

Toshiba Global Commerce Solutions
SureMark 4610 Printer

Native Microsoft Windows Driver User's Guide

Note:

Before using this information and the product it supports, be sure to read [Safety Information-Read This First](#), [Warranty Information](#), [Uninterruptible Power Supply Information](#), and the information under [Notices](#).

March 2016

This edition applies to Version 3 Release 5 of the native Microsoft Windows driver for the Toshiba SureMark 4610 printer Models TI3, TI4, TI5, TI8, TI9, TG3, TG4, TG5, TG8, TG9, TM6, TF6, TM7, TF7, 2CR, 2NR, 1CR, and 1NR.

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Safety

Before installing this product, read [Safety Information- Read This First](#).

قبل تركيب هذا المنتج، يجب قراءة الملاحظات الأمنية

Antes de instalar este produto, leia as Informações de Segurança.

在安装本产品之前，请仔细阅读 **Safety Information**
(安全信息)。

安裝本產品之前，請先閱讀「安全資訊」。

Prije instalacije ovog produkta obavezno pročitajte Sigurnosne Upute.

Před instalací tohoto produktu si přečtěte příručku bezpečnostních instrukcí.

Læs sikkerhedsforskrifterne, før du installerer dette produkt.

Lees voordat u dit product installeert eerst de veiligheidsvoorschriften.

Ennen kuin asennat tämän tuotteen, lue turvaohjeet kohdasta Safety Information.

Avant d'installer ce produit, lisez les consignes de sécurité.

Vor der Installation dieses Produkts die Sicherheitshinweise lesen.

Πριν εγκαταστήσετε το προϊόν αυτό, διαβάστε τις πληροφορίες ασφάλειας
(safety information).

לפני שתתקינו מוצר זה, קראו את הוראות הבטיחות.

A termék telepítése előtt olvassa el a Biztonsági előírásokat!

Prima di installare questo prodotto, leggere le Informazioni sulla Sicurezza.

製品の設置の前に、安全情報をお読みください。

본 제품을 설치하기 전에 안전 정보를 읽으십시오.

Пред да се инсталира овој продукт, прочитајте информацијата за безбедност.

Les sikkerhetsinformasjonen (Safety Information) før du installerer dette produktet.

Przed zainstalowaniem tego produktu, należy zapoznać się
z książką "Informacje dotyczące bezpieczeństwa" (Safety Information).

Antes de instalar este produto, leia as Informações sobre Segurança.

Перед установкой продукта прочтите инструкции по
технике безопасности.

Pred inštaláciou tohto zariadenia si pečítajte Bezpečnostné predpisy.

Pred namestitvijo tega proizvoda preberite Varnostne informacije.

Antes de instalar este producto, lea la información de seguridad.

Läs säkerhetsinformationen innan du installerar den här produkten.

About this guide

This guide describes how to install and configure Version 3 Release 5 of the native Microsoft Windows® driver for Toshiba SureMark™ 4610 printers.

This driver supports the following 4610 printer models: TI3, TI4, TI5, TI8, TI9, TG3, TG4, TG5, TG8, TG9, TM6, TF6, TM7, TF7, 2CR, 2NR, and 1NR.

Version 3.5 of the driver runs on the following 64 bit operating systems: Windows 7, POSReady 7, Windows 8.1, and Windows 10 supports both the 32 bit and 64 bit application and API.

For 32 bit operating systems, use the Version 3 Release 5 32 bit version of the driver. The 32 bit version runs on the following 32 bit operating systems: Windows 7, Windows Server 2003, POSReady 2009, and POSReady 7.

Who should read this guide

This guide is intended for personnel who are connecting a Toshiba SureMark 4610 printer to a Microsoft Windows machine, installing the native Windows driver, and configuring the printer options.

Where to find more information

A CD-ROM is available that contains books that are part of the Toshiba Global Commerce Solutions (TGCS) Library Collection, SK2T-0331.

Current versions of Toshiba publications are available on the [Toshiba support site](#).

1. Select a product from the hardware or software drop-down list.
2. Click **Publications** to view a list of available documents.

The following publications and service diskettes provide additional information on installing the native Microsoft windows driver for Toshiba SureMark 4610 printers.

- *SureMark Printers: Hardware Service Manual*, GY27-0355
- *SureMark 4610 Printers: DBCS User's Guide for Models TI5, TG5, TF7, TM7, 2CR, 2NR, 1CR, and 1NR*, GA27-4256
- *SureMark 4610 Printers: User's Guide for Models TI1, TI2, TI3, TI4, TI8, TI9, TG3, TG4, TG8, TG9, TF6, TM6, 2CR, 2NR, 1CR, and 1NR*, GA27-4151
- *SureMark Printers: Fonts and Logos Utility Diskette*
- *SureMark Printers: Firmware Update Diskettes*
- *4693 Point-of-Sale Terminals Reference Diskette*
- *4694/4695 Point-of-Sale Terminals Service Diskette*
- *Safety Information – Read This First*, GA27-4004.
- *SurePOS 700 Series: System Reference*, SA27-4220.
- *SurePOS 500 Series: System Reference*, SA27-4255.
- *POSS Programming Reference and User's Guide*, SC30-3560

Resources on the Internet

The [Toshiba support site](#) contains publications for the SureMark printer. The Web site also provides access to diskettes, drivers, and miscellaneous documentation, such as readme files and information about original equipment manufacturer (OEM) papers that have been certified.

Select Support at the left on the main page of the Web site, then select SureMark Printers. The displayed page contains links to documentation, diskettes, and drivers that you can download for the SureMark printers.

Notice statements

Notices in this guide are defined as follows:

Notes

These notices provide important tips, guidance, or advice.

Important

These notices provide information or advice that might help you avoid inconvenient or problem situations.

Attention

These notices indicate potential damage to programs, devices, or data. An attention notice is placed just before the instruction or situation in which damage could occur.

CAUTION

These statements indicate situations that can be potentially hazardous to you. A caution statement is placed just before the description of a potentially hazardous procedure step or situation.

DANGER

These statements indicate situations that can be potentially lethal or extremely hazardous to you. A danger statement is placed just before the description of a potentially lethal or extremely hazardous procedure step or situation.

Summary of changes

March 2016

| This edition includes the following updates:

- Support for System Management.
- Support for choosing the default printer during installation.
- Support for Windows 10 64-bit.

October 2014

This edition includes updates for the Sample Configuration file contents.

June 2014

This edition includes the following updates:

- Support for the paper saving feature.
- Support for the new API function: BiResetPrinter.
- Support for the Toshiba Global Commerce Solutions qualified USB/RS232 Dongle.

December 2013

This edition includes the updates:

- Support bar codes of GS1 DataBar and QR Code.
- Support for Windows 8.1 64-bit.

Chapter 1. Installing the native Windows driver

This chapter explains how to install the native Windows driver for the Toshiba SureMark 4610 printer.

