

Installing the USB Printer Driver



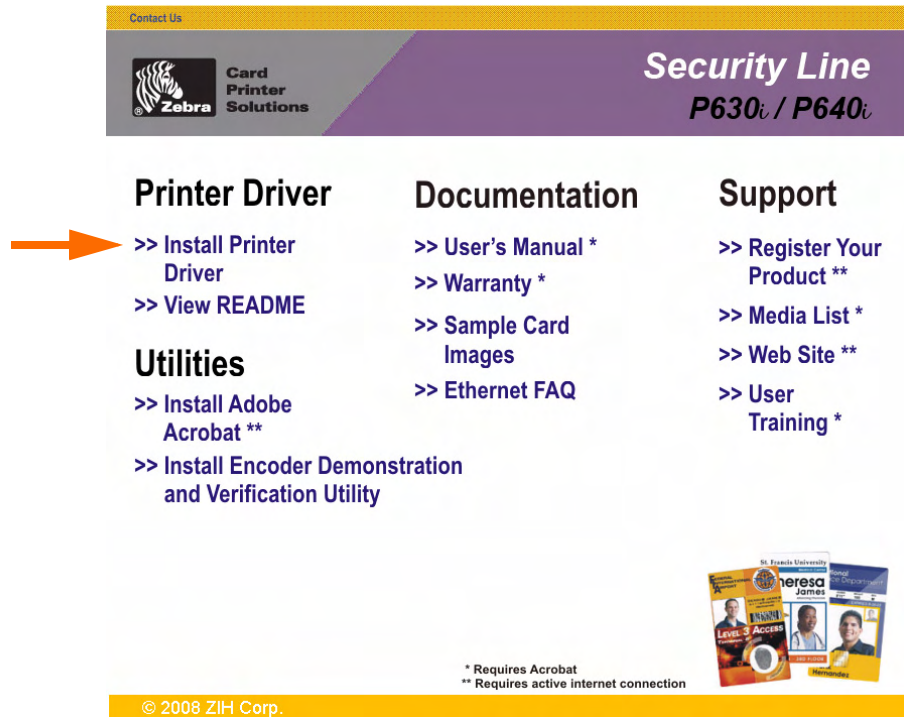
Note • To install the Ethernet driver, see [Page 40](#).

- Step 1.** If not already done, connect power to the printer (see [Page 30](#)), and connect the USB port on the rear of the printer to the computer's USB port (see [Page 31](#)).
- Step 2.** Turn the Printer on, and let it initialize until the READY LED on the front panel is lit.
- Step 3.** Insert the **User Documentation, Drivers, and Training CD** into the CD drive of the host computer. The **Select Language** window will open.



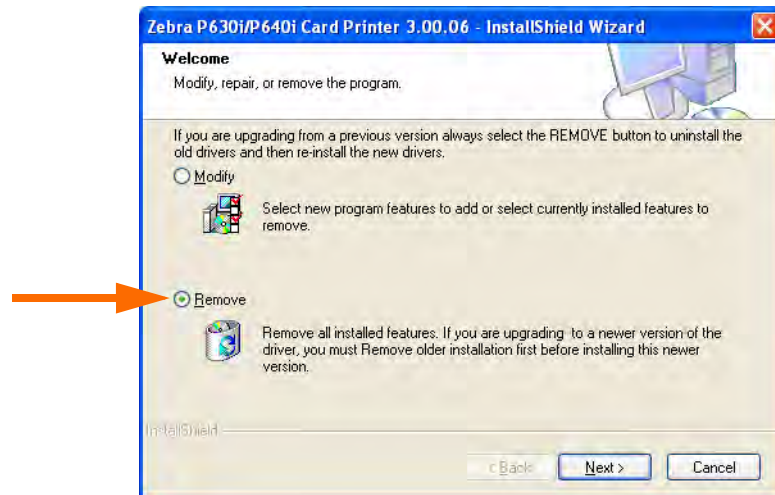
- Step 4.** From the **Select Language** window, choose the appropriate language for your system.

Step 5. The **Main Menu** will open in the selected language (English shown below).



Step 6. From the **Main Menu**, click **Install Printer Driver**.

Step 7. If an older P630i or P640i Printer and Driver is installed on your computer, the following window will be displayed; otherwise go to [Step 8](#).

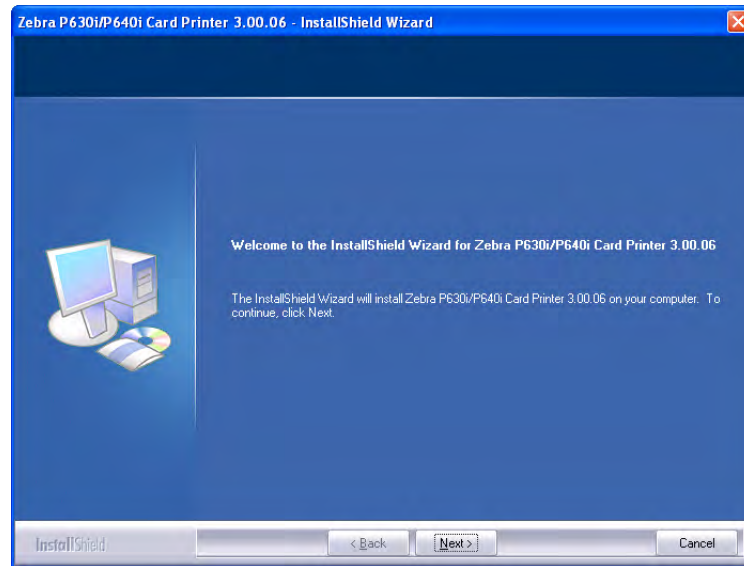


Follow the screen prompts. At the end of the uninstall process, you will be asked to re-boot your computer. Re-boot your computer, and start over with [Step 1](#). If the computer enters the Found New Hardware Wizard at this time, cancel this Wizard.

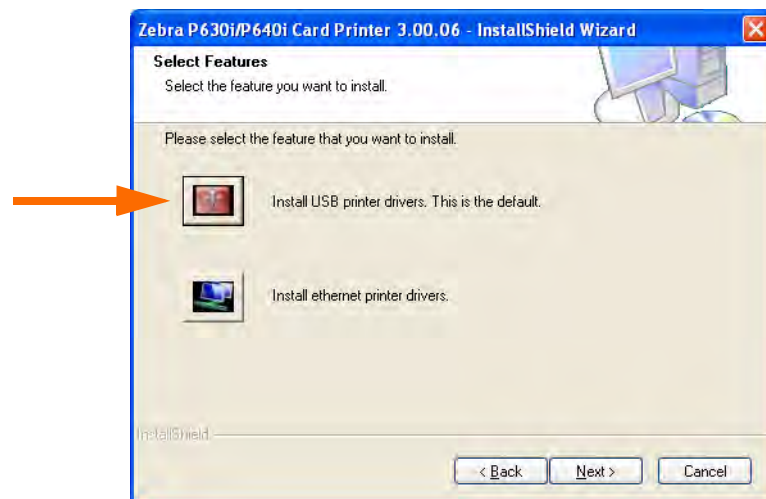
Printer Driver Installation

Installing the USB Printer Driver

Step 8. The **InstallShield Wizard** window will open. To proceed with the installation, click the **Next** button.



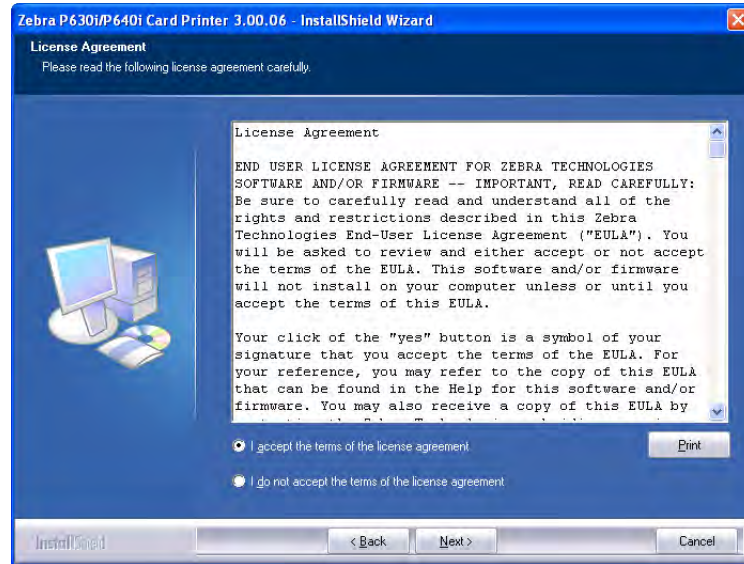
Step 9. Select **Install USB printer drivers**, and click the **Next** button.



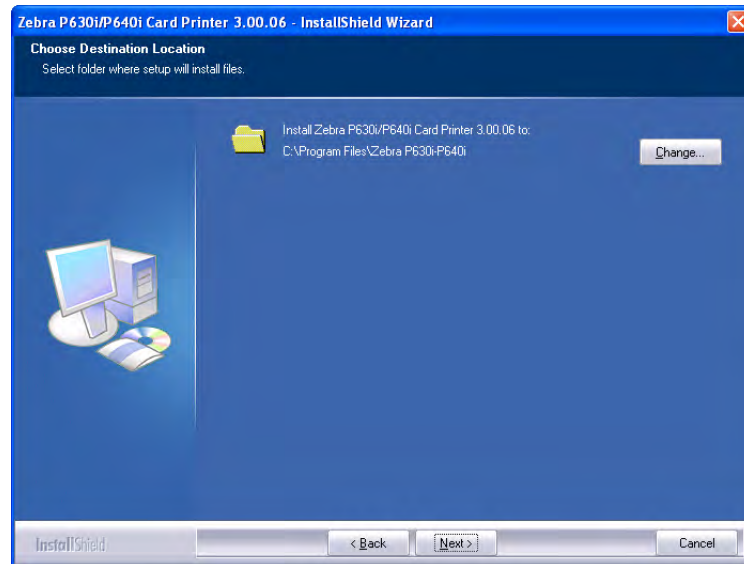
Step 10. At this point, **turn off your printer**; and then click the **OK** button.



