SUZOHAPP

PayCheck™

High Speed Couponing Thermal Printer Firmware Downloading & Installation Instructions

NANOPTIX

Legal Notices

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Federal Communications Commission (FCC) Radio Frequency Interference Statement

Warning

Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note

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 own expense.

Information to the User

This equipment must be installed and used in strict accordance with the manufacturer's instructions. However, there is no guarantee that interference to radio communications will not occur in a particular commercial installation. If this equipment does cause interference, which can be determined by turning the equipment off and on, the user is encouraged to contact Nanoptix Inc. immediately.

Nanoptix Inc. is not responsible for any radio or television interference caused by unauthorized modification of this equipment or the substitution or attachment of connecting cables and equipment other than those specified by Nanoptix Inc. The correction of interferences caused by such unauthorized modification, substitution or attachment will be the responsibility of the user.

In order to ensure compliance with the Product Safety, FCC and CE marking requirements, you must use the power supply, power cord, and interface cables, which were shipped with this product or which meet the following parameters:

Power Supply

UL Listed power supply with standard 60Hz-50Hz, 100-240VAC input and 24VDC output equipped with AC line filtering, over-current and short-circuit protection.

Use of this product with a power supply other than the Nanoptix Inc. power supply will require you to test the power supply and Nanoptix Inc. printer for FCC and CE mark certification.

Communication Interface Cable

An approved Nanoptix interface cable must be used with this product. Use of a cable other than Nanoptix approved product will require that you test the cable with the Nanoptix Inc. printer and your system for FCC and CE mark certification.

Power Cord

A UL listed, detachable power cord must be used. A power cord with Type SVT marking must be used. For applications outside the North America, power cords that meet the particular country's certification and application requirements should be used.

Use of a power cord other than described here may result in a violation of safety certifications that is in force in the country of use.

Industry Canada (IC)
Radio Frequency Interference Statement

This Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.
Cet appareil numérique de la classe A respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

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Firmware Upgrade Instruction

Download Updated Firmware

1. Go to Nanoptix's web site: ***http://www.Nanoptix.com*** and click on the ***Support*** section in the top right of the page.

Figure 1: Home Page Of http://www.Nanoptix.com - Support Section Shown

2. Scroll down the support page and click on the appropriate printer (PayCheck High Speed Couponing).

Figure 2: Support Page Showing PayCheck High Speed Couponing Printer

3. Enter:
    1. Username ***(If unknown, please contact Nanoptix for a unique Username)***
    2. Password ***(If unknown, please contact Nanoptix for a unique Password)***
    3. Click the ***login*** button to continue to the Technical Support section.

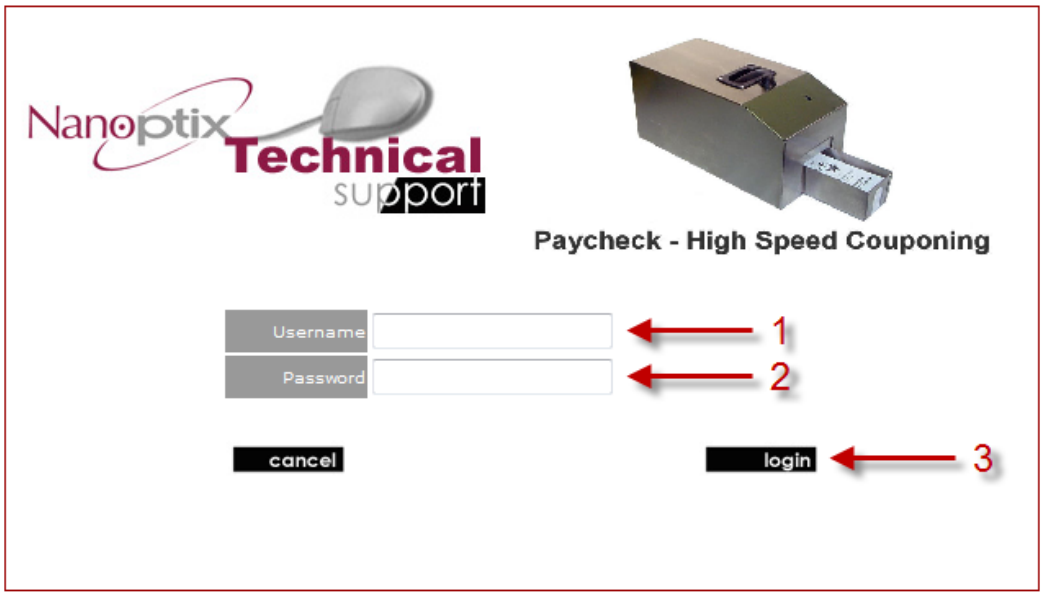

Figure 3: Login Page For Technical Support

4. After successfully logging in, click ***Firmware*** from the menu on the left side of the screen.

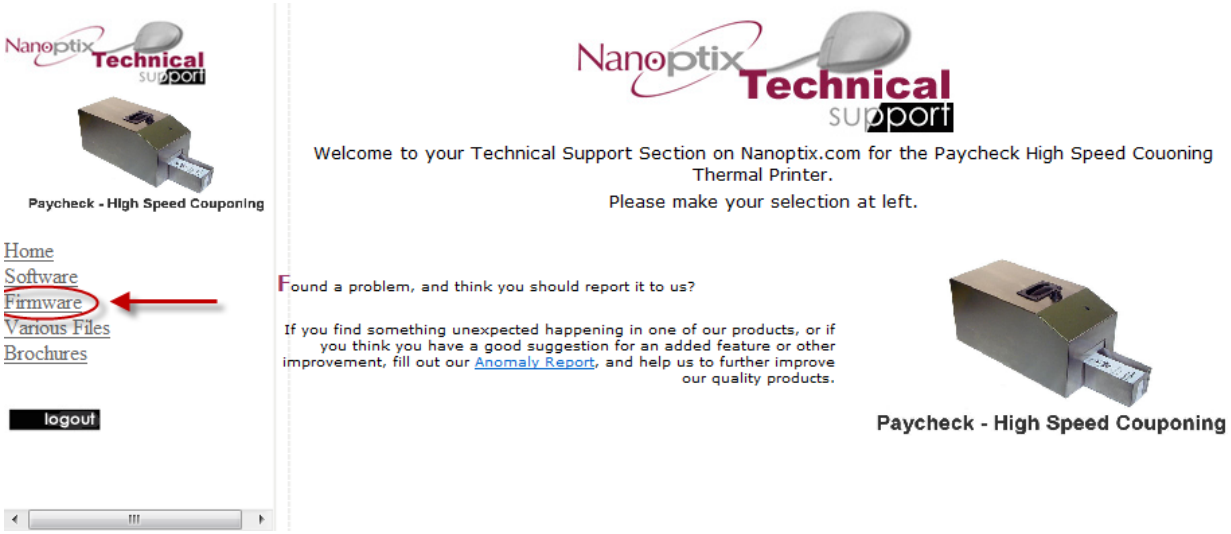

Figure 4: Support Section For PayCheck High Speed Couponing

5. On the right side of the screen, located the newest firmware under the heading ***Current production Firmware***.

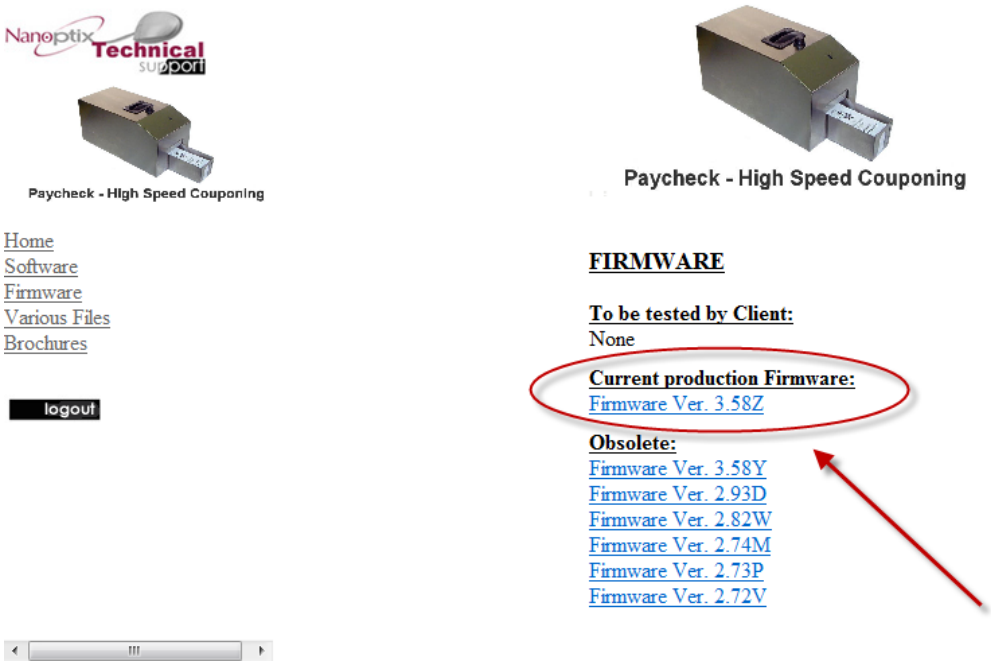

Figure 5: Firmware Download Section

6. Download and save the desired firmware to a known location on your hard drive. ***(Example: c:\firmware\)***

Note: If downloading multiple firmware files in the same folder on your hard drive, make note of the firmware filename for future steps.

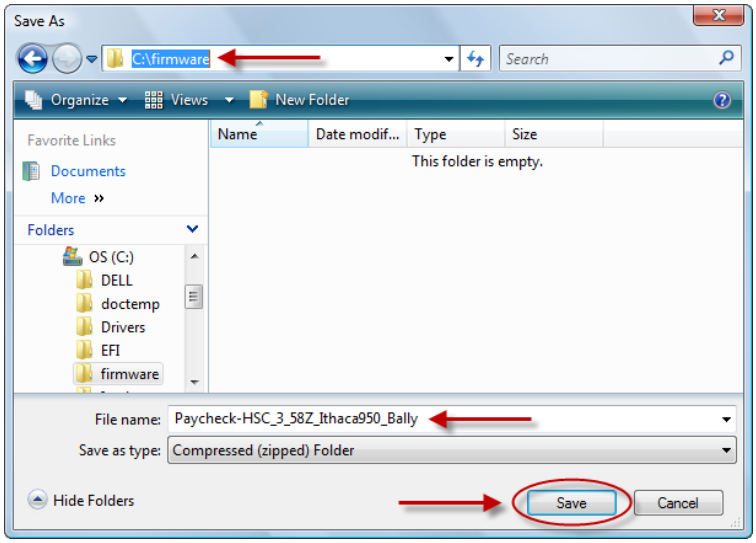

Figure 6: Sample Save As Screen With Sample Directory

Extract Updated Firmware

Extract the whole contents of the previously downloaded ZIP file to a known location on your hard drive using WinZip or the ZIP extractor of your preference.