Before you install

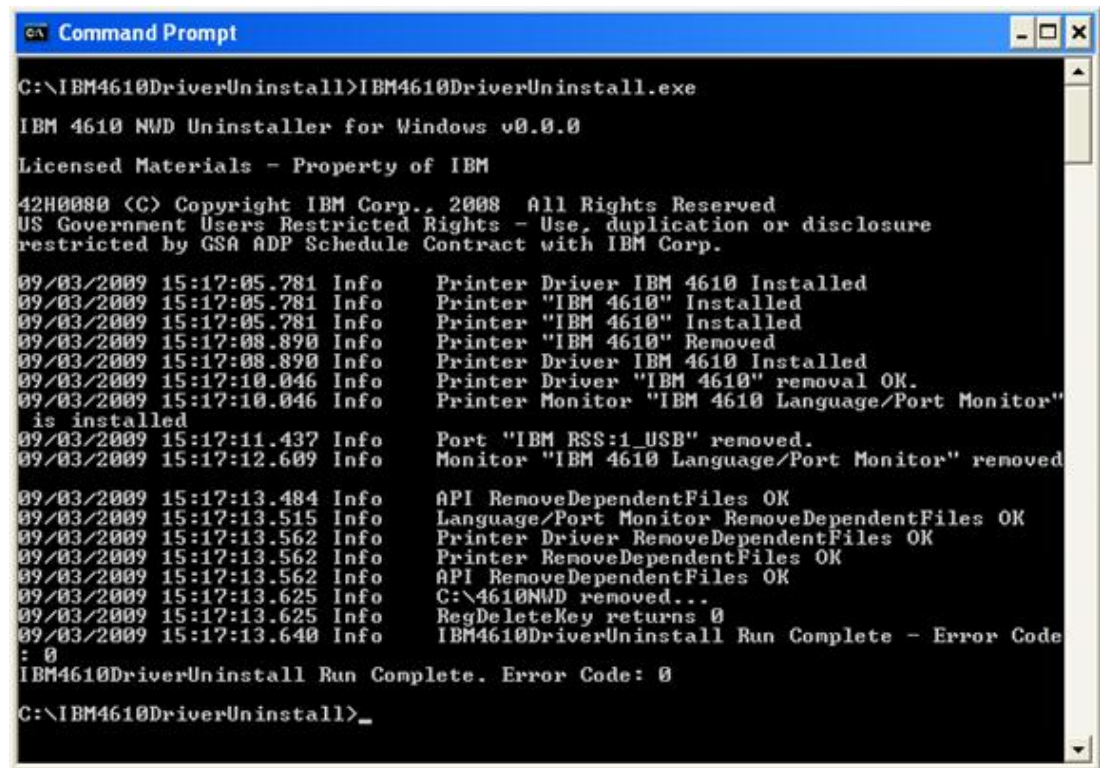
Caution: Do not connect the printer to your system until you are instructed to do so by a procedure step in this section.

This section details prerequisite steps that you must follow before you can install the native Windows driver.

Uninstalling previous driver for V2.5.0 and earlier

You must remove any previous versions of the Native Windows Driver on your system before you install NWD Version 2.5.1 or later. Perform the following steps:

1. Download the Native Windows Driver V2.5.1 or later installer package from the [Toshiba support site](#) to your system. Run the **IBM4610DriverUninstall** file that is found inside the Native Windows Driver V2.5.1 installer package.
2. Unzip the contents and save to a familiar location.
3. Open Command Prompt and navigate to the location where you have unzipped the contents of the uninstaller.
4. Run the executable with the following command, **IBM4610DriverUninstall.exe** to initiate the un-installation process.
5. Upon successful completion of the uninstall process, you should have a final Error Code of 0 (see [Figure 1](#)). Refer to the Microsoft Developer Network (MSDN) Web site at [http://www.msdn.microsoft.com/en-us/library/ms681381\(v=VS.85\).aspx](http://www.msdn.microsoft.com/en-us/library/ms681381(v=VS.85).aspx) for other error codes.



```
C:\IBM4610DriverUninstall>IBM4610DriverUninstall.exe

IBM 4610 NWD Uninstaller for Windows v0.0.0

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09/03/2009 15:17:05.781 Info Printer Driver IBM 4610 Installed
09/03/2009 15:17:05.781 Info Printer "IBM 4610" Installed
09/03/2009 15:17:05.781 Info Printer "IBM 4610" Installed
09/03/2009 15:17:08.890 Info Printer "IBM 4610" Removed
09/03/2009 15:17:08.890 Info Printer Driver IBM 4610 Installed
09/03/2009 15:17:10.046 Info Printer Driver "IBM 4610" removal OK.
09/03/2009 15:17:10.046 Info Printer Monitor "IBM 4610 Language/Port Monitor"
is installed
09/03/2009 15:17:11.437 Info Port "IBM RSS:1_USB" removed.
09/03/2009 15:17:12.609 Info Monitor "IBM 4610 Language/Port Monitor" removed

09/03/2009 15:17:13.484 Info API RemoveDependentFiles OK
09/03/2009 15:17:13.515 Info Language/Port Monitor RemoveDependentFiles OK
09/03/2009 15:17:13.562 Info Printer Driver RemoveDependentFiles OK
09/03/2009 15:17:13.562 Info Printer RemoveDependentFiles OK
09/03/2009 15:17:13.562 Info API RemoveDependentFiles OK
09/03/2009 15:17:13.625 Info C:\4610NWD removed...
09/03/2009 15:17:13.625 Info RegDeleteKey returns 0
09/03/2009 15:17:13.640 Info IBM4610DriverUninstall Run Complete - Error Code
: 0
IBM4610DriverUninstall Run Complete. Error Code: 0

C:\IBM4610DriverUninstall>
```

Figure 1. Uninstaller progress screen

6. For further logging details provided by the Uninstaller, refer to the ReadMe.txt in the zip contents.

Unattended uninstallation procedure for NWD Version 2.5.1 or later

The following steps describe a 'silent' uninstallation procedure.

1. Open a Command Prompt window (Start->Run, then type "cmd" and press Enter).
2. Navigate to the location of the Setup.exe.
3. Wrap in a batch file or type the following command in the Command Prompt window:
setup.exe /s/x/v"/qn".
4. Press Enter.

Attended Uninstallation Procedure

There are two ways to uninstall the Native Windows Printer driver:

1. Using the Control Panel
2. Using the Setup.exe

Using the Control Panel

1. Navigate to the Control Panel window (see [Figure 2](#)).

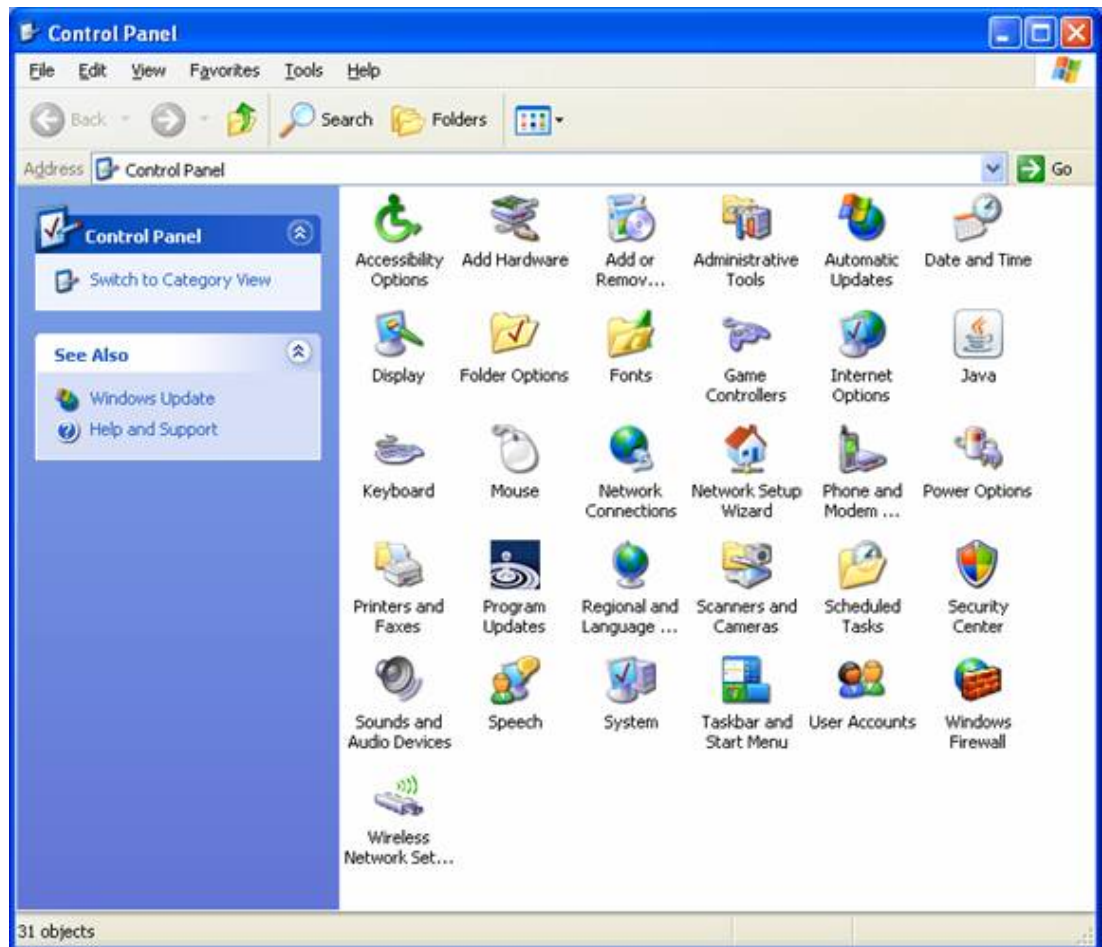


Figure 2. Control Panel window

2. Double-click the **Add or Remove Programs** icon.
3. Search for the "Toshiba 4610 Suremark Printers Native Windows Driver". Click **Remove** to uninstall the driver (see [Figure 3](#)).

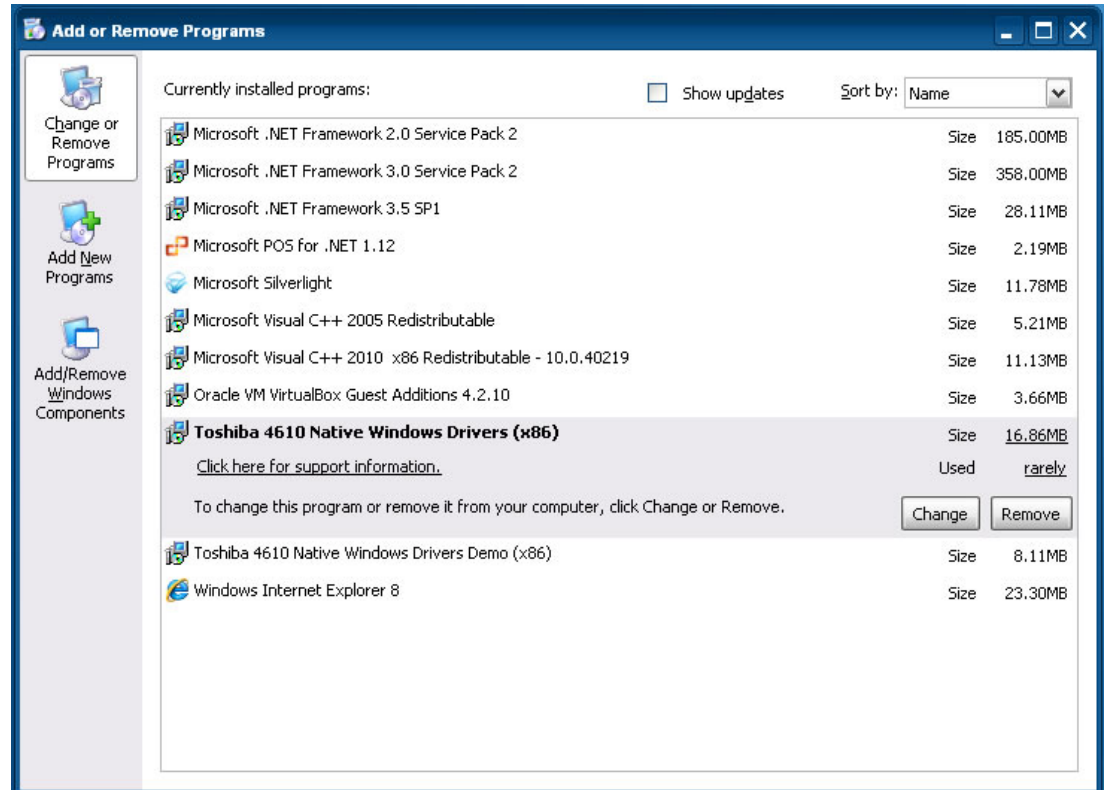


Figure 3. Add or Remove Programs

4. The Add or Remove Programs window opens. Click **Yes** to uninstall the driver.



Figure 4. Yes or No screen

Through the Setup.exe

1. Double-click the setup.exe used to install the printer driver. The InstallShield Wizard Welcome window opens. See [Figure 5](#).

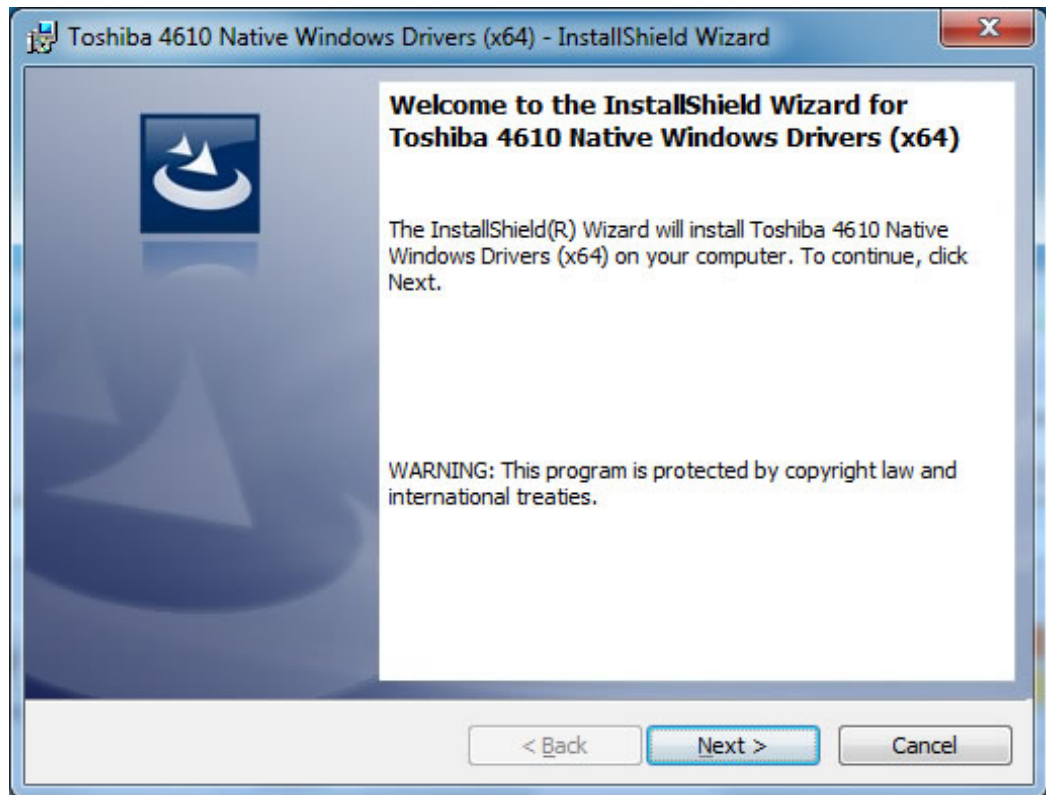


Figure 5. Welcome window

2. Click **Next**. The Program Maintenance window opens (see [Figure 6](#)). Select the **Remove** button and click **Next**.