Step 11. This will bring up the End User License Agreement. To proceed with the installation, select the *I accept the terms of the license agreement* option, and then click the **Next** button.



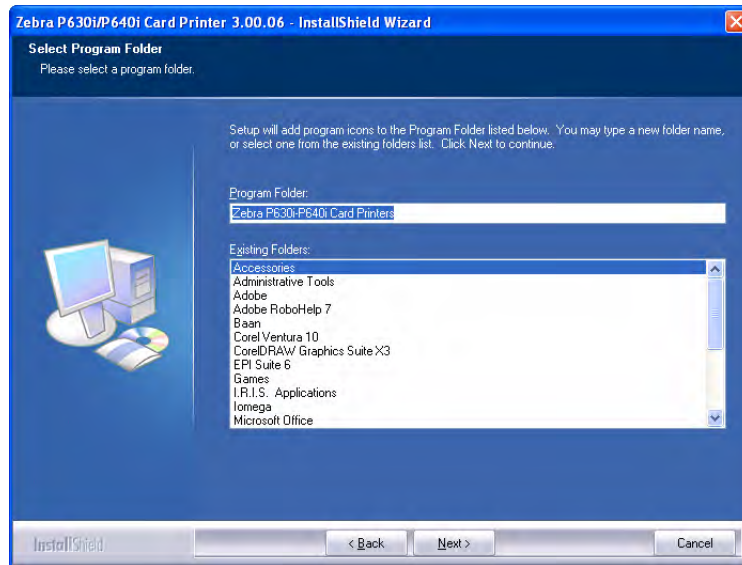
Step 12. This will bring up the **Choose Destination Location** window. If necessary, make any changes; and then click the **Next** button.



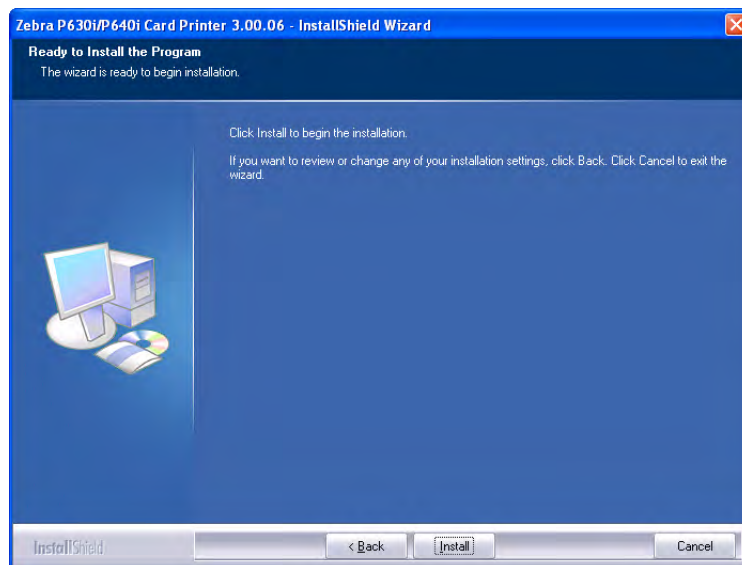
Printer Driver Installation

Installing the USB Printer Driver

Step 13. This will bring up the **Select Program Folder** window. Select the desired Program Folder; and then click the **Next** button.

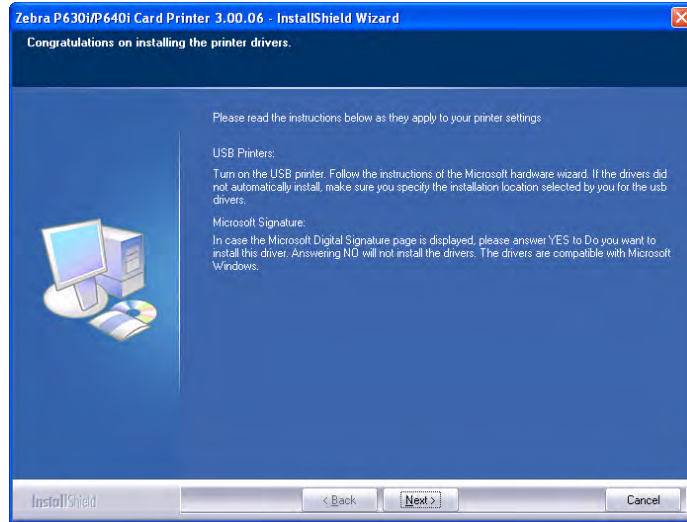


Step 14. This will bring up the **Ready to Install the Program** window. To continue, click the **Install** button.

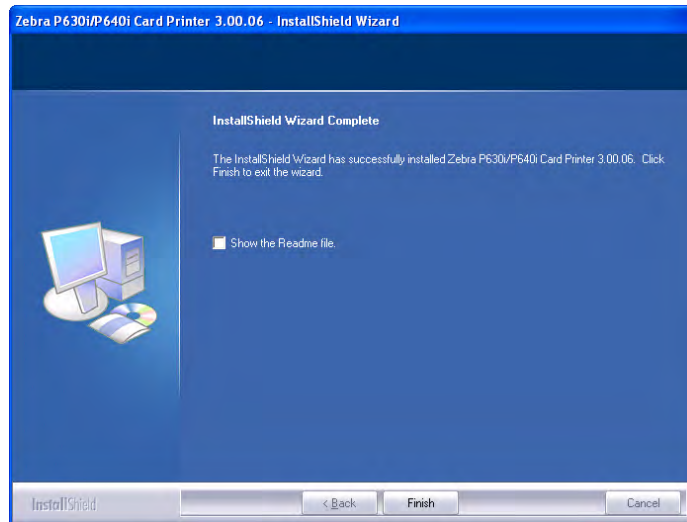


Step 15. Observe the **Setup Status** window.

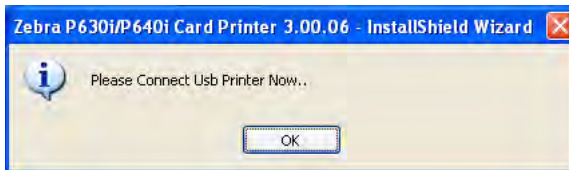
Step 16. When the **Congratulations** window appears, click the **Next** button.



Step 17. When the InstallShield Wizard Complete window appears, click the **Finish** button.



Step 18. At this point, **turn on your printer**; and then click the **OK** button.



Step 19. This completes USB driver installation. To use the P630i or P640i Printer, you would select it just like you would any other printer connected to a Windows system.

Installing the Ethernet Printer Driver



Note • To install the USB driver, see [Page 34](#).



Important • The Ethernet Network must be configured correctly, with the Printer and the host computer on the same subnet mask. If you are not sure how to verify this or change the configuration, consult someone knowledgeable on Ethernet Networks.

Important • A valid **static** IP address must be assigned to the printer.

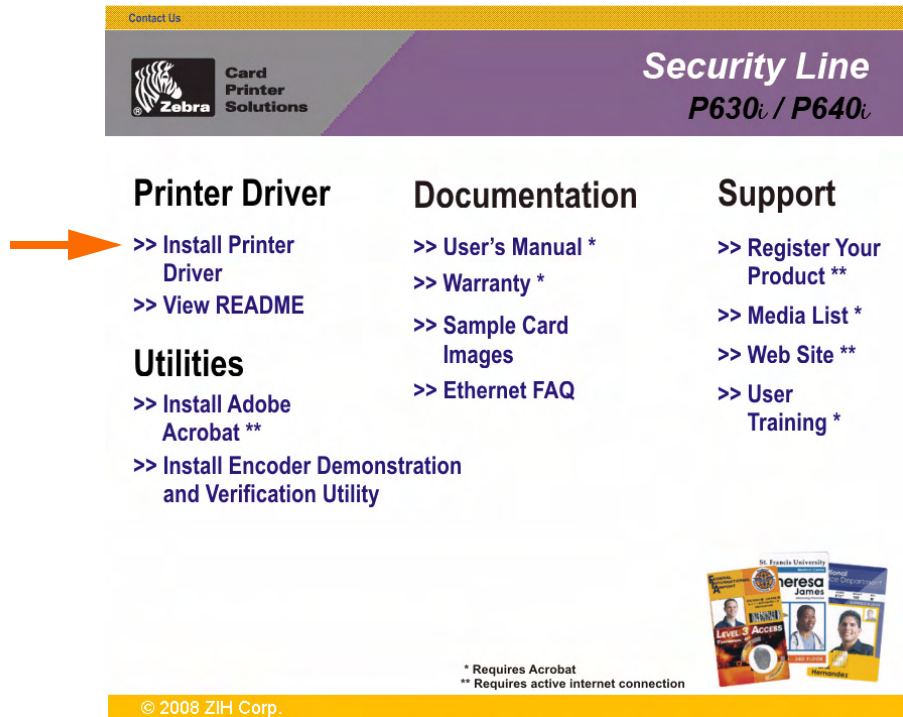
Important • See [Section 7](#) for system-related troubleshooting issues.

- Step 1.** If not already done, connect power to the printer (see [Page 30](#)), and connect the Ethernet Port on the rear of the printer to an Ethernet Network Port (see [Page 31](#)).
- Step 2.** Turn the Printer on, and let it initialize until the READY LED on the front panel is lit.
- Step 3.** Insert the **User Documentation, Drivers, and Training CD** into the CD drive of the host computer. The **Select Language** window will open.