Note: Do not run the file ***FlashImage.exe*** directly from the ZIP file without first extracting the complete file. Doing so will cause the firmware upgrade to fail.

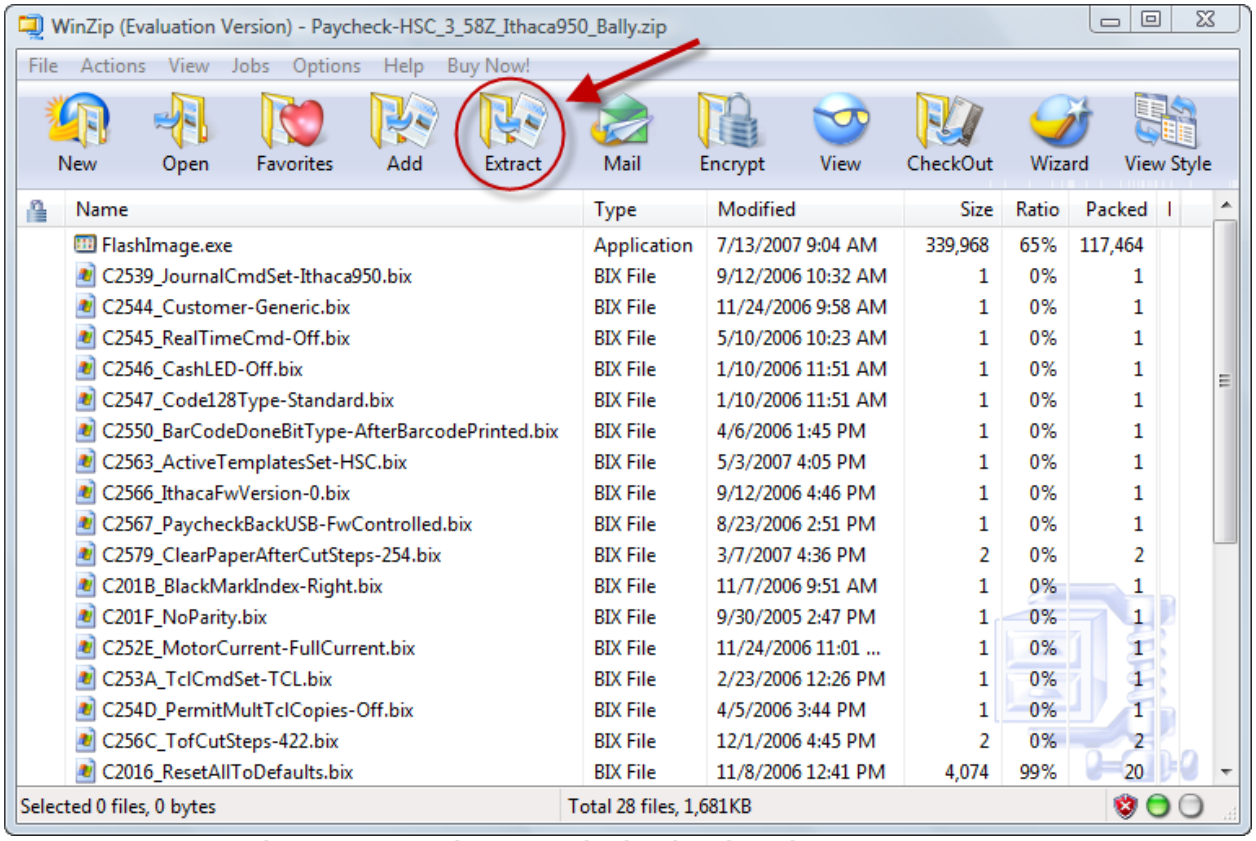

Figure 7: Example From WinZip Showing The Extract Button

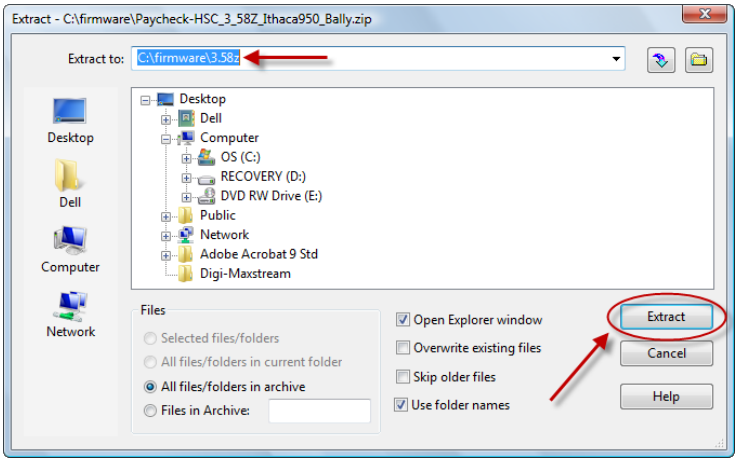

Figure 8: Example From WinZip Showing The Extract Dialog

Flashing The PayCheck High Speed Couponing Printer

1. Make sure the PayCheck High Speed Couponing Printer is powered up with the included 24 VDC power supply and connected to the computer using one of the two communication options, ***USB or RS-232***.

Note: USB communications is strongly recommended as the firmware upgrade will be much faster.

Port Identification	Connector Type	Function
A	USB Type B	USB Communication
B	DB9 Receptacle	RS-232 Communication
C	Molex 2 Pin Latching	24 VDC

Table 1: Interface Ports

Figure 9: Interface Ports

2. Navigate to the folder where the ZIP file was extracted and double click on ***FlashImage.exe***.

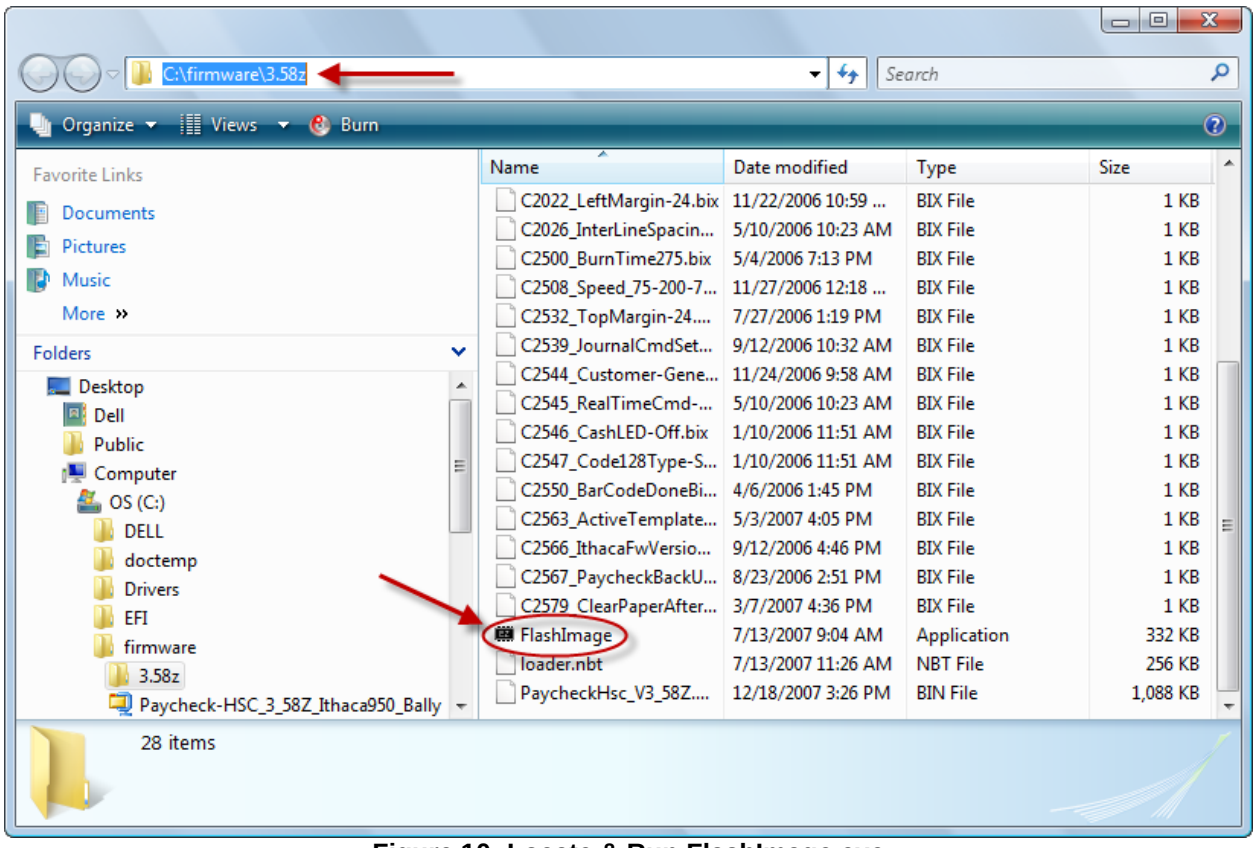

Figure 10: Locate & Run FlashImage.exe

3. Once ***FlashImage.exe*** begins to run, make sure it is the correct ***FlashImage.exe*** from the folder that was just extracted (shown below by arrow 1). Also confirm the firmware version is the same as what was downloaded earlier (shown below by arrow 2).