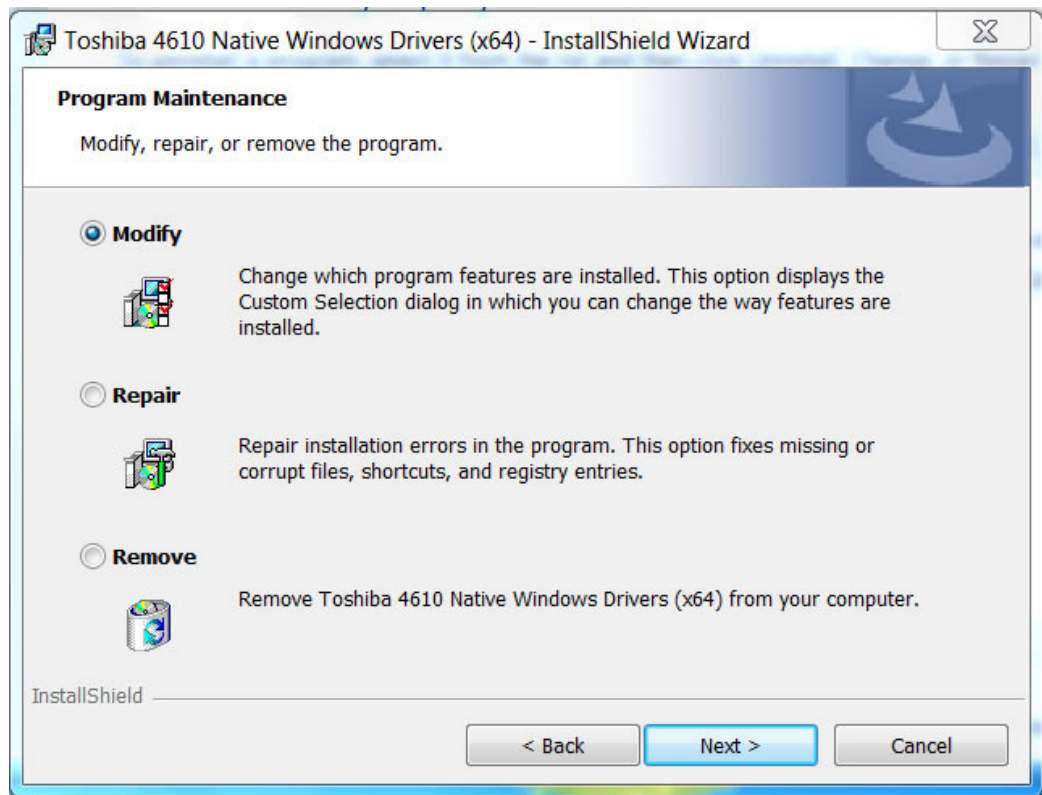


Figure 6. Program Maintenance window

3. The Remove the Program window opens. Click **Remove** to remove the printer driver from the system. See [Figure 7](#).

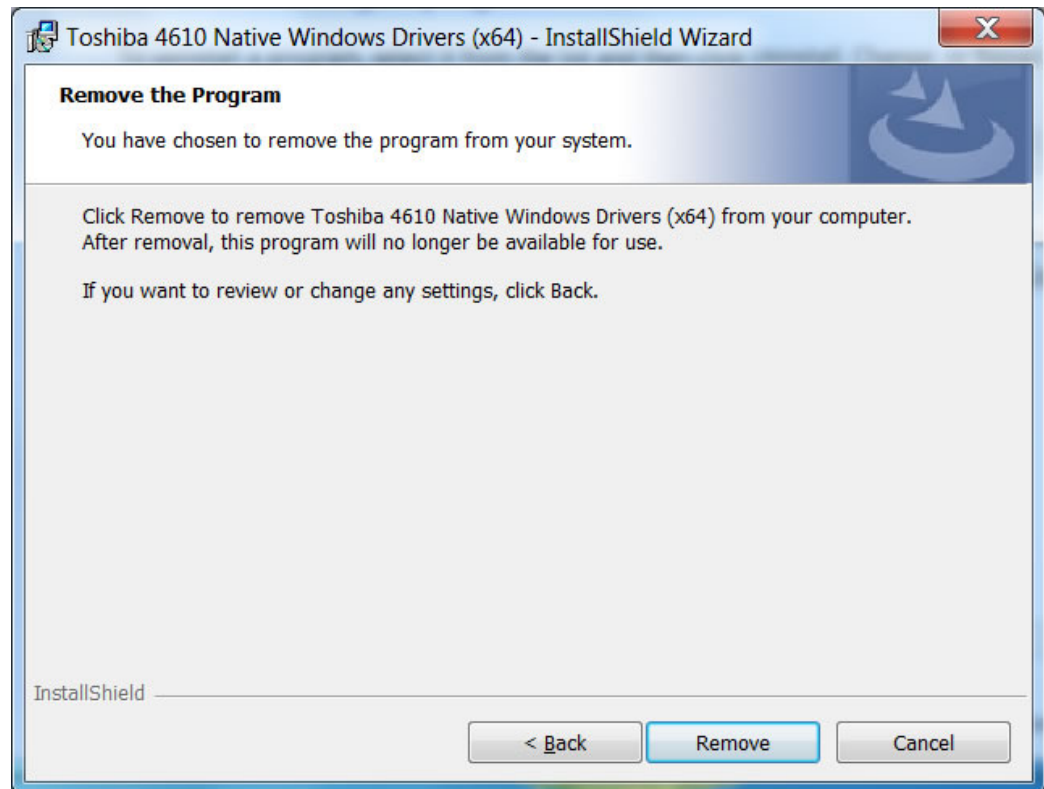


Figure 7. Remove the Program window

4. Upon Completion, the InstallShield Wizard Completed window opens. Click **Finish** to end the process. See [Figure 8](#).