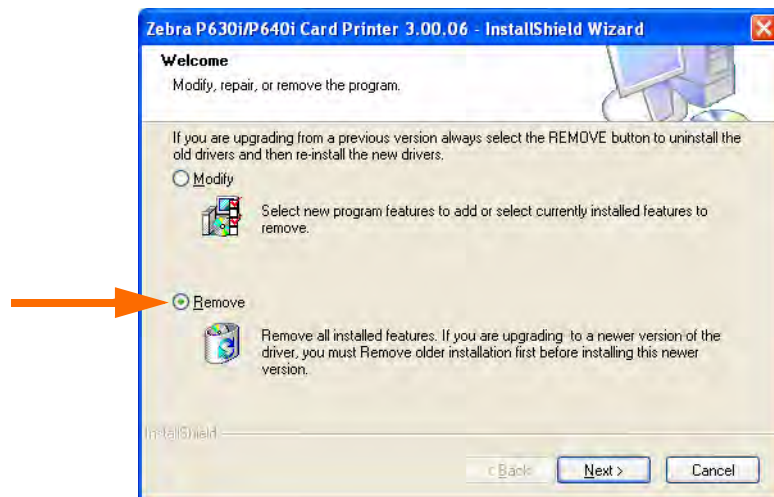
- Step 4.** From the **Select Language** window, choose the appropriate language for your system.

Step 5. The **Main Menu** will open in the selected language (English shown below).



Step 6. From the **Main Menu**, click **Install Printer Driver**.

Step 7. If an older P630i or P640i Printer and Driver is installed on your computer, the following window will be displayed; otherwise go to [Step 8](#).

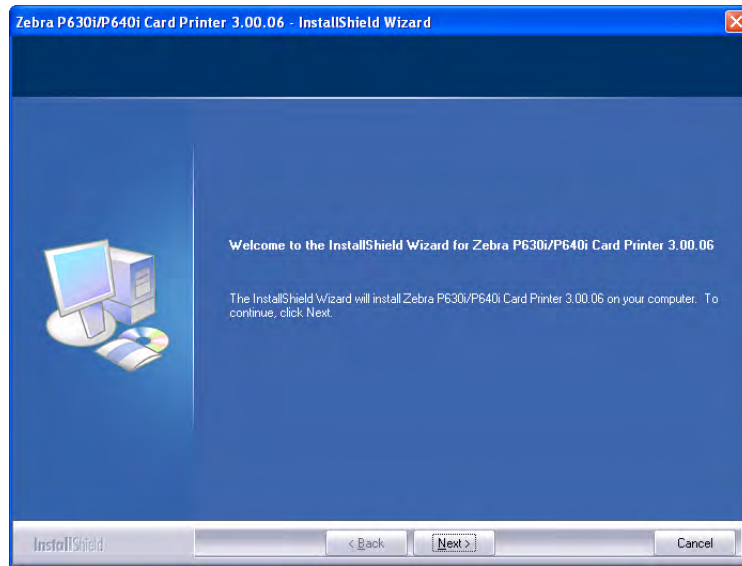


Follow the screen prompts. At the end of the uninstall process, you will be asked to re-boot your computer. Re-boot your computer, and start over with [Step 1](#). If the computer enters the Found New Hardware Wizard at this time, cancel this Wizard.

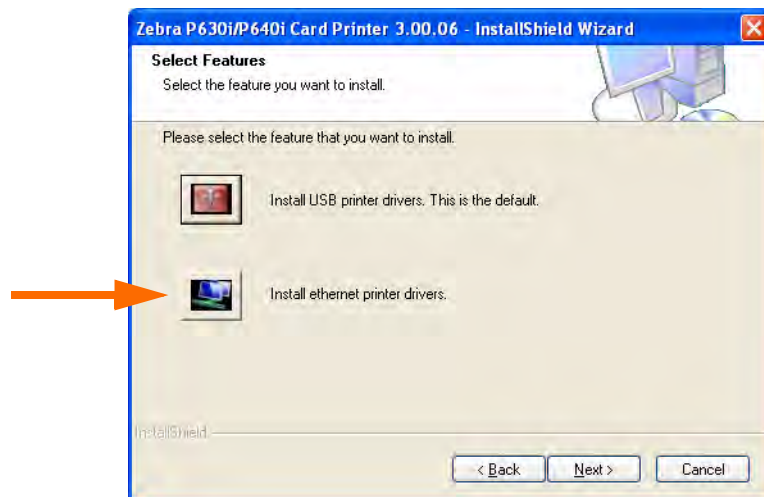
Printer Driver Installation

Installing the Ethernet Printer Driver

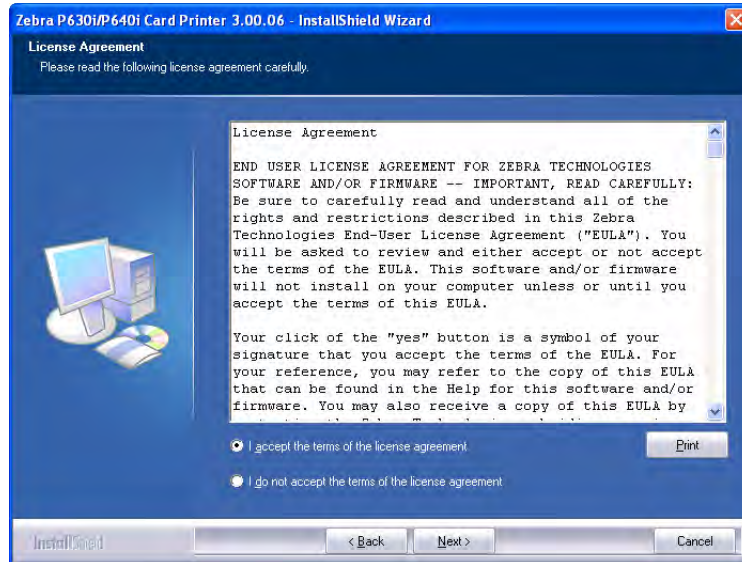
Step 8. The **InstallShield Wizard** window will open. To proceed with the installation, click the **Next** button.



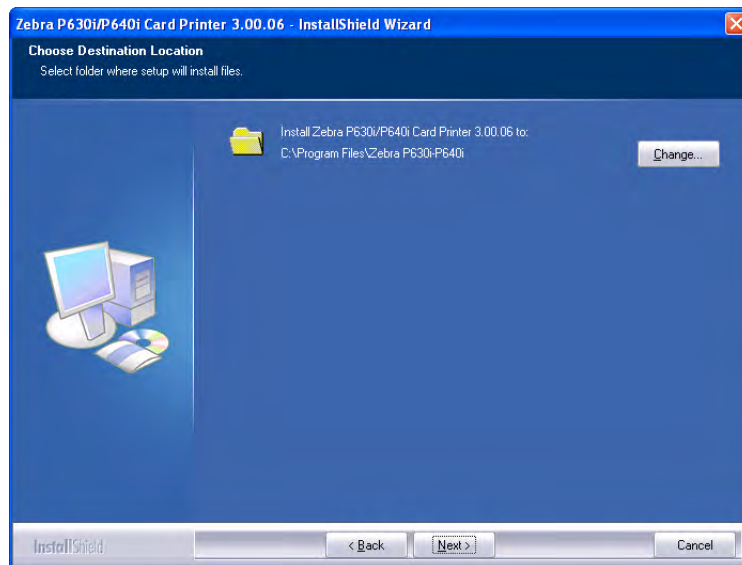
Step 9. Select **Install ethernet printer drivers**, and click the **Next** button.



Step 10. This will bring up the End User License Agreement. To proceed with the installation, select the *I accept the terms of the license agreement* option, and then click the **Next** button.



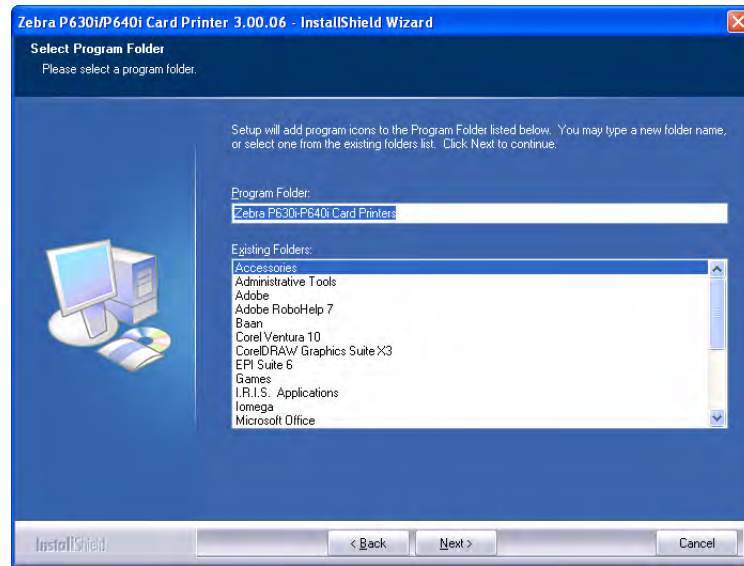
Step 11. This will bring up the **Choose Destination Location** window. If necessary, make any changes; and then click the **Next** button.