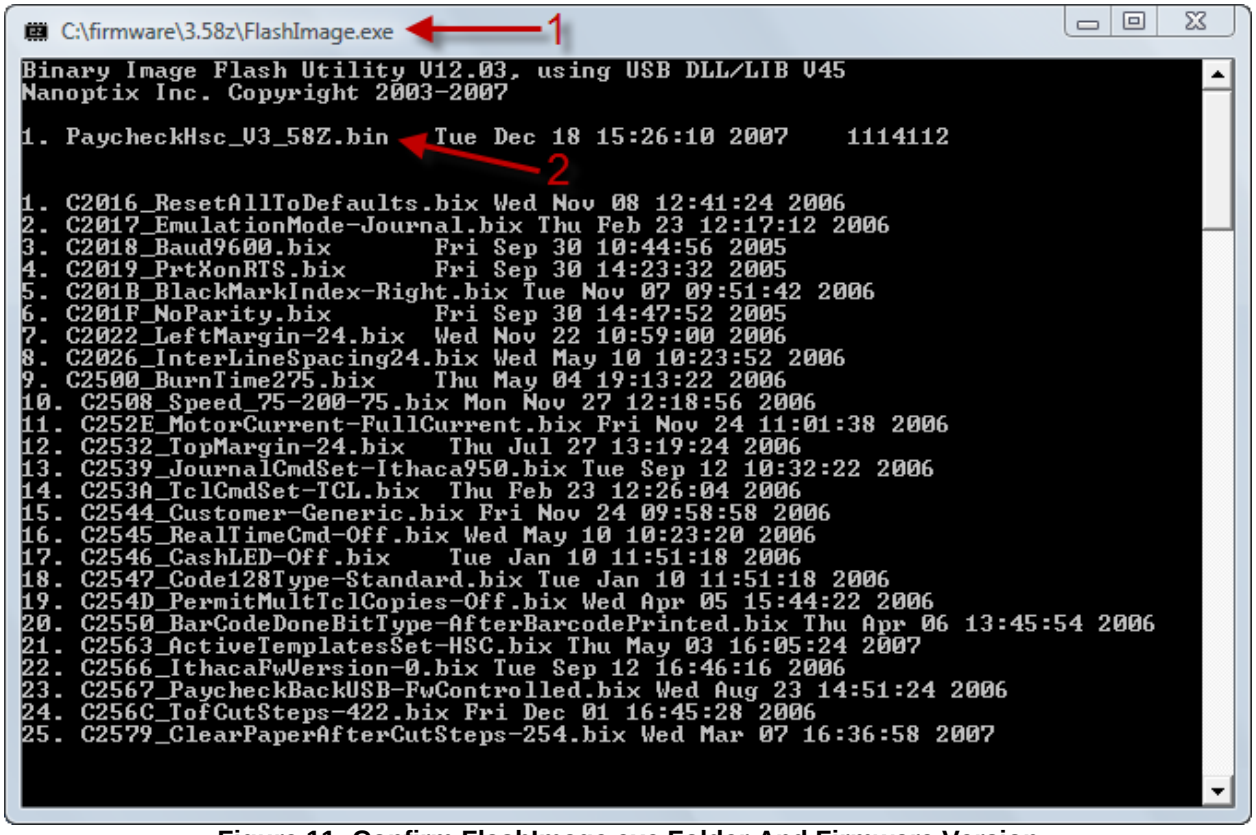

Figure 11: Confirm FlashImage.exe Folder And Firmware Version

4. FlashImage.exe will look for a known printer on the USB Port. If a printer is not found on the USB Port, the software will then begin to scan the available RS-232 Ports for a known printer.

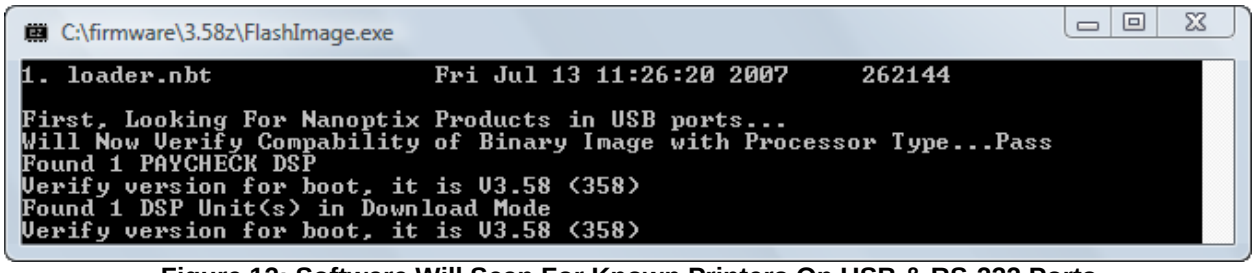

Figure 12: Software Will Scan For Known Printers On USB & RS-232 Ports

5. When a known printer has been found, the software will place the printer into ***Download Mode*** (Red LED Status Light will flash once per second while in Download Mode) and download the configuration BIX files to the printer.

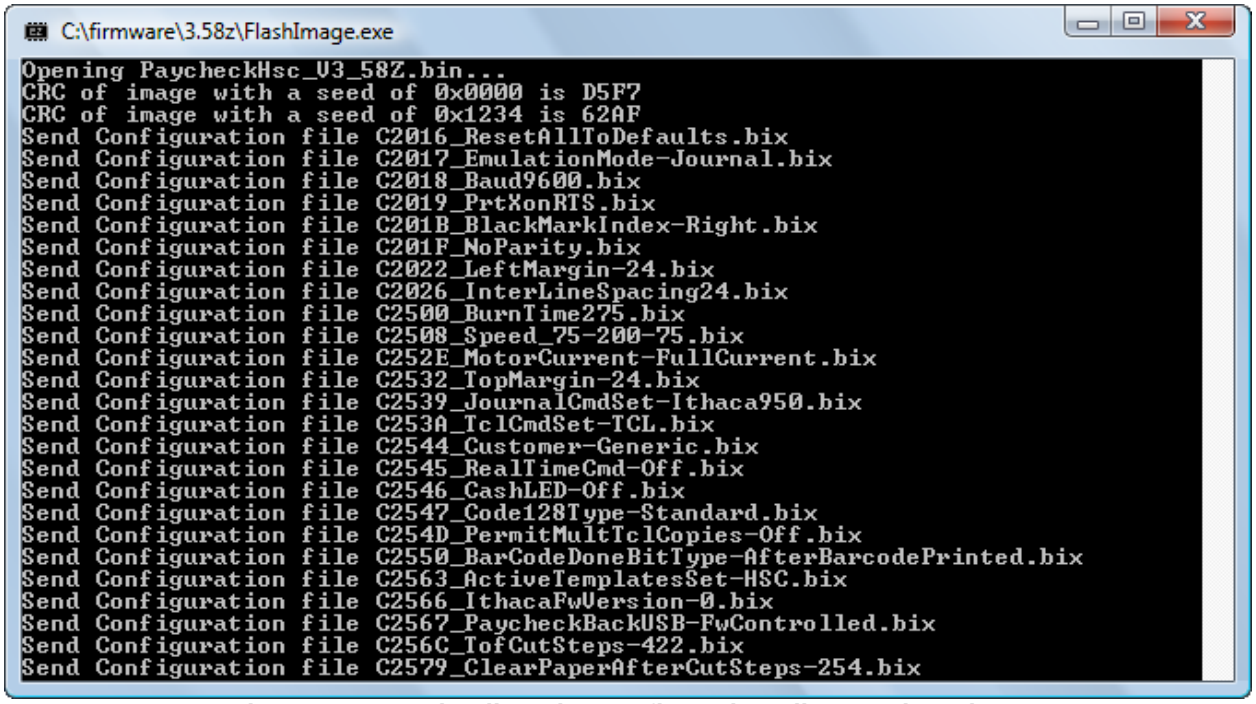

Figure 13: Downloading The Configuration Files To The Printer

6. Next, the firmware image BIN file will be downloaded to the printer in blocks of 64 KB.

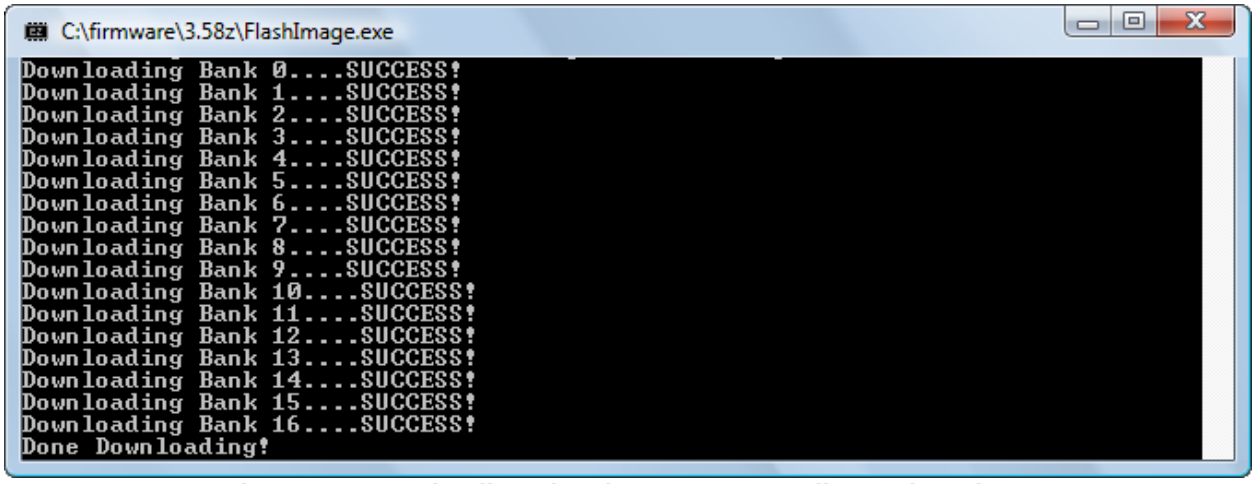

Figure 14: Downloading The Firmware Image File To The Printer

7. During the final 20 seconds of the firmware update, the printer transfers all of the information from RAM to the Flash.

Note: Make sure the power and communications are not interrupted during this critical 20 seconds or else the firmware will become corrupt. If by chance this does happen, please see the section ***Restoring Firmware to Factory Default***.

Figure 15: Copying Firmware Update From RAM To Flash

8. The printer will reboot out of Download Mode and back into Run Mode when the firmware update is completed.

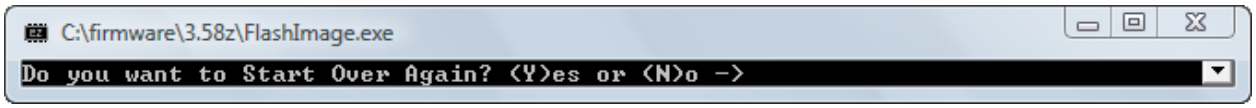

Figure 16: Firmware Update Completed Prompt

9. To exit the ***FlashImage.exe*** software, enter ***N*** at the above prompt or enter ***Y*** to run the firmware upgrade again.