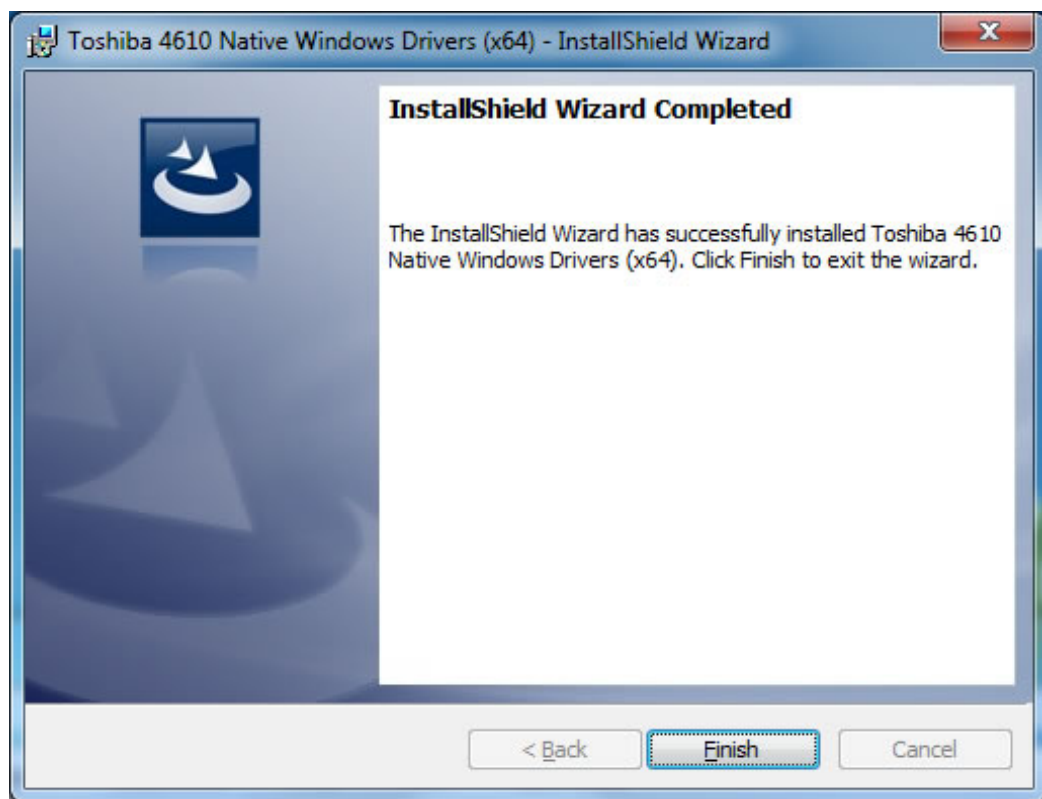


Figure 8. InstallShield Wizard Completed window

5. If the Toshiba 4610 SureMark Printer Native Windows Driver Restart window (Figure 9) opens, click **Yes** to allow the InstallShield Wizard to restart your computer.

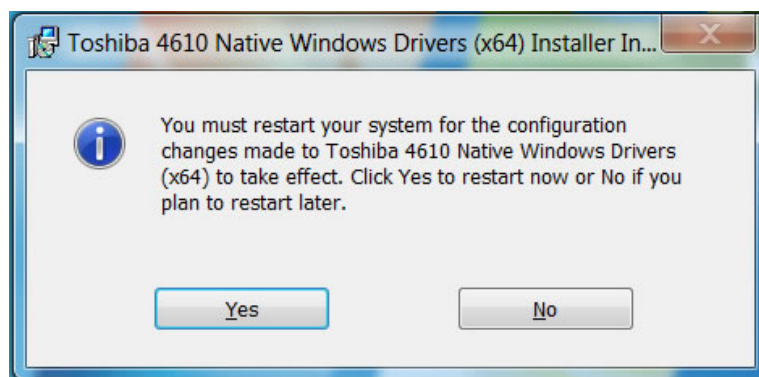


Figure 9. Restart window

Note: The following files are not created by the Microsoft Windows Installer during the installation process and therefore are not uninstalled:

- The log file in the \Toshiba\log folder.
- The dlls created in the \3 folder in the Windows Printer Directory.

Updating the printer firmware

Ensure that you have updated the 4610 printer's firmware to the newest revision level that is appropriate for your particular environment and applications.

Note: For the Ethernet printer (1xR/2xR), you must use the printer's utility tools to update the printer firmware.

Installing on a system that has UPOS drivers

There might be printing problems when the native Windows driver is installed on a system that already has UPOS drivers installed.

Then, go to the [Toshiba support site](#) and search on "4610 native Windows driver".

Setting COM ports

Note: If your printer has the USB interface adapter installed and you intend to connect it to a USB port on your computer, then skip this section and proceed to ["Attended installation procedure" on page 28](#) or ["Sample Configuration File" on page 48](#).

If your printer has the RS-232 interface adapter installed and you intend to connect it to the serial port on your computer, perform the following steps to configure the COM port:

1. Right-click your **My Computer** icon and choose **Properties**. The System Properties window opens with the General page selected.
2. Click the **Hardware** tab (see [Figure 10](#)).