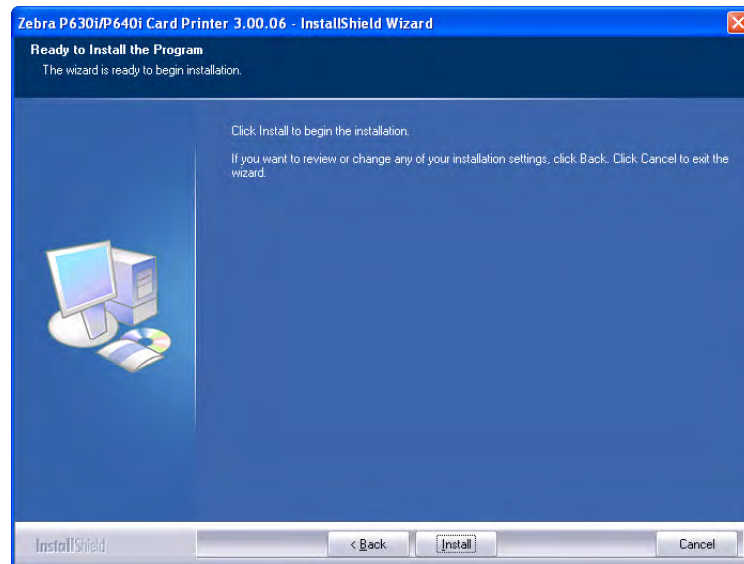
Printer Driver Installation

Installing the Ethernet Printer Driver

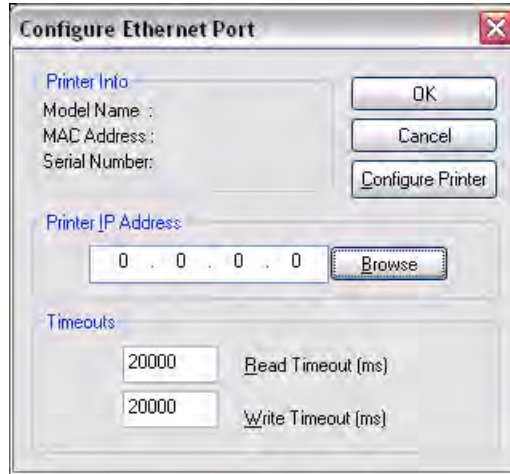
Step 12. This will bring up the **Select Program Folder** window. Select the desired Program Folder; and then click the **Next** button.



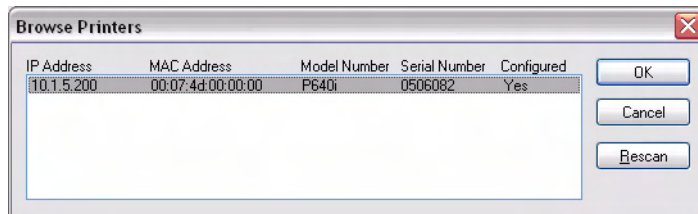
Step 13. This will bring up the **Ready to Install the Program** window. To continue, click the **Install** button.



Step 14. This brings up the **Configure Ethernet Port** window. Click the **Browse** button.



Step 15. Any Zebra printers will be located. Select (highlight) the desired printer (for this procedure it is a P640i, but the steps would be the same for a P630i) and click the **OK** button.



Note • If the Printer is not found, check to make sure the Printer is powered on; and the Ethernet connector is engaged.

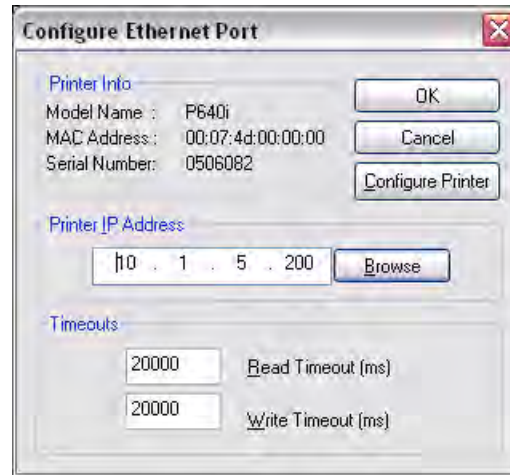


Note • Also, the Ethernet Network must be configured correctly, with the Printer and the host computer on the same subnet mask. If you are not sure how to verify this or change the configuration, consult someone knowledgeable on Ethernet Networks.

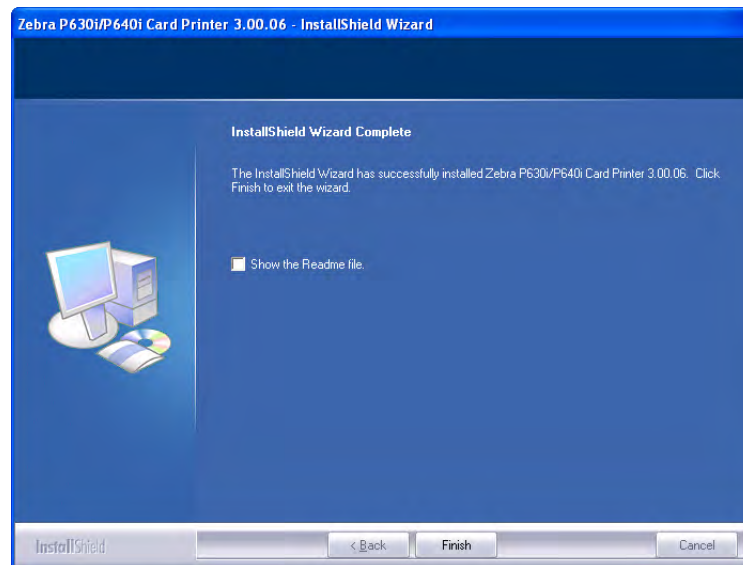
Printer Driver Installation

Installing the Ethernet Printer Driver

Step 16. The **Configure Ethernet Port** window will reappear, but now the information for the P640i printer selected in [Step 15](#) will be displayed. Then click **OK**.



Step 17. When the **InstallShield Wizard Complete** window appears, click the **Finish** button.



Step 18. This completes Ethernet driver installation. To use the P630i or P640i Printer, you would select it just like you would any other printer connected to a Windows system.



Settings and Adjustments

Introduction

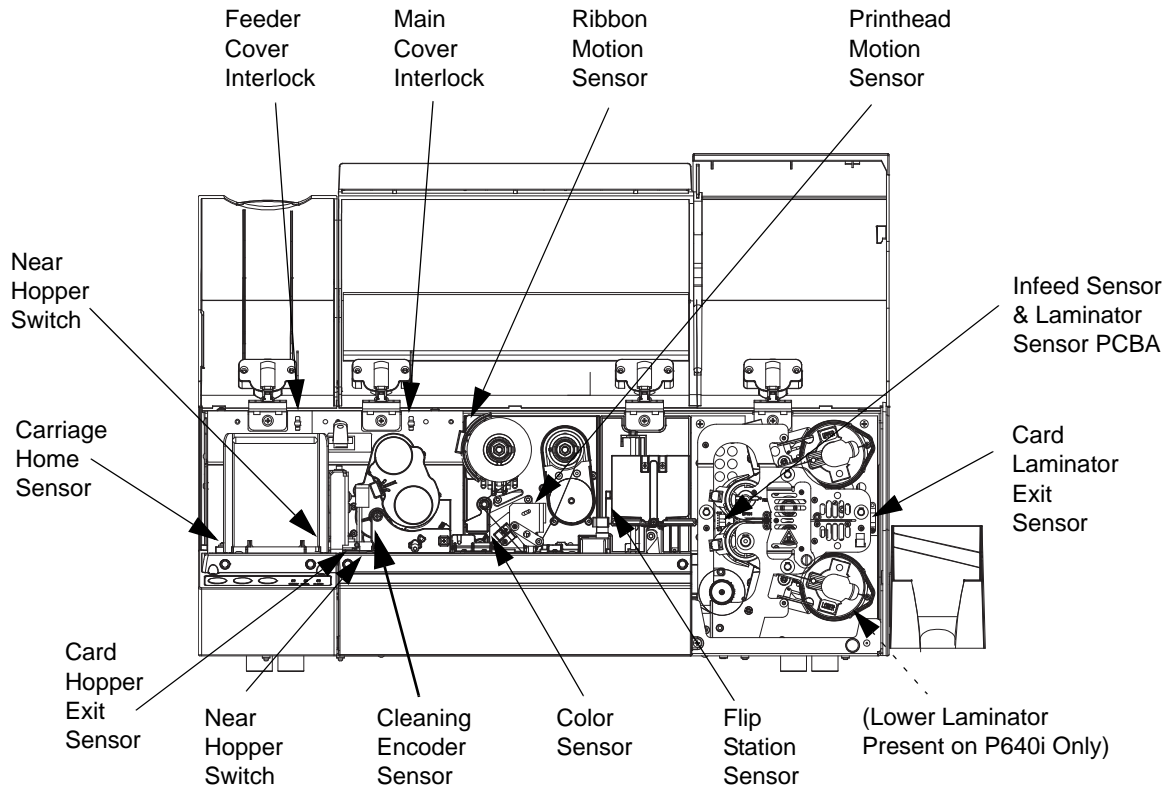
This section describes settings and adjustments that can be made to your printer. This consists of four major topics:

Sensors and Interlock Switches	48
Printer Properties	50
Printing Preferences	62
Adjustments	69

Sensors and Interlock Switches

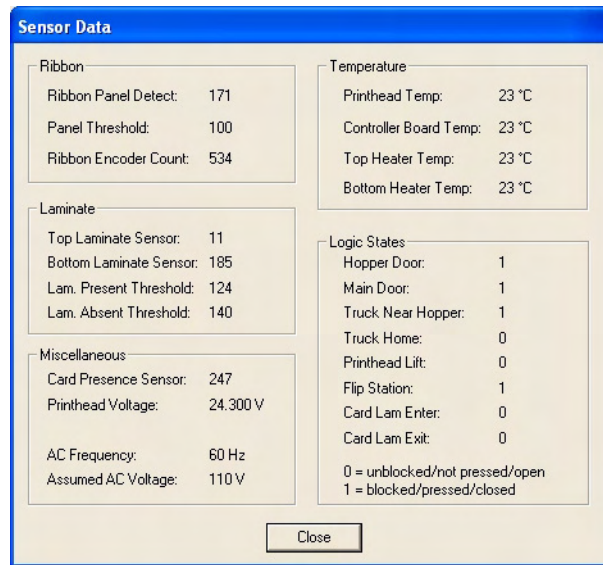
These are of several different types of sensors and interlock switches, but they have one thing in common - they tell the printer's control logic what's happening and where, enabling it to continue with the process or, if a malfunction occurs, to light the appropriate indicator light and report a specific error condition on the host computer screen.