Verify Firmware Update

A ***Power On Test Ticket*** can be printed to verify the firmware update was successful. To print a test ticket, the printer must be powered on while holding down the ***Paper Feed*** button for approximately 5 seconds.

A status test ticket similar to the one shown on the next page will be printed. This ticket can be used to verify the firmware version. Pressing the Paper Feed button again will result in a blank ticket being advanced.

Figure 17: Paper Feed Button

Model:	PAYCHECK HSC
Firmware:	HSC-3.58Z (0xD5F7)*
Protocol:	ITHACA 950
COMMUNICATION	
Interface:	Serial
Baud:	9600
Data Bits:	8
Parity:	NONE
Handshaking:	PRT+XON+RTS
Print Mode:	Line
PRINT CONTROL	
Print Method:	No HPQ
Speed:	200 mm/sec
Black Bar Index:	Right
No HPQ Burn Time:	275 us
Clear After Cut:	254 steps
Cutter PWM:	80 %
Motor Current:	3
Real Time Command:	Disabled
Validation Bit:	After Barcode
Cut Cal. (Auto):	161+258 steps
PRINTER ENVIRONMENT CONDITIONS	
Voltage:	24.4 Volts
Temperature:	20 Celsius
SYSTEM RESOURCES	
FLASH: Used=00000 Free=65535	RAM: Used=00000 Free=65535
LIBRARY INVENTORY (HSC)	
Templates:	0,1,2,3,4,5,6,7,8,9,A,B,D, E,F
Regions:	1,2,3,4,5,6,7,8,h,9,A,B,C, D,E,F,G,I,J,K,L,N,O,P,Q,R, S,T,U,Z,X,a,b,c,d,e,f,g,i, j,k,l,m,n,o,p,q,r,s,t,u,v, w,x,y,z
Fonts:	0,1,2,3,4,5,7,8,9,A,B,E,P
Graphics:	
MANUFACTURING INFORMATION	
Printer ID:	PC00014
Date Code:	20080623

A to D: 03cc,01e6,01f8,03ce

* S | 0 | HSC-3.58Z | @ | @ | @ | H | @ | P | *

*** Indicates the Firmware CRC ***

Figure 18: Power On Test Ticket

Restoring Firmware to Factory Default

If the printer's power or communications is interrupted before the final 20 seconds of ***FlashImage.exe***, while copying the configuration files or the firmware image file to RAM, the printer will power up again already in ***Download Mode*** and the firmware update can be restarted by closing and starting ***FlashImage.exe*** again.

Otherwise, if the printer's power or communications is interrupted during the final 20 seconds of FlashImage.exe, while copying the firmware image from RAM to Flash, the software may not have been able to complete update. If the printer is unresponsive after the power has been restored (will not paper feed) then the printer will need to be restored to factory default. This can be done by following the following steps:

Download Anchor USB Drivers

1. Go to Nanoptix's web site: http://www.Nanoptix.com and click on the Support section in the top right of the page.

Figure 19: Home Page Of http://www.Nanoptix.com - Support Section Shown

2. Scroll down the support page and click on the ***Anchor USB Drivers*** link to download the drivers needed for Windows to detect the PayCheck High Speed Couponing printer in ***Factory Boot Mode***.

Figure 20: Anchor USB Drivers Download Section

3. Download and save the Anchor USB Drivers ZIP file to a known location on your hard drive.
   (Example: c:\anchor\)

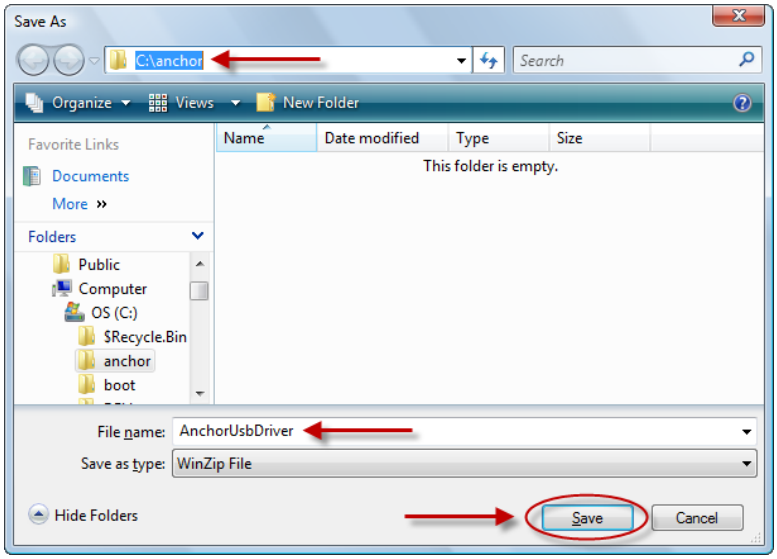

Figure 21: Sample Save As Screen With Sample Directory

Extract Anchor USB Drivers

Extract the whole contents of the previously downloaded ZIP file to a known location on your hard drive using WinZip or the ZIP extractor of your preference.