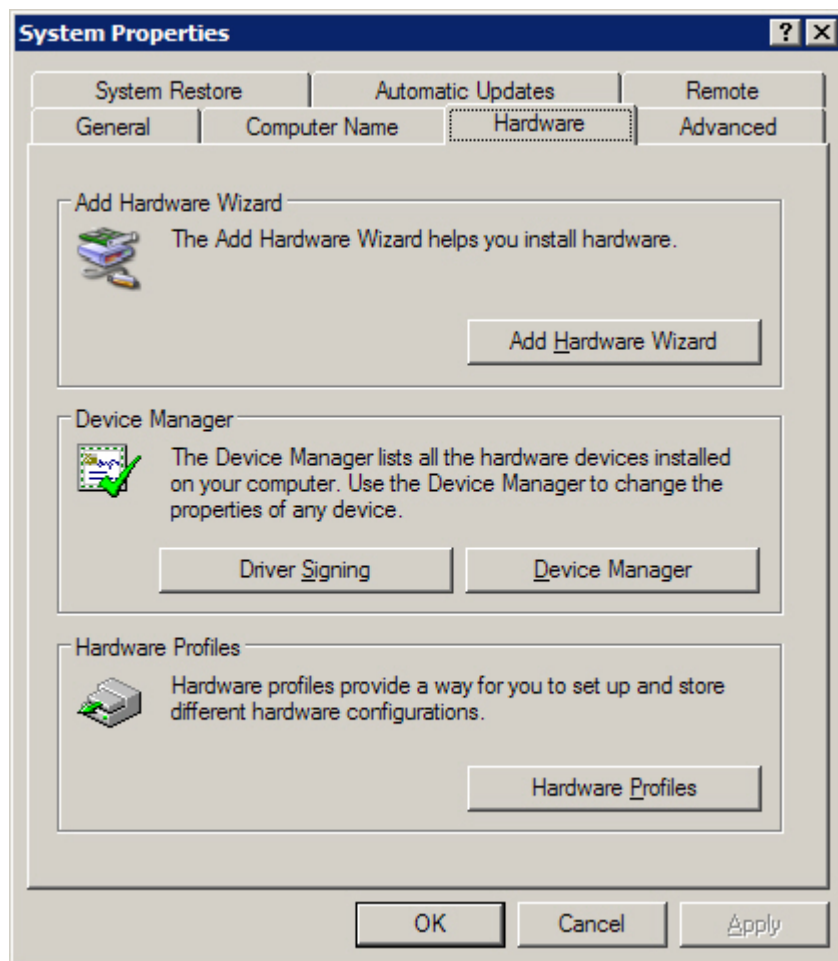


Figure 10. Hardware tab

3. Click **Device Manager**. The Device Manager window opens (see [Figure 11](#)).

4. Expand **Ports (COM & LPT)** (see [Figure 11](#)).

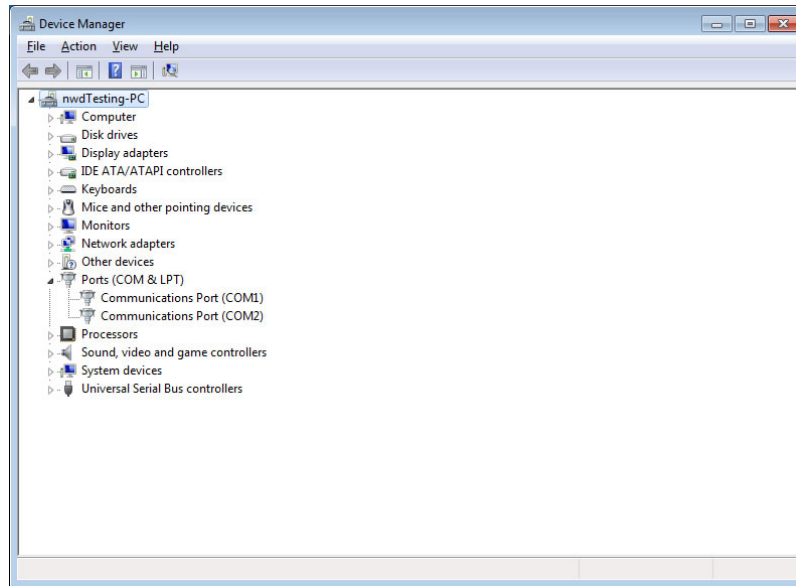


Figure 11. Device Manager window

5. Right-click **Communications Port (COM1)** and select **Properties**. The Communications Port (COM1) Properties window opens with the General page selected.

Note: If the COM1 port of your computer is already in use—perhaps for an external modem—then right-click an available COM port. If you have no available COM ports, you will have to install the USB interface adapter into your printer and connect it to an available USB port on your computer. Then proceed to [“Attended installation procedure” on page 28](#) or [“Sample Configuration File” on page 48](#).

6. Click the **Port Settings** tab (see [Figure 12](#)).

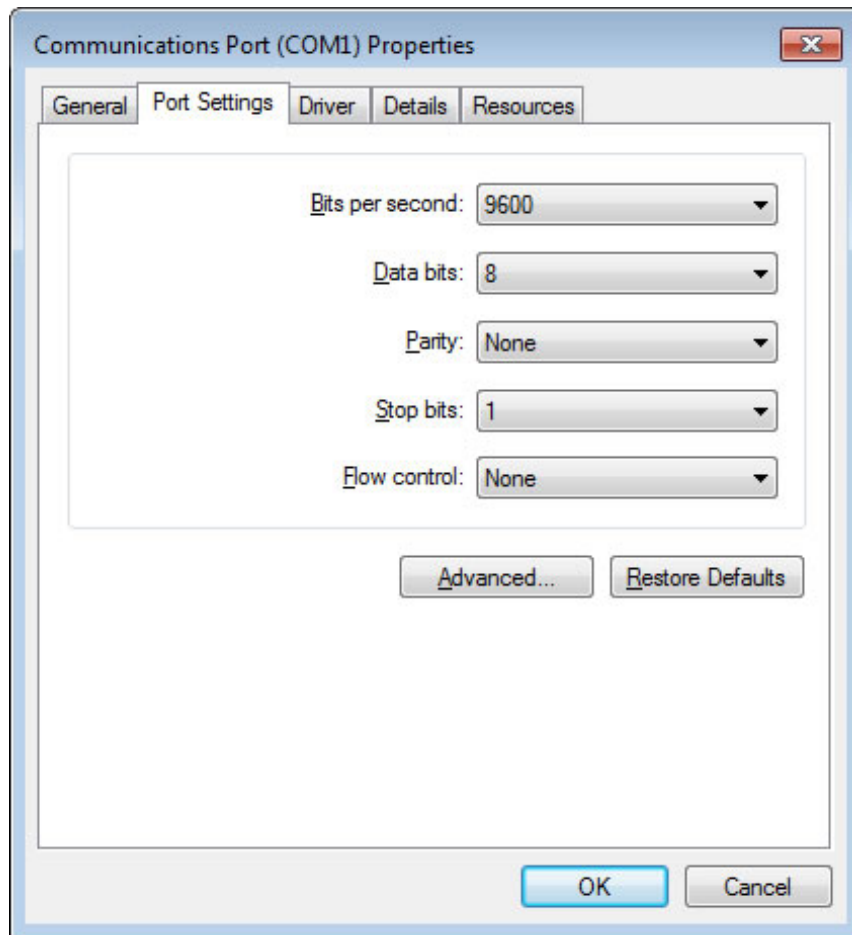


Figure 12. Port Settings tab

7. From the Bits per second list, select one of the following (see [Figure 13](#)):
 - **9600** or **19200**—All Models
 - **115200**—Models Tx8, Tx9, 2NR, 2CR, 1NR and 1CR only

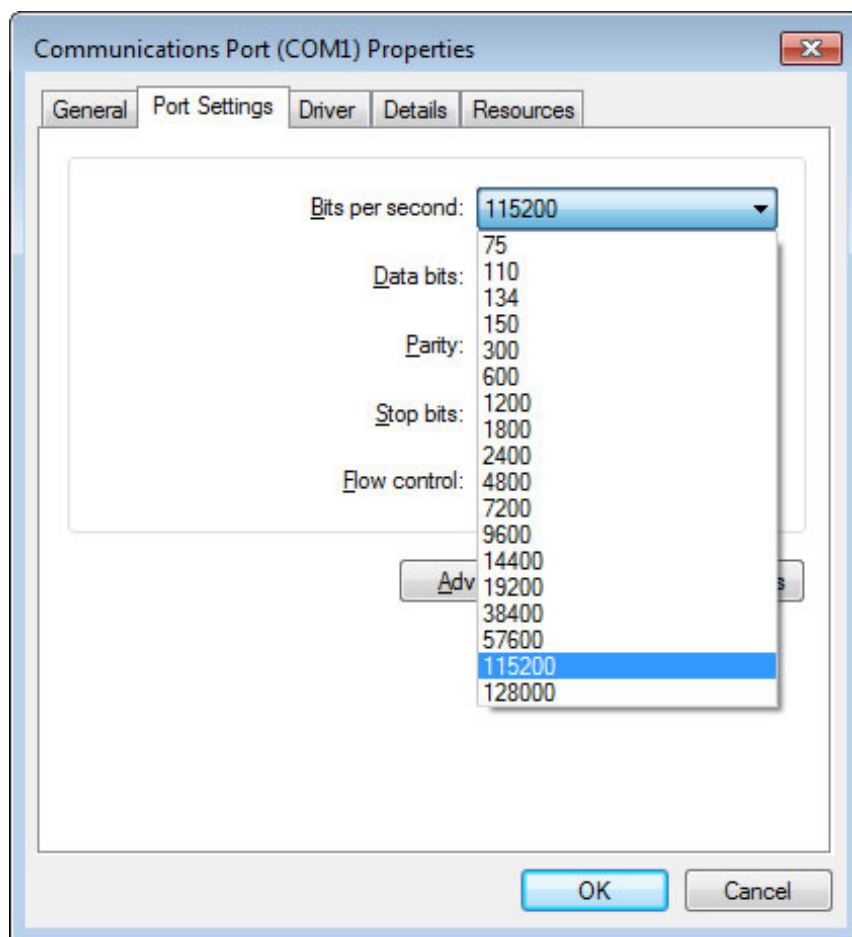


Figure 13. Setting the bits per second

8. Click **OK** to save your settings; then close the Device Manager window.
Your COM port is ready to communicate with the printer.