The figure below shows the *relative* locations of the sensors that track card and ribbon position and movement.



Access Printer Sensor Data

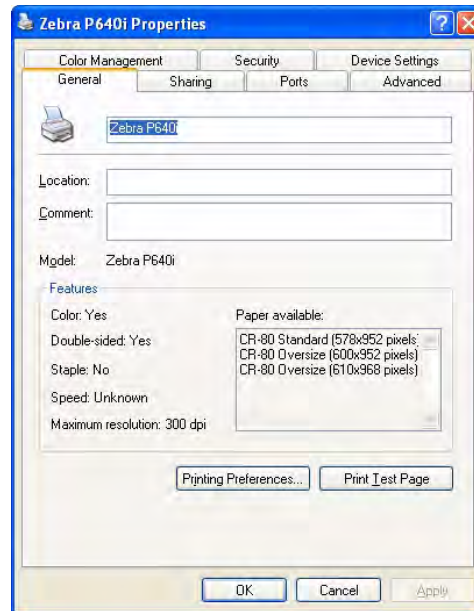
To access Sensor Data, select *Start > Printers (or Printers and Faxes)*. Right click *Zebra P630i* or *Zebra P640i*, then select *Properties > Device Settings > Control > Advanced Utilities > Show Sensor Data*.



- **Ribbon Panel Detect** - The current reading of the Color Sensor.
- **Panel Threshold** - The current value of the detection threshold for the color ribbon. Above this value is termed “black,” below this value is termed “not black.”
- **Laminate Sensors** - Reflective sensor that detect the presence of laminate on the transfer rollers: below 124 = laminate present, above 140 = laminate absent.
- **Card Presence Sensor** - The reflective sensor to the right of the card hopper: High = no card, Low = card present
- **Printhead Voltage** - Should be about 24V.
- **AC Frequency** - 50 or 60 Hz.
- **Assumed AC Voltage** - 110V assumed for 60 Hz.
- **Printhead Temperature** - Temperature ceiling 70°C (above that temperature, printing is stopped until the head cools).
- **Controller Board Temperature** - Should be about 5° above ambient.
- **Heater Temperature** - Temperatures at the top and bottom laminate heater cores.
- **Logic States** - Summarizes all two-state interlocks and photo sensors -- a very useful diagnostic tool. For example: opening/closing the doors will result in the logic states to commute from 1 to 0; and if not, it is a clear indication the sensor (switch) is faulty.

Printer Properties

To access the various Printer Properties, select *Start > Printers (or Printers and Faxes)*. Right click *Zebra P630i* or *Zebra P640i*, then select *Properties*

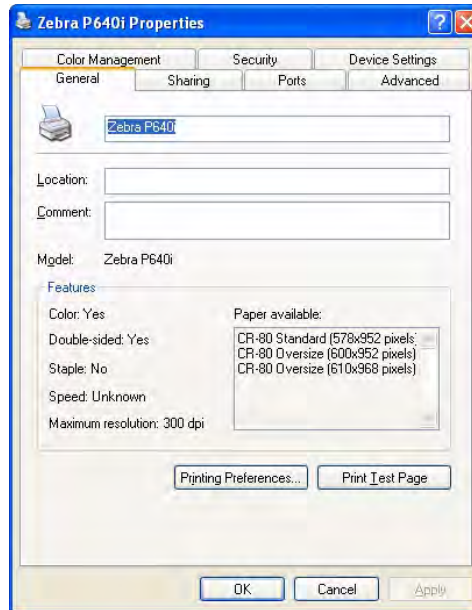


- **General Tab** - Displays printer information of a general nature, includes selection for Printing Preferences and Print Test Page (i.e., the standard Windows test page).
- **Sharing Tab** - Operating System (OS) feature where the printer can be shared with other clients on a network.
- **Ports Tab** - OS feature displays available communication ports.
- **Advanced Tab** - OS feature to select printer availability and spooling options.
- **Color Management Tab** - Allows user to define color profile(s) with color printers.
- **Security Tab** - OS feature where permissions to printers can be defined.
- **Device Settings Tab** - Allows user to make basic printer adjustments and access advanced printer controls.

General Tab

The General tab shows the printer model and lists the features of the printer.

To access the General tab, select *Start > Printers and Faxes*. Right click on the *Zebra P630i* or *Zebra P640i* printer listing. Select *Properties > General*.



- **Printing Preferences** - Changes the card settings; see [Printing Preferences](#) on page 62.
- **Print Test Page** - Prints the standard Windows test page.

Sharing Tab

On the Sharing tab (Sharing Property Page), you can choose to share the printer over the network and install additional drivers to accommodate different operating systems.

To access the Sharing tab, select *Start > Printers and Faxes*. Right click on the *Zebra P630i* or *Zebra P640i* printer listing. Select *Properties > Sharing*.

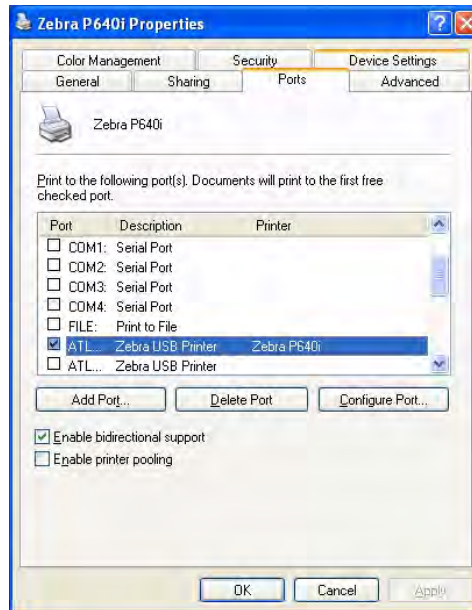


This is sharing according to the Microsoft Windows definition. In a network environment, it allows other computers to send jobs to the printer that is connected to your computer.

Ports Tab

Use the Ports tab to specify the computer port to which the P630i or P640i is connected. This will have been established at the initial installation of the printer, and will not normally require attention.

To access the Ports tab, select *Start > Printers and Faxes*. Right click on the *Zebra P630i* or *Zebra P640i* printer listing. Select *Properties > Ports*.



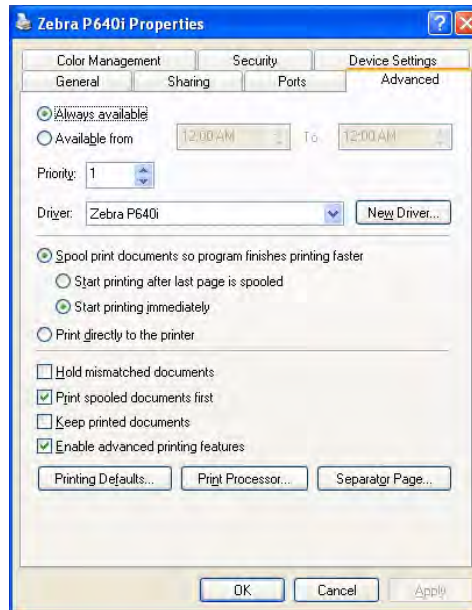
An exception to this is if you wish to use *printer pooling*, the ability to distribute print jobs to multiple printers. To enable printer pooling, check the “Enable Printer Pooling” box, then check multiple ports. Each port should have a single Zebra printer installed on it. All the pooled printers must be identical models with the same configuration (for example: all with YMC front, K back).

Now, when you print to the “main printer” (that is, whichever printer you right-clicked in Printers and Faxes to get to this screen), this printer will get print jobs until it has buffered as many jobs as it can take. Remaining jobs will then “spill over” to other printers until all printers in the pool are busy.

Advanced Tab

Determines the spooling (queuing) of print jobs, and how spooled jobs are handled relative to the most recent job. Printing Defaults allows the system administrator to establish selected default settings.

To access the Advanced tab, select *Start > Printers and Faxes*. Right click on the *Zebra P630i* or *Zebra P640i* printer listing. Select *Properties > Advanced*.



Color Management Tab

Color Management settings allow you to associate color profiles on the printer based on the type of media being used and printer configuration. The **Add** button allows the operator to add additional profiles to the color profile list.

To access the Color Management tab, select *Start > Printers and Faxes*. Right click on the *Zebra P630i* or *Zebra P640i* printer listing. Select *Properties > Color Management*.

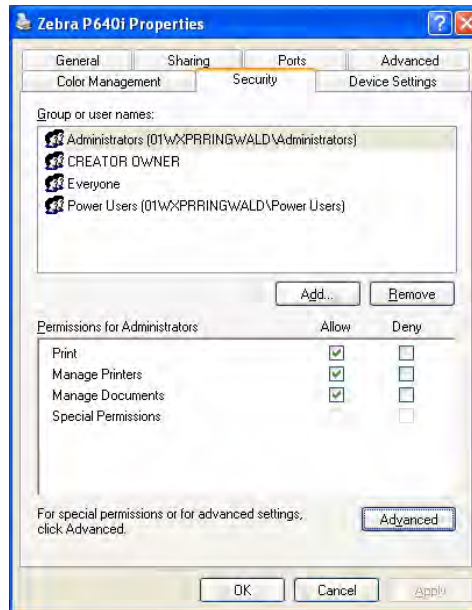


- **Automatic** - Allows Windows to select the best color profile (default).
- **Manual** - Allows the operator to select the desired profile from the list shown in the Color Profile Window.