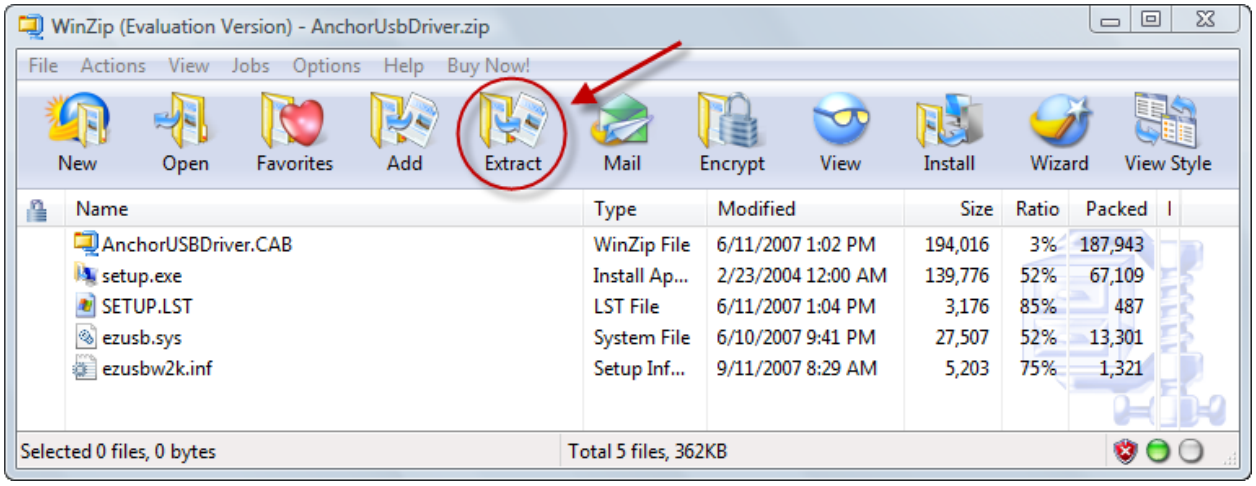

Figure 22: Example From WinZip Showing The Extract Button

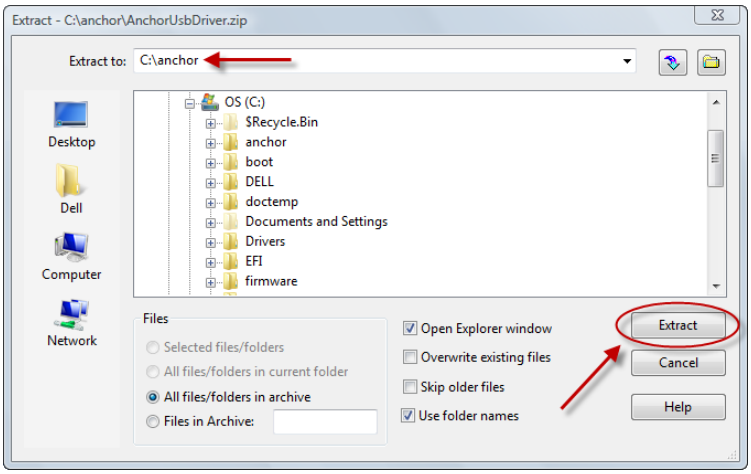

Figure 23: Example From WinZip Showing The Extract Dialog

Install Anchor USB Drivers

1. Navigate to the folder where the ***Anchor USB Drivers*** ZIP was extracted.

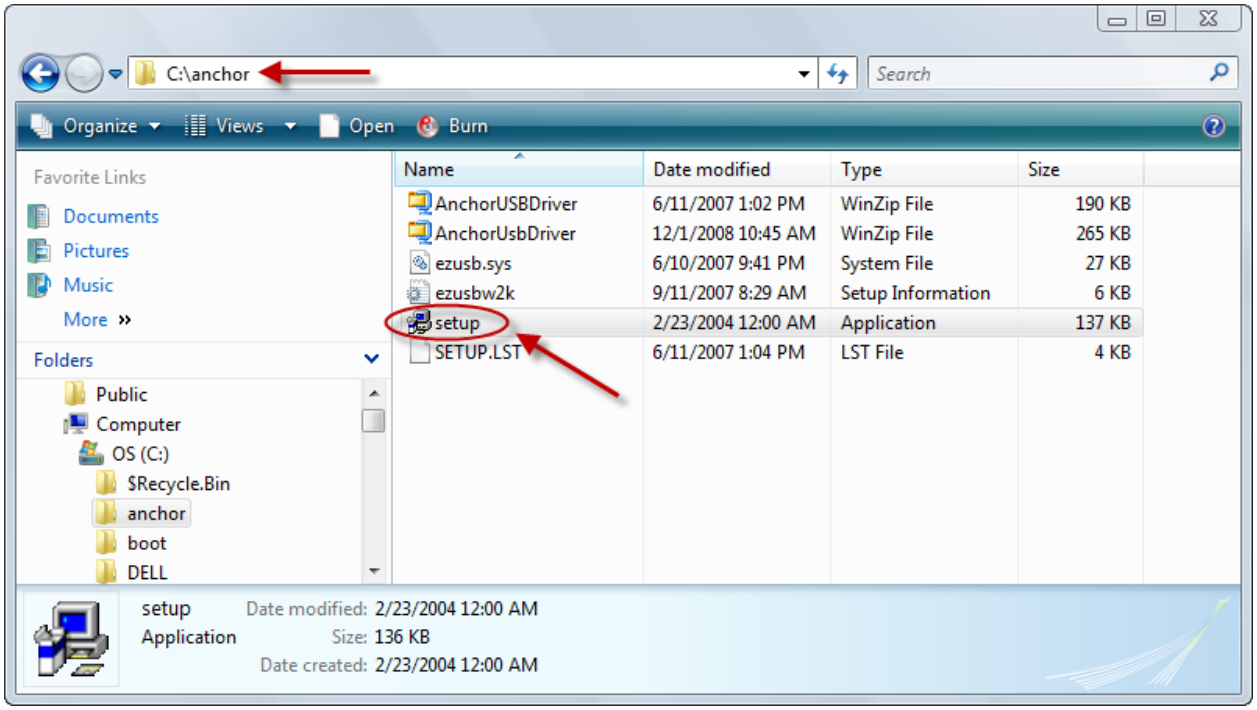

Figure 24: Extracted Folder For Anchor USB Drivers

2. Run the ***setup.exe*** file to install the ***Anchor USB Drivers***.

3. If a ***Security Warning*** dialog appears, click on the ***Run*** button.

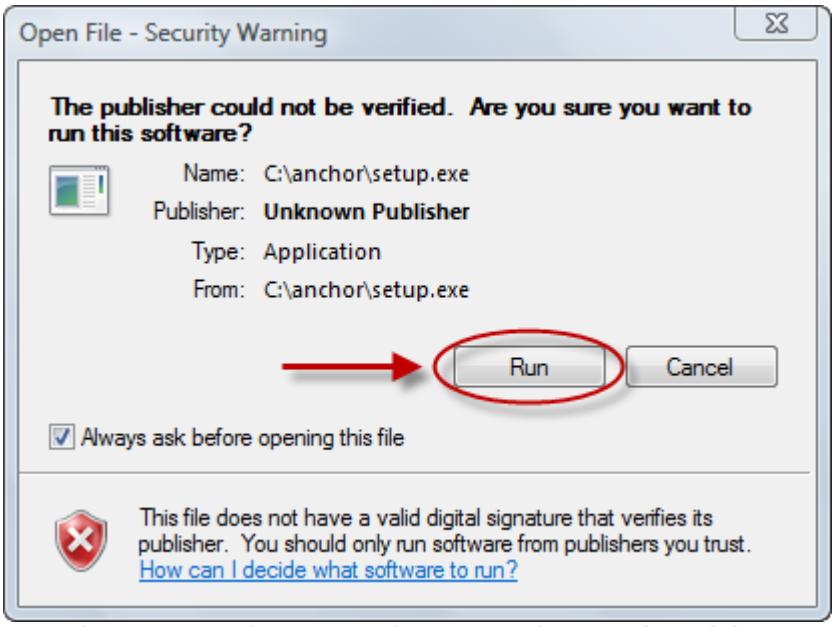

Figure 25: Anchor USB Drivers Security Warning Dialog

4. Click ***OK*** button to begin ***Anchor USB Drivers*** setup.

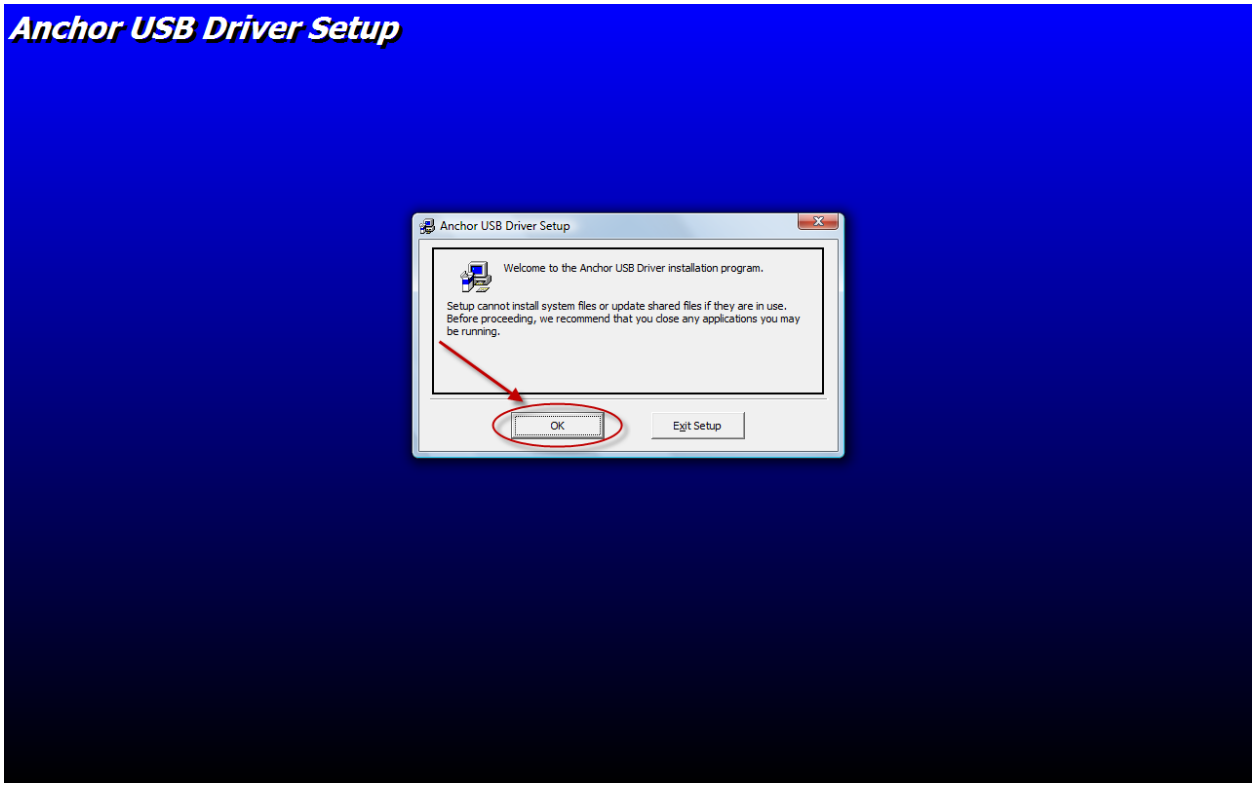

Figure 26: Anchor USB Drivers Setup Screen 1

5. Click the button with the picture of the Computer to begin installing the drivers. *Optionally, the install directory can also be set to a custom location.*

