper settings have been made. These must be set to MASTER drive.

To remove a hard drive:

1. Shut off all power to the system by unplugging the power cord from the AC outlet.
2. Unlock and open the front access door.

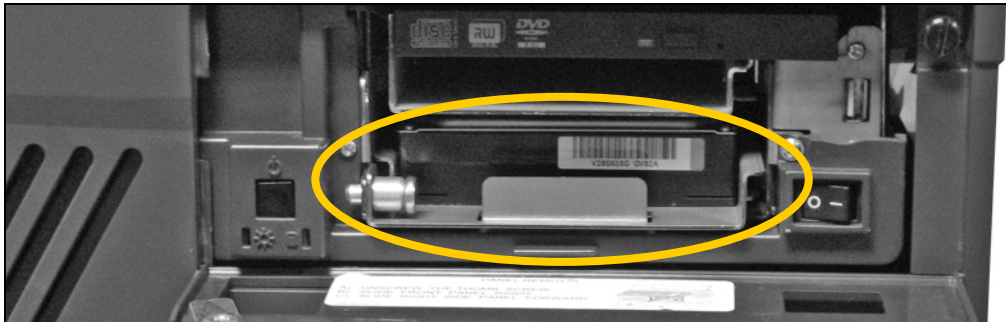


Figure 8: Hard Drive Access (one hard drive configuration)

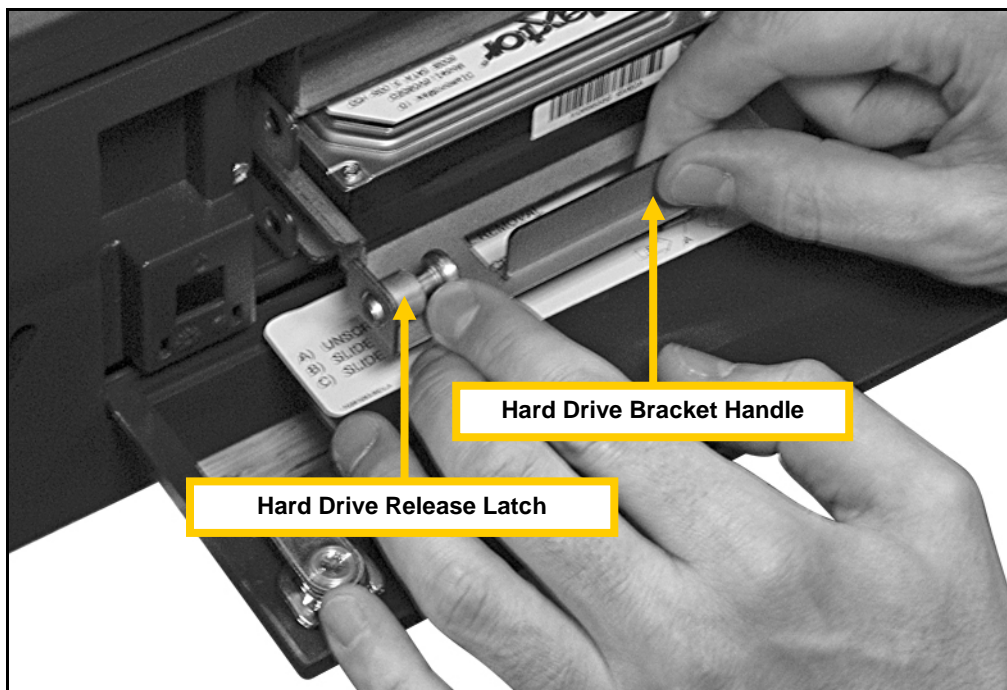


Figure 9: Access to the Hard Drive, front of 2800 Series POS System (one hard drive configuration)

3. Move the spring-loaded hard drive release latch to the right, then pull the hard drive bracket handle to remove the hard drive from the unit.

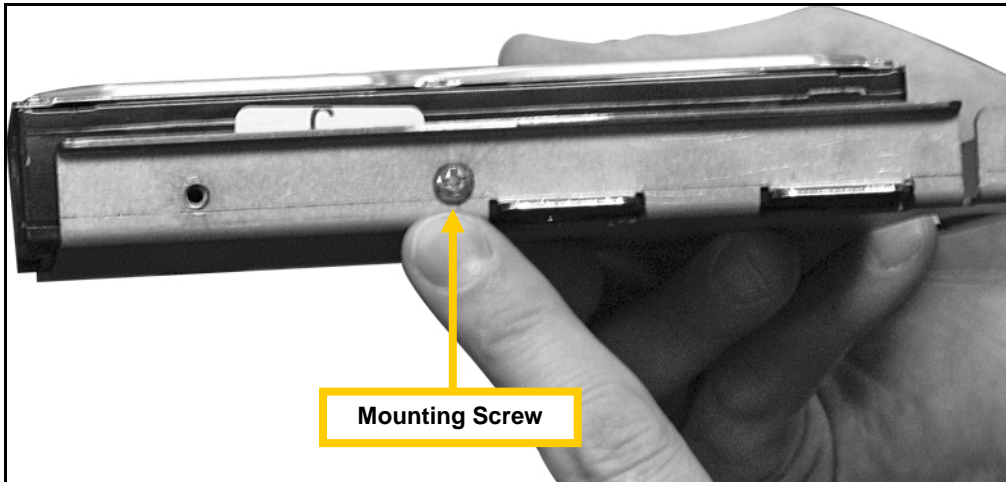


Figure 10: Hard Drive Mounting Screws.

4. If you are replacing the hard drive and the new drive does not come with a bracket, remove the old hard drive and use four mounting screws to secure the new hard drive on the old bracket.
5. Slide the hard drive and bracket back into place, pushing until the hard drive latch is securely engaged.

## Keyboard Removal

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If the 2800 Series POS system is equipped with the UTC RETAIL Model 700 Series keyboard, there is a 6-pin mini-DIN connection located on the back side of the keyboard. In order to unplug or replace the keyboard, lift the keyboard and turn it over to gain access to the keyboard port(s).

**Note:** The Model 700 Series POS Keyboard also has an RS232 scanner input port. If a scanner is used, a cable should be connected from the scanner to the new keyboard.

## Cable Routing

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All cable routing is described in the 2800 Series POS System Installation Guide, which may be downloaded from the UTC RETAIL website at [www.utcretail.com](http://www.utcretail.com).



## Glossary

| Term                     | Definition  |
|--------------------------|---|
| Logic module             | The logic module consists of the system electronics, including the PC motherboard, system memory, hard drive, and media drives. The logic module is accessed from the front of the unit.  |
| Bulkhead expansion ports | The bulkhead expansion ports include peripheral and power connections. They are located behind the front panel cover.   |
| Peripheral power ports   | Peripheral power ports can be used for the printer, LCD monitor, or other devices that meet the voltage and current requirements. They are located behind the front panel cover on the bulkhead expansion.  |
| COM port options         | These RS232 ports can be used to supply power to pin 9 of the DB9 connector. The power options are +5 VDC or +12 VDC (the factory default is +5 VDC). The current is limited to 700mA for each port.<br>The COM ports are located behind the front panel cover on the bulkhead expansion. |
| I/O connections          | The ports are divided into three sections: <ul style="list-style-type: none"> <li>- Standard ports on the motherboard</li> <li>- PCI expansion slots</li> <li>- Bulkhead port expansion section</li> </ul>  |
| PCI slot support options | The PCI slots support standard low-profile PCI cards. Depending on the product purchased, expansion cards may already be installed in these slots. Some models also include one low-profile PCI Express® slot.  |

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