Security Tab

This is the standard Windows security screen, showing user access to various printer control options. Both Print and Manage Printers *must* be checked for full functionality of the printer.

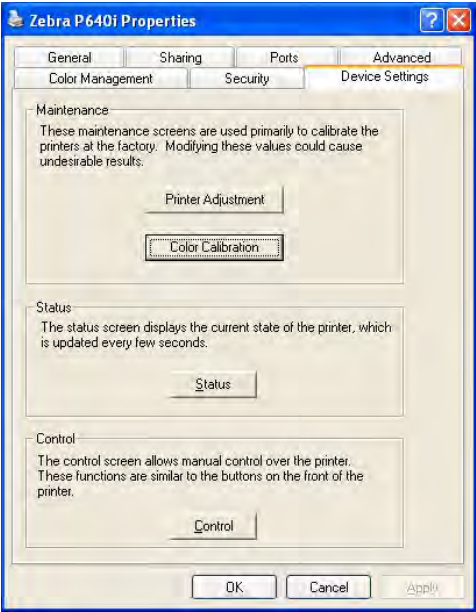
To access the Security tab, select *Start > Printers and Faxes*. Right click on the *Zebra P630i* or *Zebra P640i* printer listing. Select *Properties > Security*.



Device Settings Tab

The Device Settings screen allows you to access various adjustment and calibration screens.

To access the Device Settings tab, select *Start > Printers and Faxes*. Right click on the *Zebra P630i* or *Zebra P640i* printer listing. Select *Properties > Device Settings*.



- **Printer Adjustment** 58
- **Color Calibration** 59
- **Status** 60
- **Control** 61

Printer Adjustment

To access the Printer Adjustment screen, select *Start > Printers and Faxes*. Right click on the *Zebra P630i* or *Zebra P640i* printer listing. Select *Properties > Device Settings > Printer Adjustment*



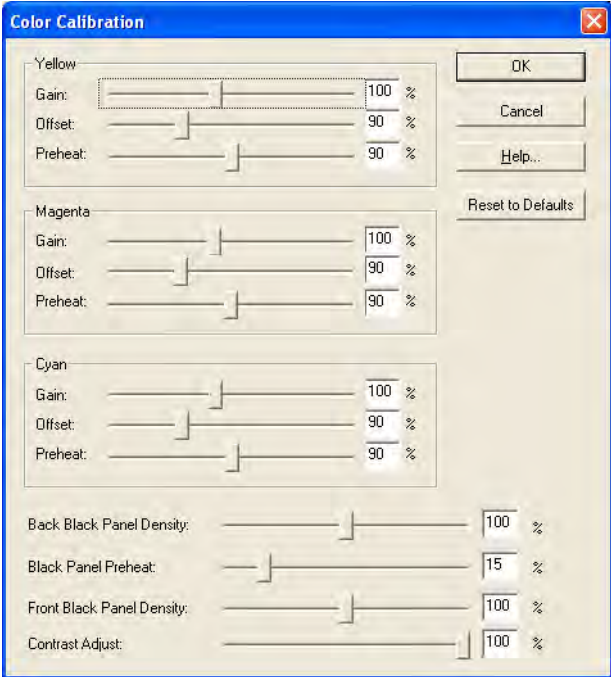
The following procedures can be performed via the Printer Adjustment screen:

- **Print Station Adjust ...** : Provides controls for print station adjustment.
- **Laminate Station Adjust ...** : Provides controls for accurate positioning of the laminate.
- **Flip Station Adjust ...** : Provides controls for flip station adjustment.
- **Advanced Adjust ...** : Provides controls for magnetic encoding and smart card position adjustments.
- **Card Hopper** (Pick Position Adjust (Pixels)): Adjusts the position of the truck when picking a card from the hopper.
- **Cleaning Station** (Clean Frequency): Runs clean cycle will be run after the specified number of cards have been printed. The clean frequency range is from 1 to 20, the default = 10.

Color Calibration

The Color Calibration screen allows manual control over printer color parameters. For details, see Adjustments: [Color Calibration](#) on page 69.

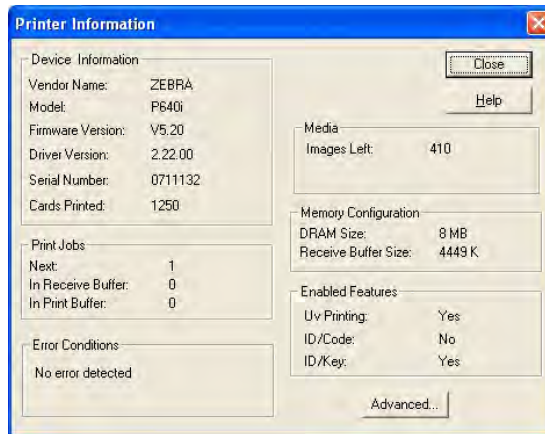
To access the Color Calibration screen, select *Start > Printers and Faxes*. Right click on the *Zebra P630i* or *Zebra P640i* printer listing. Select *Properties > Device Settings > Color Calibration*



Status

The Status screen displays the current state of the printer and provides standard printer information and sensor data, which is updated every few seconds.

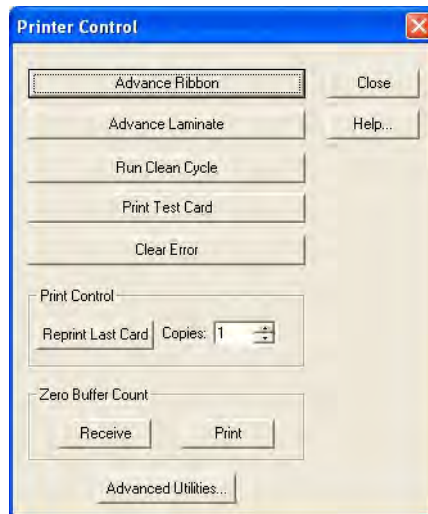
To access the Status screen, select *Start > Printers and Faxes*. Right click on the *Zebra P630i* or *Zebra P640i* printer listing. Select *Properties > Device Settings > Status*



Control

The Control screen allows manual control over the printer. Some of these functions are similar to the buttons on the front of the printer.

To access the Control screen, select *Start > Printers and Faxes*. Right click on the *Zebra P630i* or *Zebra P640i* printer listing. Select *Properties > Device Settings > Control*



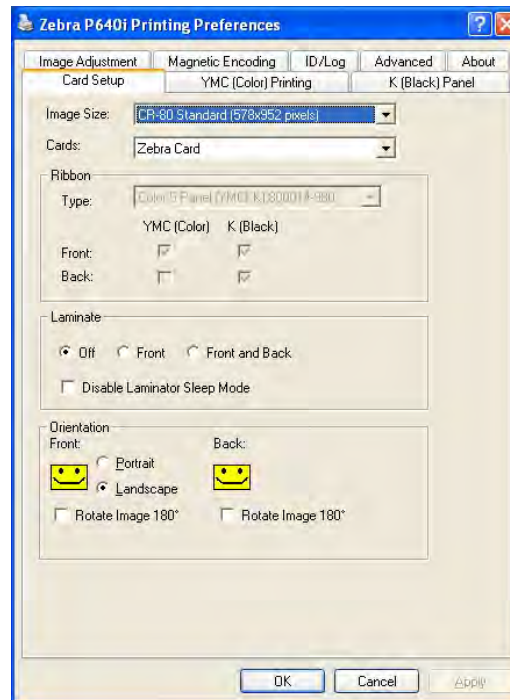
The following procedures can be performed from the Control screen (note that #1, #2 and #6 perform the same functions as the front panel buttons):

- **Advance Ribbon:** Advances the print ribbon to the next set of panels. Use this after a ribbon jam or when you load a new ribbon.
- **Advance Laminate:** Advances the Laminate onto the rollers, under the flex guides. If the laminate chips are already loaded, this will have no effect.
- **Run Clean Cycle:** Activates the clean cycle to clean the sticky roller.
- **Print Test Card:** This will print a test card containing driver configuration information
- **Clear Error:** Clears some error conditions within the printer to allow printing to resume.
- **Print Control (Reprint Last Card and Copies):** Activate a reprint of a card. You can also set the number of copies to print.
- **Zero Buffer Count:**
 - **Receive:** If an error occurred, there may be a card image stuck in the receive buffer. This clears the receive buffer if you do not want to print it.
 - **Print:** If an error occurred, there may be a card image stuck in the print buffer. This clears the print buffer if you do not want to print it.
- **Advanced Utilities... :**

Printing Preferences

The Preferences screens the operator may be asked by Service Personnel to refer to and/or modify are Card Setup, Image Adjustment, YMC (Color) Printing, and K (Black) Panel.

To access the Printing Preferences screens, select *Start > Printers and Faxes*, then right click *Zebra P630i* or *Zebra P640i* printer and select *Printing Preferences*.

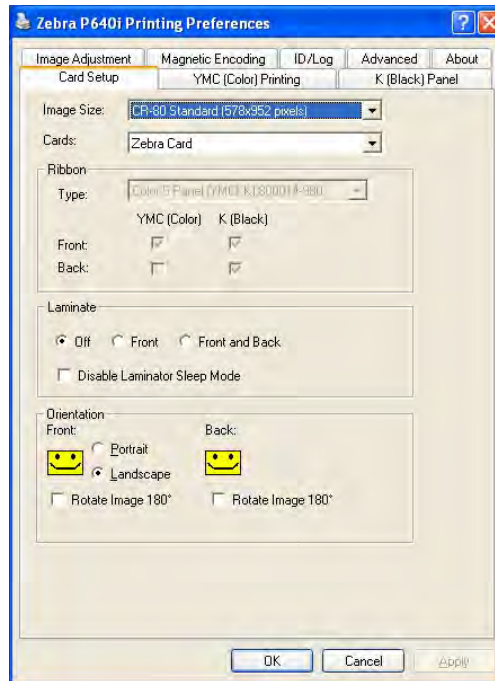


- **Card Setup Tab** - Allows user to adjust selected card parameters.
- **Image Adjustment Tab** - Allows user to adjust the brightness and contrast of the images printed on the cards.
- **YMC (Color) Printing Tab** - Allows user to adjust selected color printing parameters.
- **K (Black) Panel Tab** - Displays available options for Black Extraction.