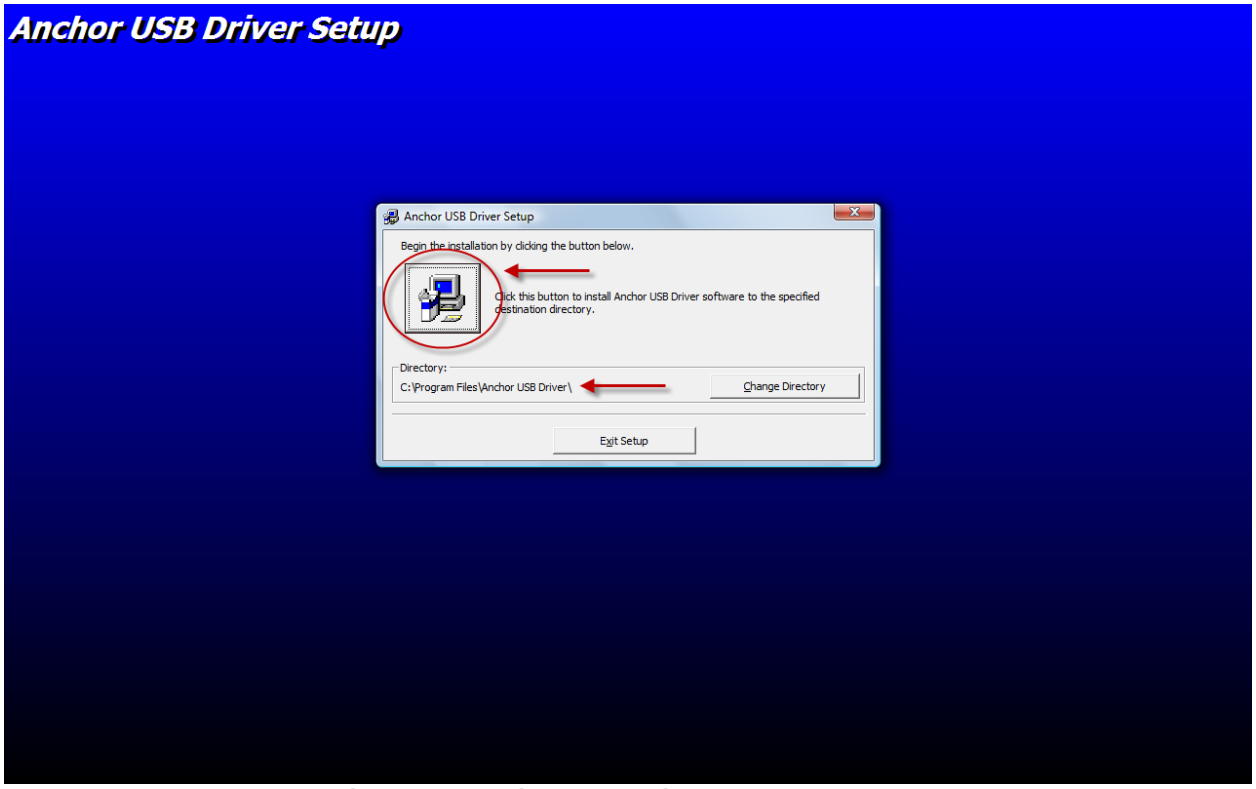

Figure 27: Anchor USB Drivers Setup Screen 2

6. Click the ***OK*** button to complete the ***Anchor USB Drivers*** installation.

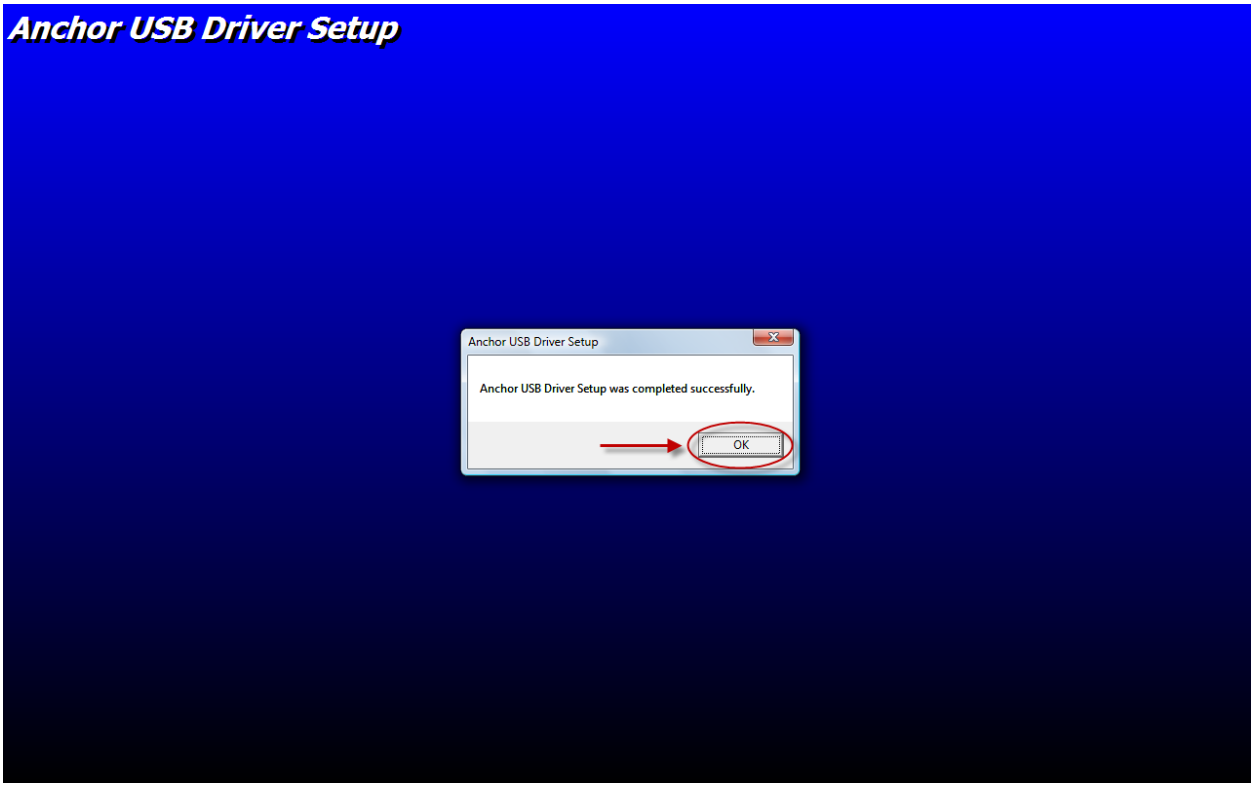

Figure 28: Anchor USB Drivers Setup Screen 3

Access DIP Switches

ESD PROTECTION (SUCH AS A WRIST STRAP) MUST BE USED ANYTIME A PCB IS EXPOSED

1. Remove the power and communication connections from the printer.
2. Remove the paper stack from the ***Ticket Tray*** and remove the 4 screws holding the ***Ticket Tray Base*** to the frame.

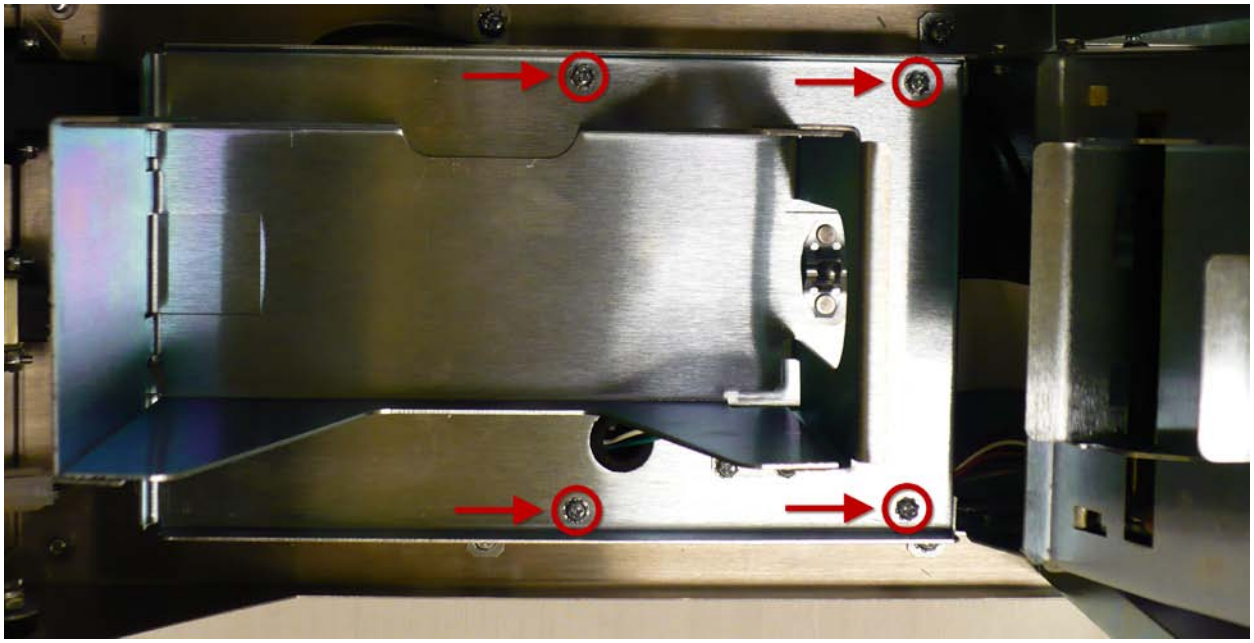

Figure 29: 4 Screws Holding Ticket Tray Base To The Frame

3. Carefully remove the ***Ticket Tray*** and ***Ticket Tray Base*** while leaving the ***Paper Low Sensor*** connected to the ***Main Board***. The ***Paper Low Sensor*** cable is long enough to move the ***Ticket Tray Base*** to the side of the frame.

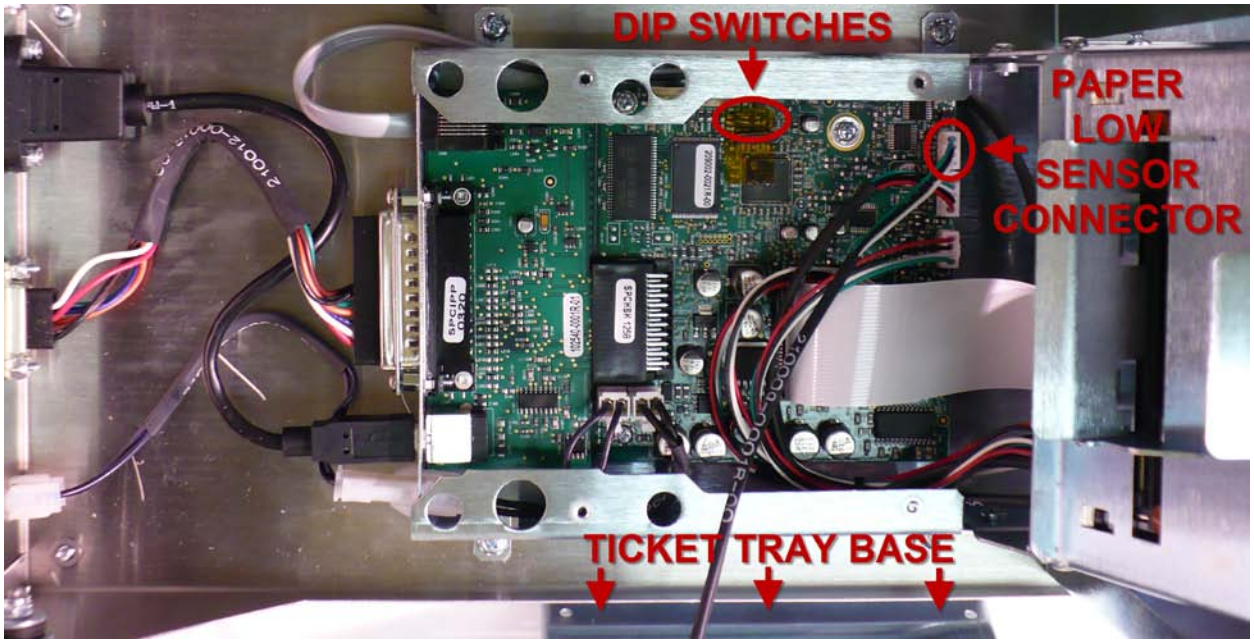

Figure 30: Main Board Shown With Ticket Tray Base Removed

4. Locate the ***DIP Switches*** and move both switches to the ***ON*** position. This will place the printer into ***Boot Mode*** on power up.