Attended installation procedure

1. Download the Native Windows Driver from the [Toshiba support site](#).
2. Double-click the setup.exe. The InstallShield Wizard opens. See [Figure 14](#).

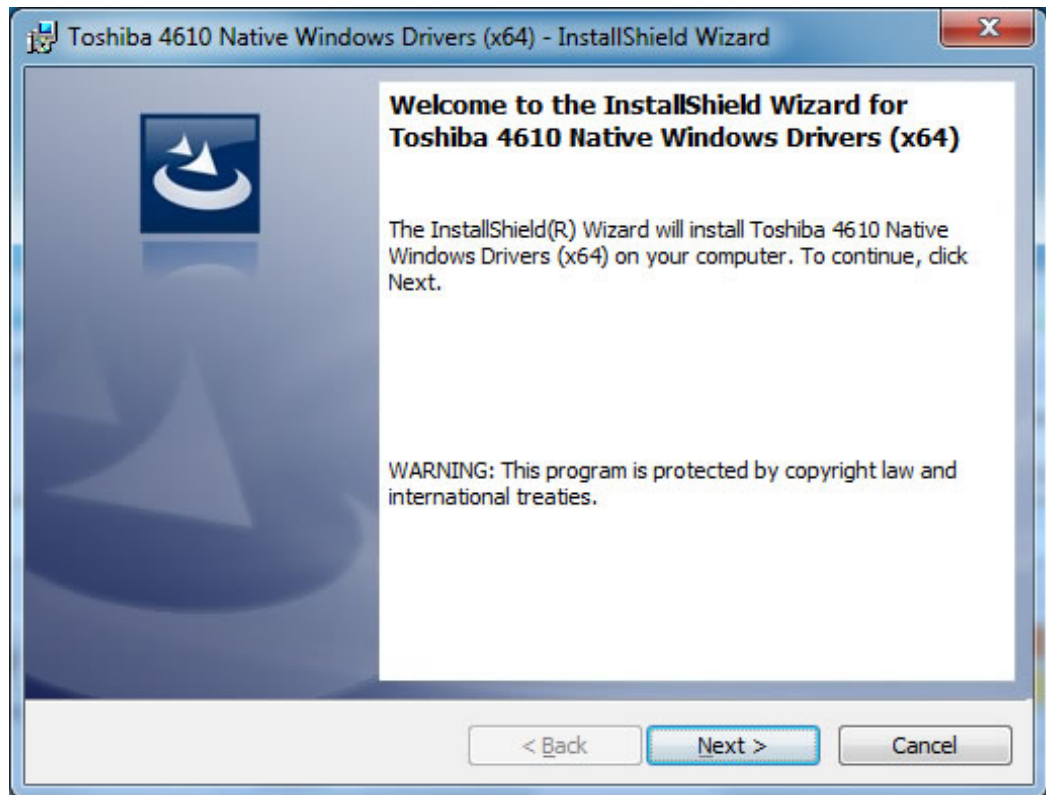


Figure 14. Welcome window

3. Select **Next** to continue. The License Agreement dialog box opens. See [Figure 15](#).

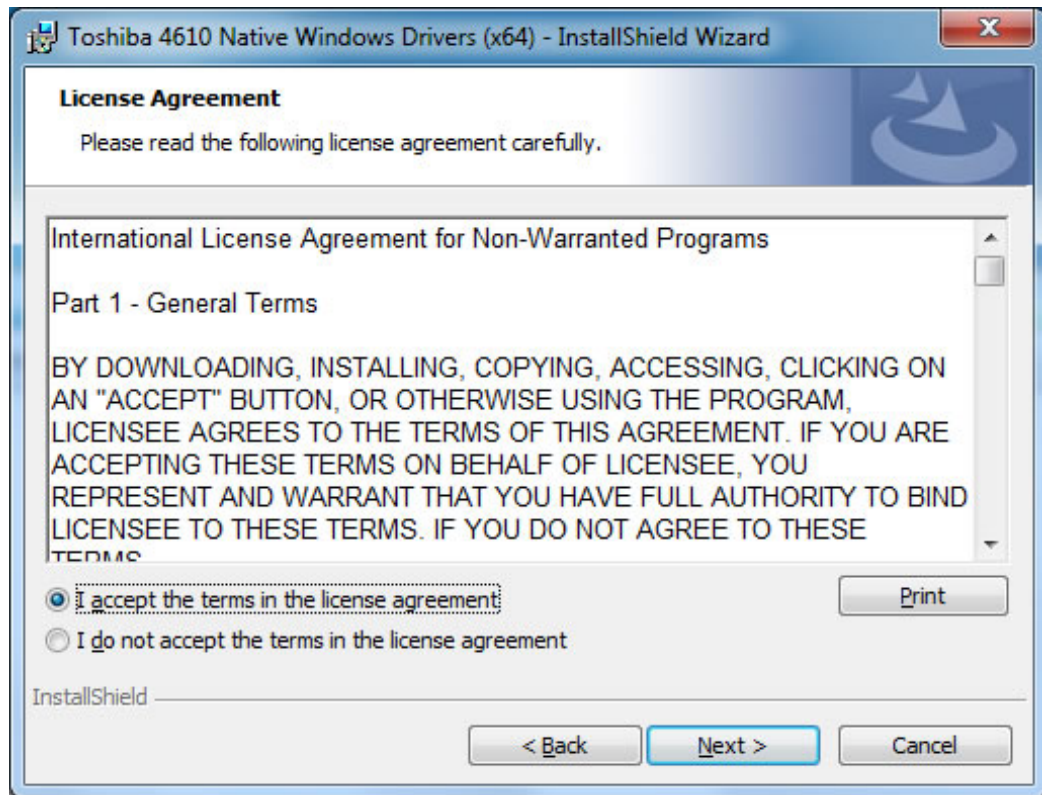


Figure 15. License Agreement window

4. Click **"I accept the terms in the license agreement"** and click **Next**. The Customer Information dialog box opens. See [Figure 16](#).