Card Setup Tab

Card Setup allows the user to adjust selected card parameters.

To access the Card Setup screen, select *Start > Printers and Faxes*. Right click on the *Zebra P630i* or *Zebra P640i* printer listing. Select *Printing Preferences > Card Setup*.

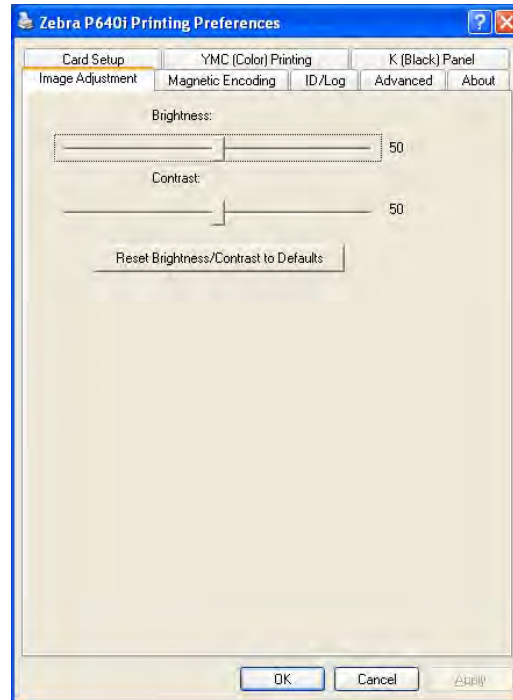


- **Image Size** - Sets the image area for both front and back of the card (1 inch = 300 pixels).
- **Cards** - Specifies the type of card loaded in the hopper. “Zebra Card” is the only option.
- **Ribbon** - This is the color ribbon installed in the printer. This is not user selectable but is setup by the RFID. For most applications, two types are available: YMCK = 3 color panels + 1 black panel, and YMCKK = 3 color panels + 2 black panels. For secure applications, a third type is available: YMCUvK (“Uv” is a panel of ultraviolet responsive resin). When using a printer with RFID, this option is not selectable.
- **Front/Back** - Allows you to apply color or black, or both, to either side of the card. For example, with a 4-panel YMCK ribbon the usual arrangement is YMC (Color) on the front, K (Black) on the back. If you check both YMC and K on one side, this sets up a special condition known as black extraction.
- **Laminate** - Allows you to choose whether laminate will be applied to the front side, to both sides (P640i Printer only), or to neither side. This option will automatically turn on the heaters.
- **Orientation** - Allows you to set up the front and back images, independently, for landscape or portrait orientation. By checking the *Rotate* box, you can also flip either image upside down. The following combination is not available: Front landscape and Back portrait.

Image Adjustment Tab

From the Image Adjustment screen, the operator can adjust the brightness and contrast of the images printed on the cards.

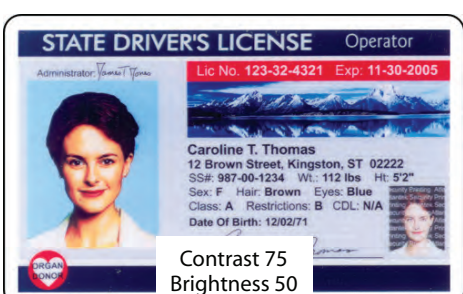
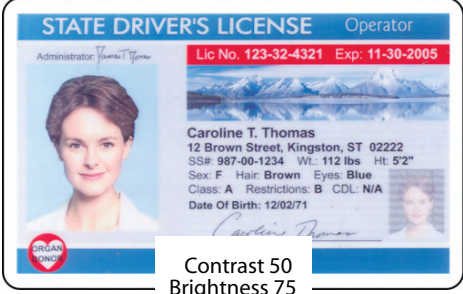
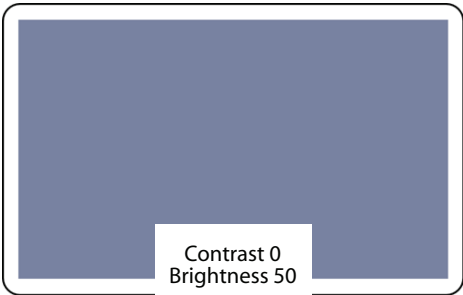
To access the Image Adjustment screen, select *Start > Printers and Faxes*. Right click on the *Zebra P630i* or *Zebra P640i* printer listing. Select *Printing Preferences > Image Adjustment*.



Brightness and Contrast: Controls on the Image Adjustment screen have same effect on the printed image as do similar controls on typical office color printers. Move the slide bars to adjust the brightness and contrast of the cards being printed.

Click the **Reset Brightness/Contrast to Defaults** button to restore the default conditions; i.e., Brightness (50) and Contrast (50).

Here are some sample prints to illustrate the effects of changing the brightness and contrast settings:



YMC (Color) Printing Tab

YMC (Color) Printing allows the user to adjust selected color printing parameters.

To access the YMC (Color) Printing screen, select *Start > Printers and Faxes*. Right click on the *Zebra P630i* or *Zebra P640i* printer listing. Select *Printing Preferences > YMC (Color) Printing*.



The printer accepts 24-bit color images, meaning that each of the colors (Y, M and C) is represented by 8 bits per pixel.

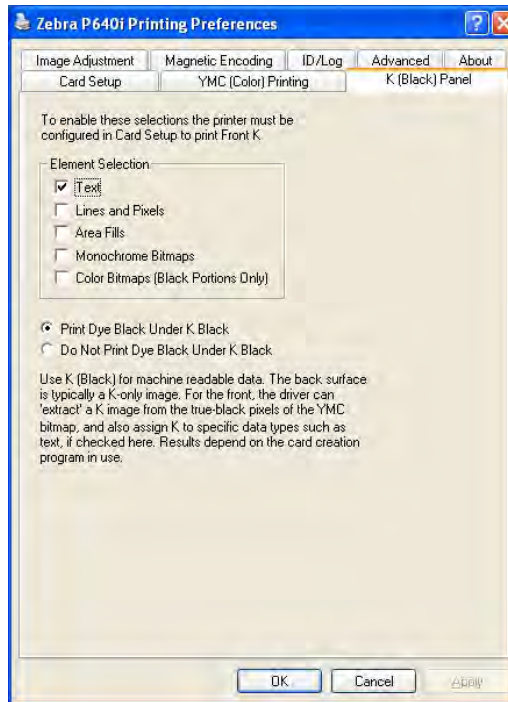
- In High Quality, the default setting, all 24 bits are processed.
- In Low Quality, the printer driver transmits a smaller amount, 16 bits, of color information, the effect being a slight degradation of the printed image.

With a USB Connection (standard interface configuration), there will be no noticeable difference.

K (Black) Panel Tab

When the Card Setup screen is set for YMC and K on the same side of a card, a process called Black Extraction is enabled. The K (Black) Panel screen displays available options for Black Extraction.

To access the K (Black) Panel screen, select *Start > Printers and Faxes*. Right click on the *Zebra P630i* or *Zebra P640i* printer listing. Select *Printing Preferences > K (Black) Panel*.



Black Extraction

Black extraction has to do with the way the printer driver handles the K (black) panel. The term applies *only* to the surfaces of the card on which *both* YMC (color) *and* K (black) are to be printed.

Equal amounts of Y, M, and C dyes, at maximum intensity, deliver a near-black image, but one that is not machine readable. A bar code printed from YMC will be visible to the eye, but will not be detectable by most bar code readers.

The remedy for this is to extract the black; which means printing the same bar code, using the K panel, on top of the YMC bar code. You can also choose to print only in K, omitting YMC from that region. The K panel is not a dye. It is more of a paint containing carbon black, which is highly visible to infrared-type readers.

Elements Selection - Depending on the program used to create the card layout, elements of the design may be identified in different ways to the printer driver. This printer driver recognizes five types of elements:

- **Text** is text which is sent explicitly as such to the printer driver.
- **Lines and pixels** are lines and dots (pixels) sent as such to the printer driver.
- **Area fills** are color-filled geometric shapes.
- **Monochrome bitmaps** are 1-bit bitmaps (every pixel either black or white).
- **Color bitmaps (black portions only)** are full color un-compressed pixel maps.

The above elements may not always be sent to the driver as expected. For example, a bar code may be sent as text, a series of area fills, or a monochrome bitmap. Results will vary by application used to create the card design.

Any of the above five elements may be selected for black extraction when the ribbon is set up to apply YMC (color) and K (black) to the same surface of the card. In this condition, the driver generates an extracted K image by looking for “true-black” features in the selected element types, that is, instances where all three YMC values are at the maximum (full intensity). Each such true-black instance generates a corresponding cluster of black pixels in the extracted image, which will be printed with the K (black) panel either on top of the YMC image, or replacing it entirely – your choice.