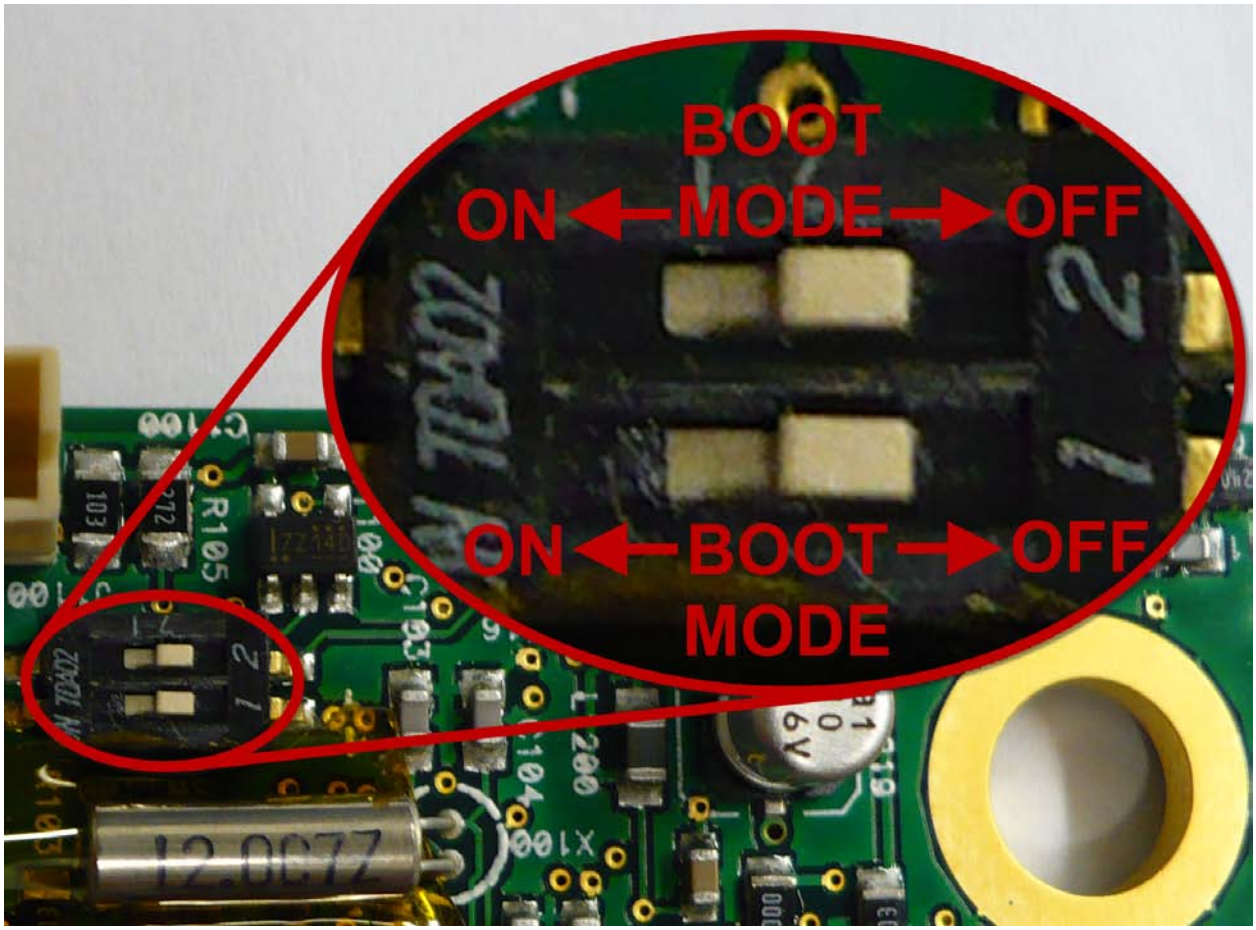

Figure 31: DIP Switches Shown To Place The Printer In Boot Mode

5. Apply power to the printer.
6. Once the green power LED has been on for at least 3 seconds, move the ***DIP Switches*** back to the ***OFF*** Position. Leave power applied to the printer.
7. Reverse the above steps to reassemble the printer.

Connecting The Printer To The Windows Host Computer

1. Connect the printer to the Windows host computer via the USB connection. The Windows host computer will open the ***Found New Hardware*** dialog for a new ***Unknown Device***.

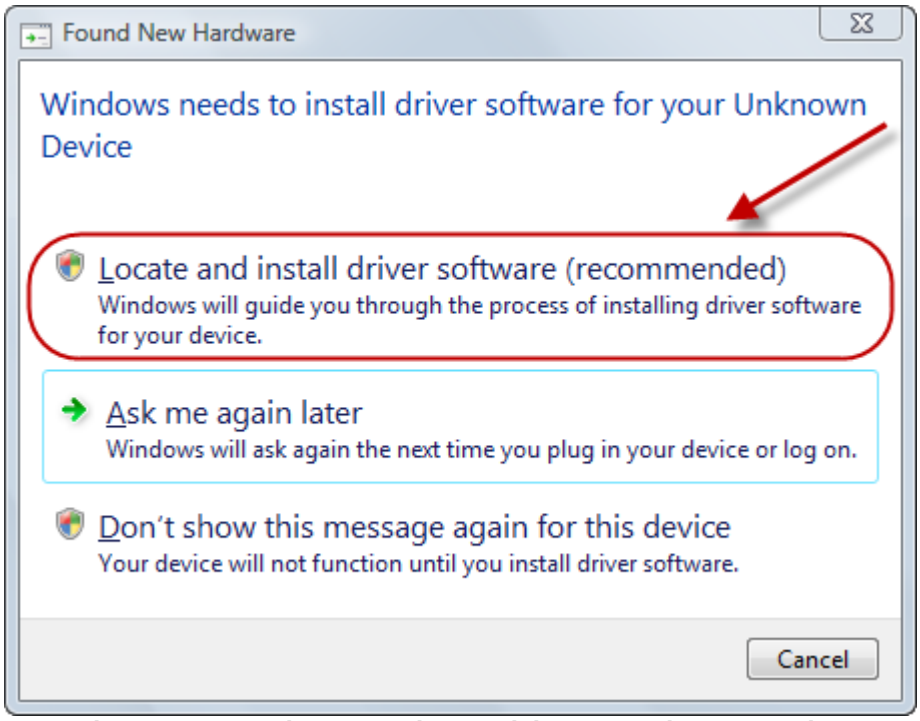

Figure 32: Found New Hardware Dialog For Unknown Device

2. Click ***Locate and install driver software (recommended)***.

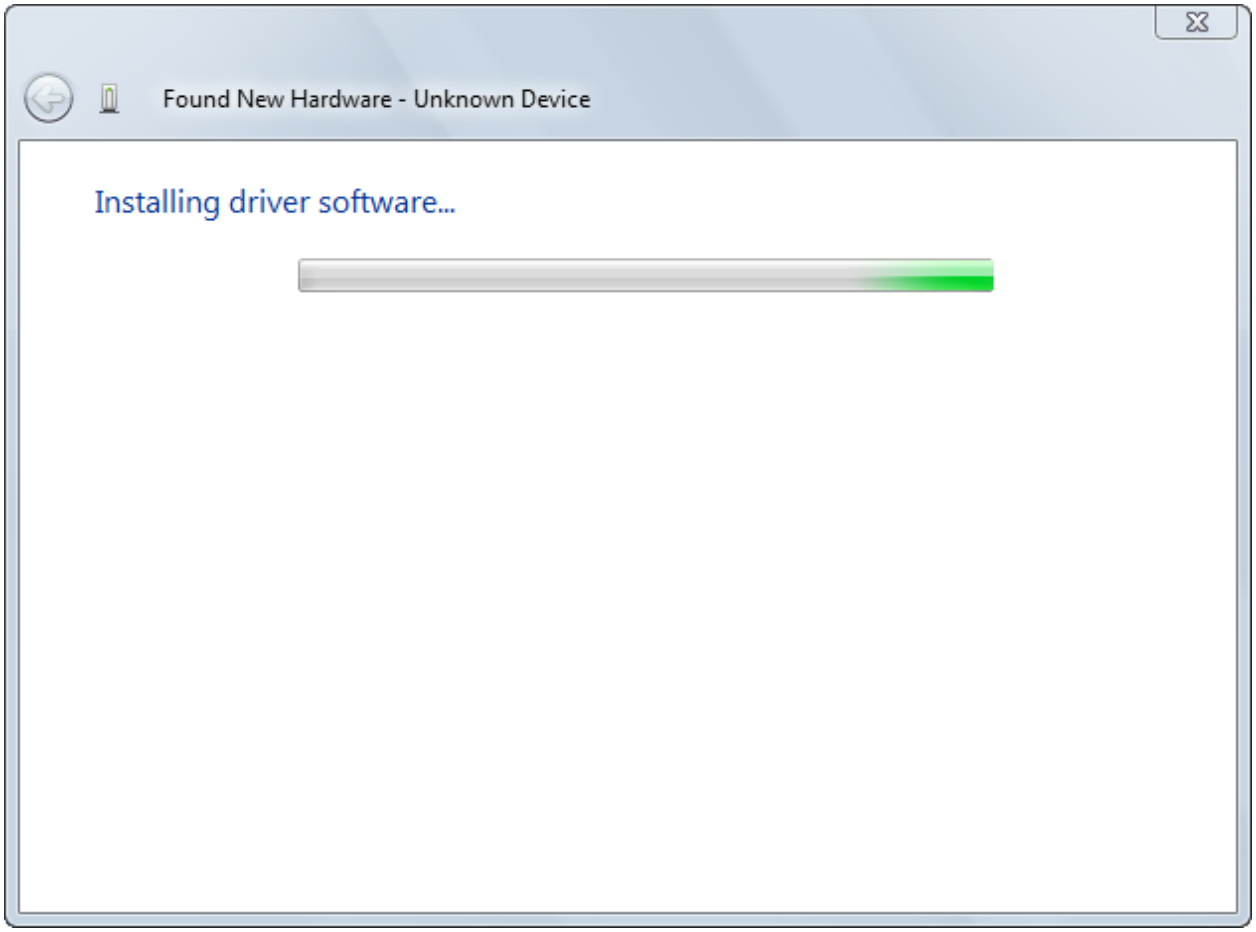

Figure 33: Found New Hardware Installing Dialog

3. If a ***Windows Security*** dialog opens because ***Windows can't verify the publisher of this driver software***, click on ***Install this driver software anyway***. Once this option is selected, Windows will continue to install the driver.