Adjustments

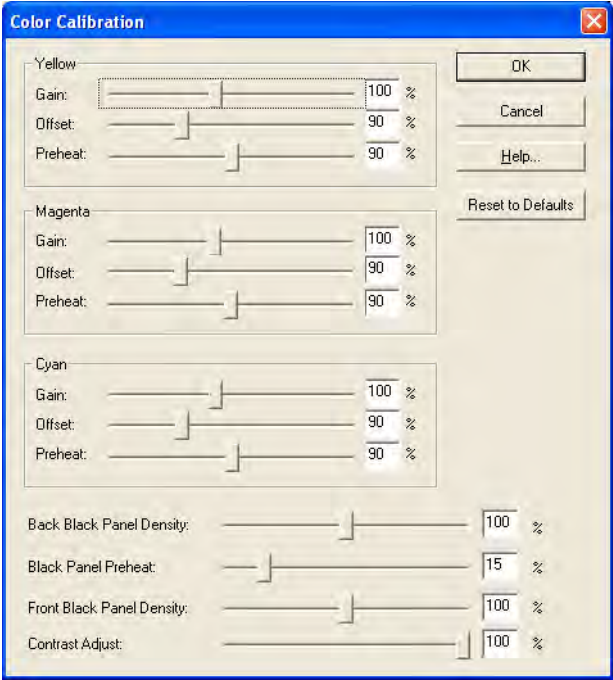
Color Calibration

To access the Color Calibration screen, select *Start > Printers and Faxes*. Right click on the *Zebra P630i* or *Zebra P640i* printer listing. Select *Properties > Device Settings > Color Calibration*.

Color rendering in the printer can be described in terms of a curve, which determines how much power is put into the printhead for a given shade.

The Y, M and C color curves can be separately modified by the Gain and Offset parameters. Click Restore Defaults if you are not satisfied with adjustments made.

The following procedures can be performed from the Color Calibration screen:



Note • The values shown above are the default values; recommended settings (different from the default values) are shown on the next page.



Note • The values shown on the previous page are the default values; recommended settings (different from the default values) are given in the following descriptions.



Note • Typically, the set of values (Gain, Offset, and Preheat) should be the same for each color.

- **Gain** - Adjusts steepness of the curve. Lighter shades will remain unchanged, but darker shades will get darker or lighter as the number is increased or decreased.
Recommended setting = 95%.
- **Offset** - Shifts the color curve up (darker) and down (lighter).
Recommended setting = 95%.
- **Preheat** - Adjusts how much the head is preheated before each print line (every three hundredths of an inch). A larger value darkens (sharpen) the leading edges of colored areas. A lower value may result in “feathering” - starting light, then darkening over the following few pixels as the head heats up.
Recommended setting = 90%.
- **Back Black Panel Density** - This controls the amount of heat energy applied to any pixel required to be black. A higher value gives darker printing, but can cause undesirable blooming (indefinite edges).
Recommended setting = 100%.
- **Black Panel Preheat** - Temperature offset applied across the entire head, specifically for K panel printing. A higher value results in better resin transfer on the leading edge of graphics and text than you would get with a cold start, but it may lead to undesirable blooming (indefinite edges) overall.
Recommended setting = 15%.
- **Front Black Panel Density** - This controls the amount of heat energy applied to any pixel required to be black. A higher value gives darker printing, but can cause undesirable blooming (indefinite edges).
Recommended setting = 100%.
- **Contrast Adjust** - A subtle color printing control, allows the user to shape the printer’s lightness curve. This means the ability to control how the printer resolves, or differentiates, the lighter and darker shades.

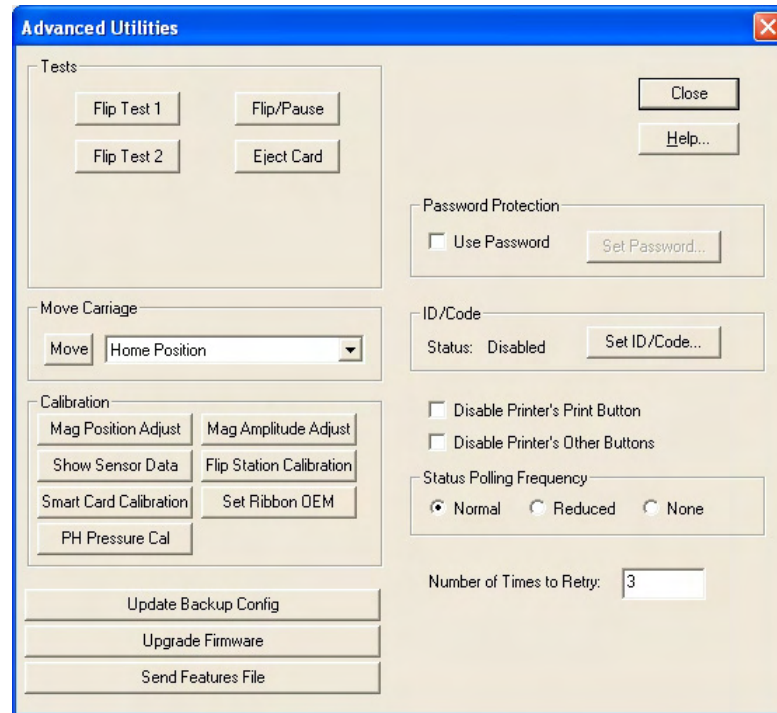
Between contrast settings of 0 and 100, the lightness curve transitions from linear to sinusoidal. Linear (0%) tends to result in a low contrast, muddy looking image. Sinusoidal (100%) gives mostly good results, but tends to sacrifice the lightest and darkest shades.
Recommended setting = 80%.



Important • The printer must be power cycled for any adjustments to take effect.

Flip Station Routines

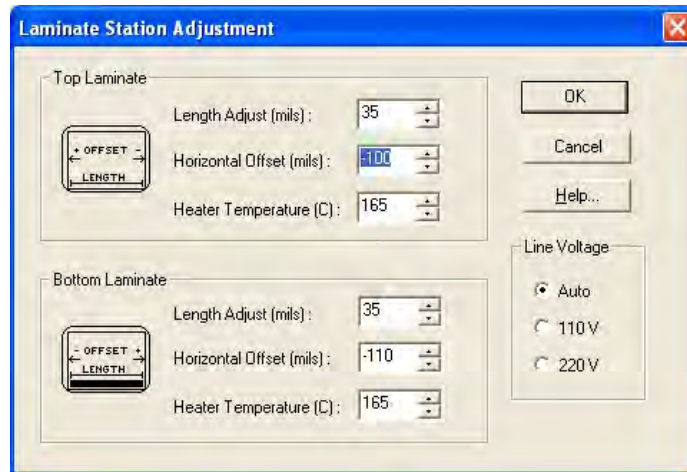
To access the Advanced Utilities screen, select *Start > Printers (or Printers and Faxes)*. Right click on the *Zebra P640i* or *Zebra P640i* printer listing. Select *Properties > Device Settings > Control > Advanced Utilities*.



- **Tests:** Activate various flip tests, used to troubleshoot flip station problems; and activate a card eject cycle.
 - **Flip Test 1** - Picks up a card, runs it to the flip station, flips it, raises it to the laminator infeed, then ejects it through the laminator. The sequence repeats until the PRINT button is pressed and released.
 - **Flip Test 2** - Picks up a card, runs it to the flip station, flips it, returns it to the Platen, then backs it out to the card sensor (by the mag head). The sequence repeats until the PRINT button is pressed and released.
 - **Flip/Pause** - Picks up a card, runs it to the flip station, raises it to the laminator infeed, then holds this position (termed the Insertion Height in the flip station dialog) until the user presses the PRINT button (at which point the flip carrier descends, and the truck returns the card to the hopper).
 - **Eject Card** - Picks up a card, runs it to the flip station, raises it to the laminator infeed, then ejects it through the laminator. Like Flip Test 1, but done once only, and without flipping.
- **Move Carriage:** Use this button to move the card carrier to the desired position. This is useful when adjusting the mechanical settings on the printer.

Laminator Station Adjustments

To access the Laminate Station Adjustment screen, select *Start > Printers and Faxes*. Right click on the *Zebra P630i* or *Zebra P640i* printer listing. Select *Properties > Device Settings > Printer Adjustment > Laminate Station Adjust...*



- **Length Adjust (mils)** - This is the length of the laminate *patch*. If the patch is too long, decrease this number, and vice versa.
- **Horizontal Offset (mils)** - Adjusts laminate placement on the card.
- **Heater Temperature** - This is the set point temperature (i.e., the temperature desired) not the actual temperature. For actuals, see [Access Printer Sensor Data on page 49](#).



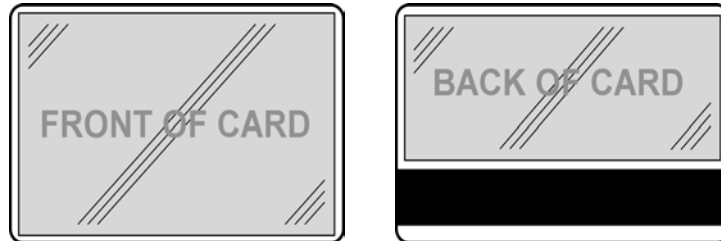
Note • Temperatures are monitored by thermocouples at the *core* of the heated rollers. Surface temperatures may differ significantly.

- **Line Voltage** - If Auto is selected, the printer guesses line voltage based on line frequency, assuming that 110V will be @ 60Hz and 230V @ 50Hz. If this is not the case in your locality, the printer will guess wrong; and you should set the voltage manually.



Caution • Running the printer at 220V, 60Hz in Auto mode may cause premature failure of the heaters. Running the printer at 110V, 50Hz in Auto mode may cause abnormally long heat-up time and poor temperature control. Either will result in a heater error message in the printer status screen.

The standard laminate patch length is 3.25" (82.55mm). Accurate positioning of the laminate is important for practical and aesthetic reasons. The laminate must cover the entire image as printed at the time of issuance, thus protecting critical data with a tamper-deterrent film. Additionally, because even the smallest amount of overhang can compromise the card's integrity, the patch should be symmetrically positioned on the card.



If there is no magnetic stripe on the underside, a full-width laminate should be used.

When using smart card or registered laminates and the length is too long or too short, use the **Length Adjust (mils)** option to make length adjustments as required.