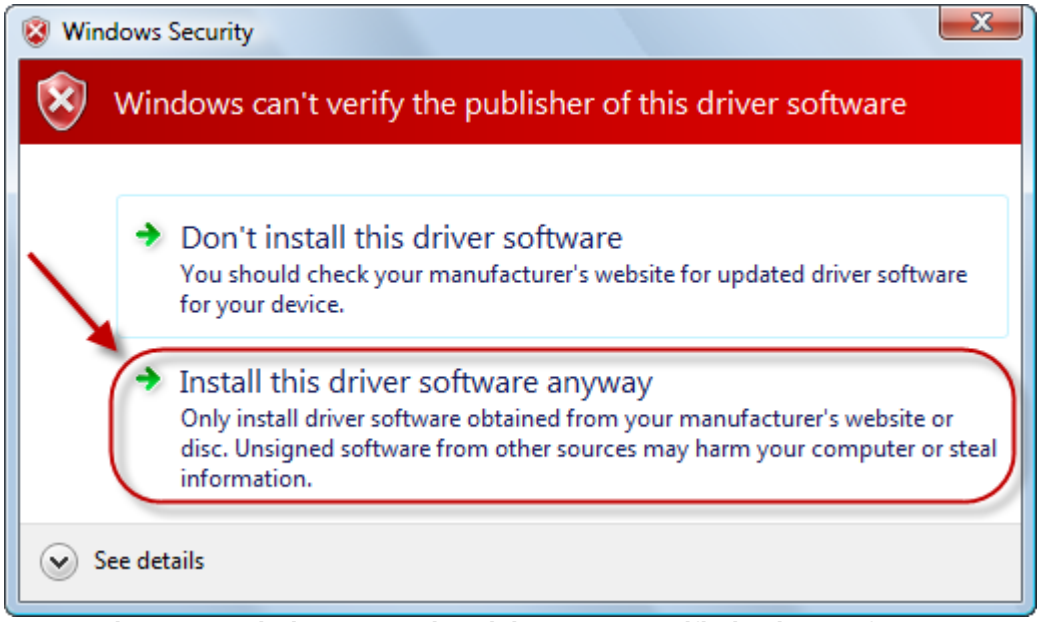

Figure 34: Windows Security Dialog For Unverified Driver Software

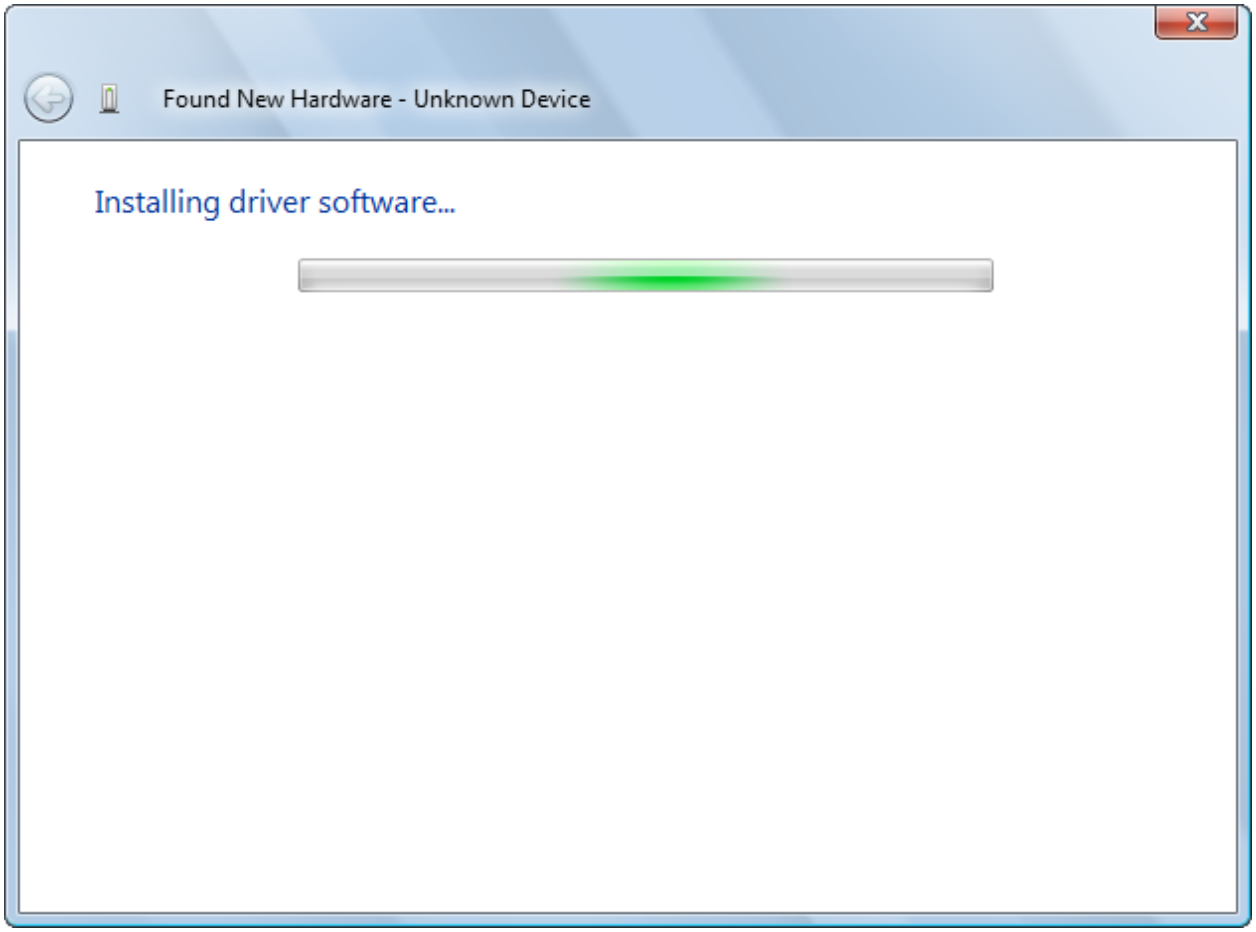

Figure 35: Found New Hardware Installing Dialog

4. When driver and new hardware has finished installed, the Close button can be clicked to close the window.

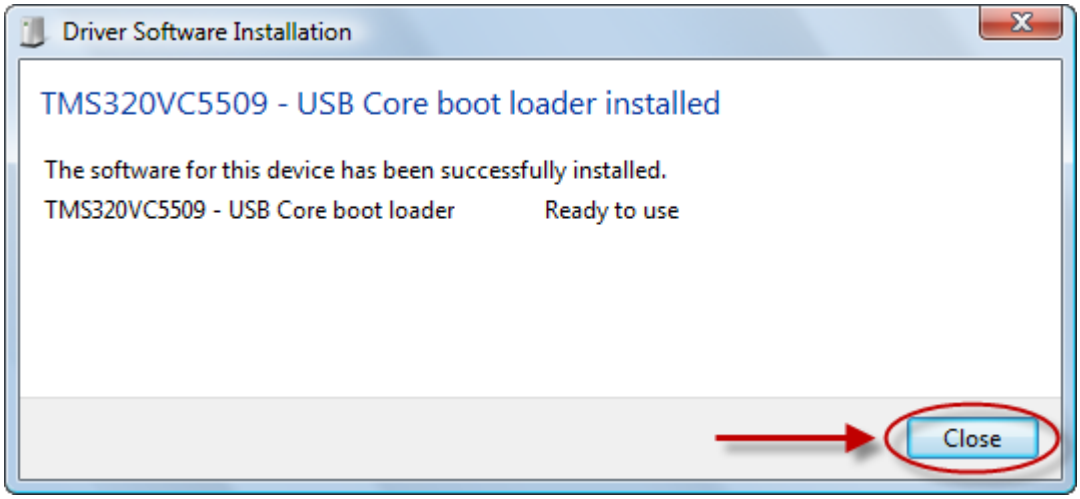

Figure 36: Driver/New Hardware Installation Completed Dialog

5. To verify that the driver and hardware has been installed correctly, open the ***Device Manager*** in Windows. This can be done by clicking on ***Start → Control Panel → System (In Classic View) → Device Manager***. Expand the ***Universal Serial Bus controllers*** and find ***TMS320VC5509 – USB Core boot loader***. If ***TMS320VC5509 – USB Core boot loader*** is listed then the driver and hardware has been installed correctly.

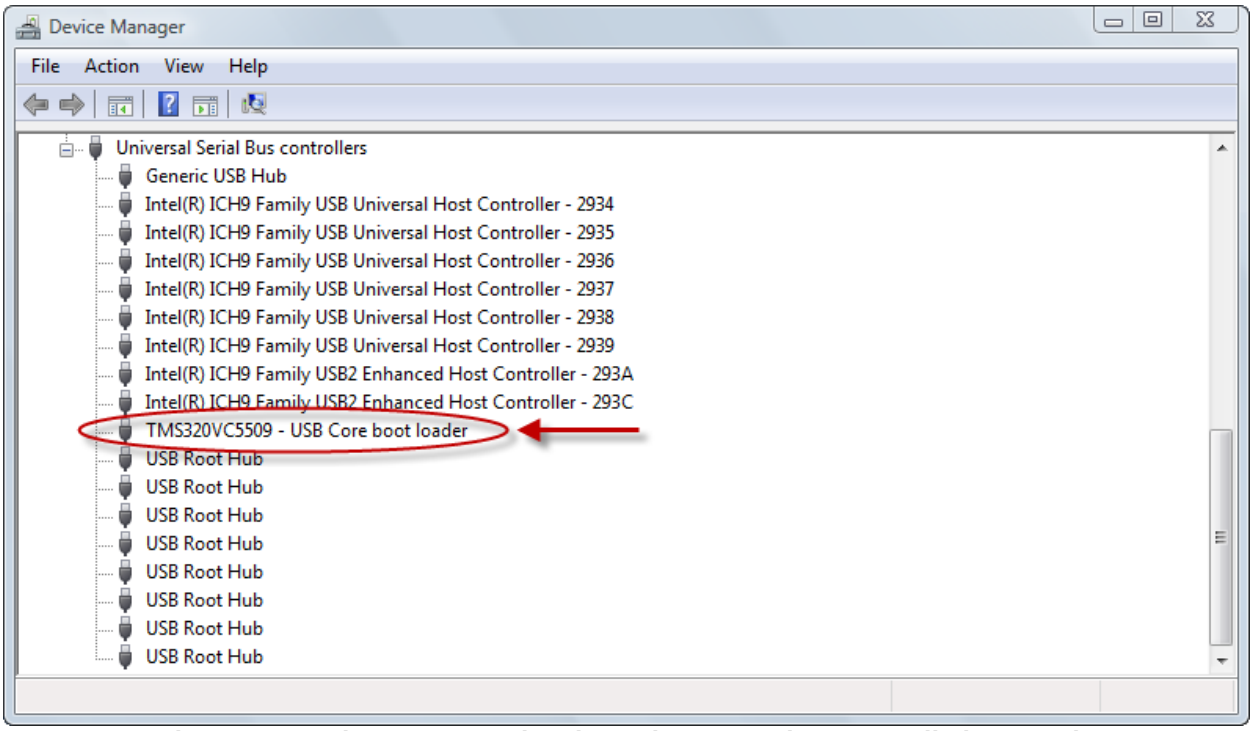

Figure 37: Device Manager Showing Driver & Hardware Installed Correctly

Re-Flashing The PayCheck High Speed Couponing Printer

The printer is now ready to run ***FlashImage.exe***. Follow the instructions outlined above in ***Firmware Upgrade Instruction → Flashing The PayCheck High Speed Couponing Printer***. Because of the previous steps, if the printer ever needs to be reset to Factory Default, the drivers and hardware will already be installed.

Note: The above steps will need to be repeated to install the ***Anchor USB Drivers*** if the printer is plugged into a different USB Port when in ***Factory Default Mode***.