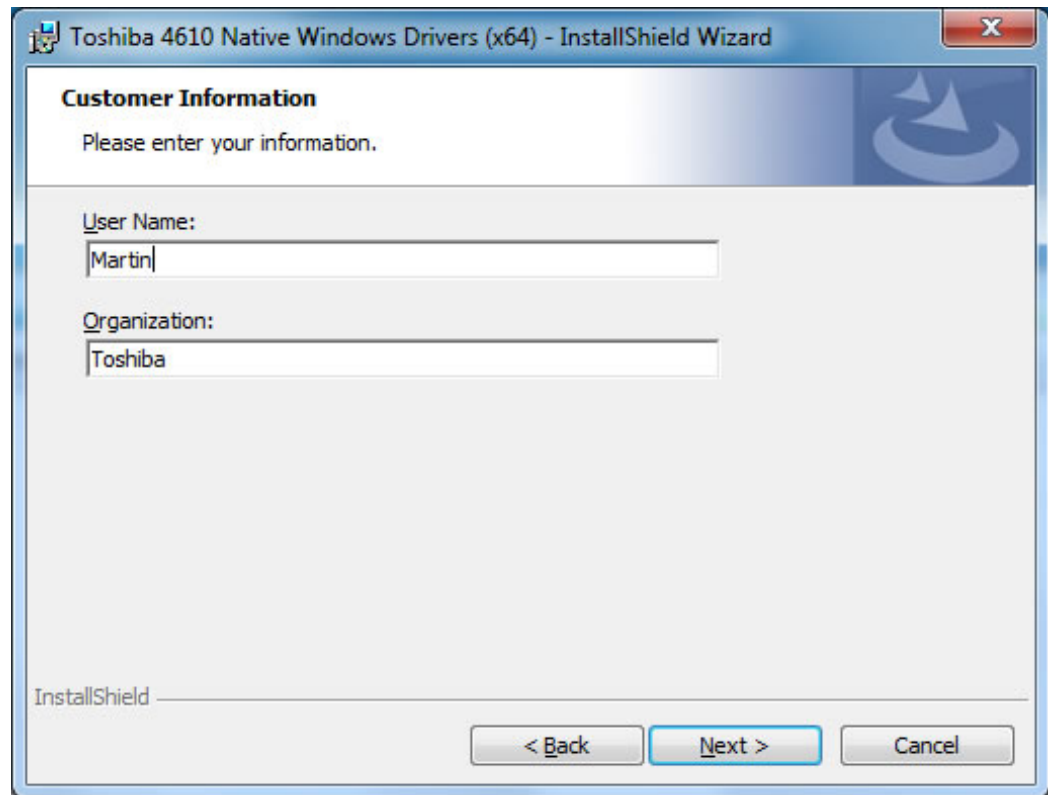


Figure 16. Customer Information window

5. Change the Customer Information accordingly and click **Next**.
6. Select the printer setting required and click **Next** (see [Figure 17](#)) .

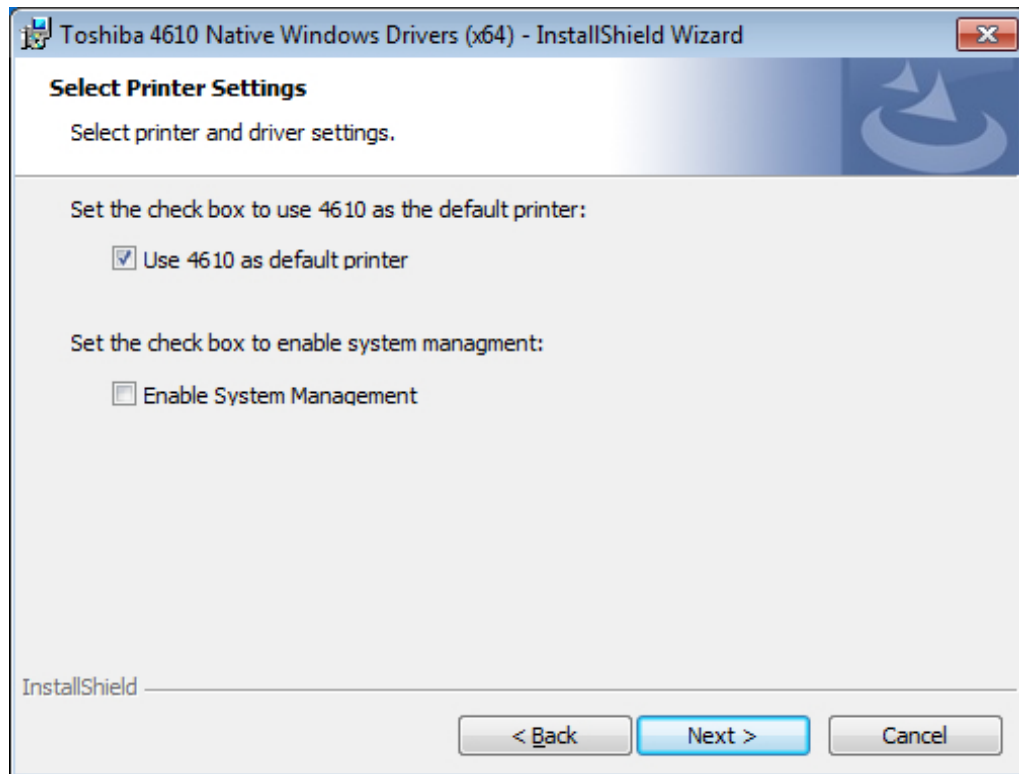


Figure 17. Select Printer Settings

7. To install the entire package, leave the **Complete** button selected. Otherwise, select **Custom** and click **Next**. For “Complete” options, ignore step (a).

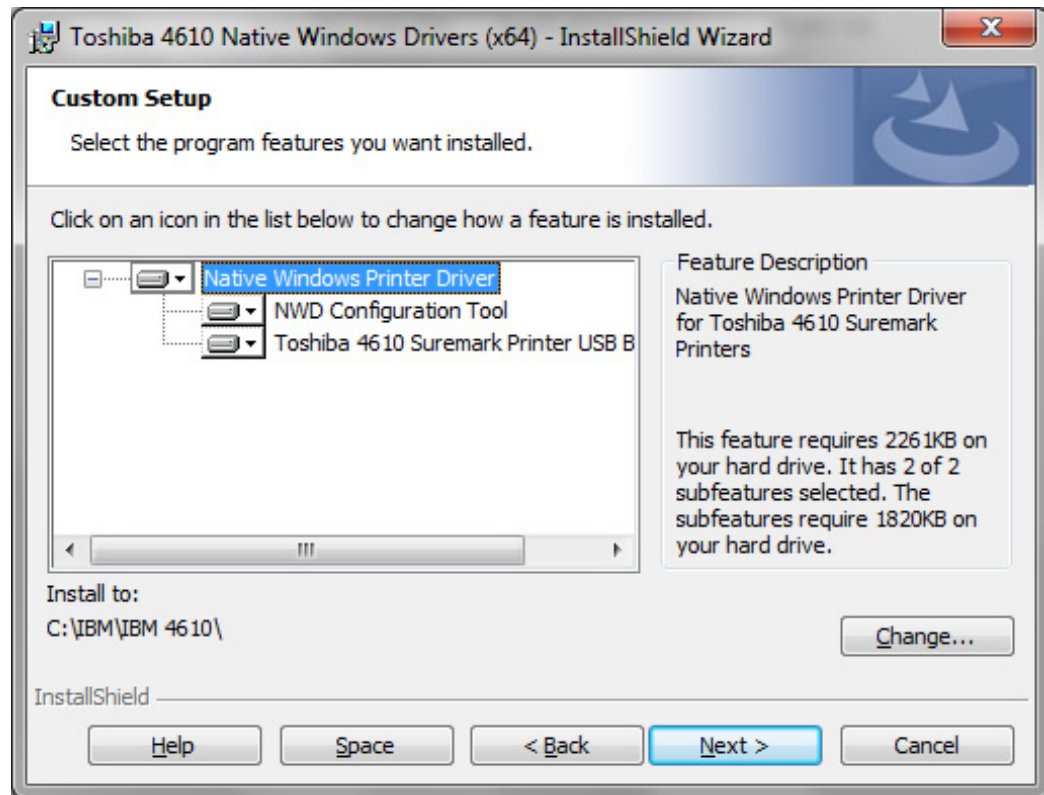


Figure 18. Custom Setup window

- a. In the Custom Setup window (Figure 18), select those features that you wish to install on the host and click **Next**. The Ready to Install the Program window Figure 19 opens.

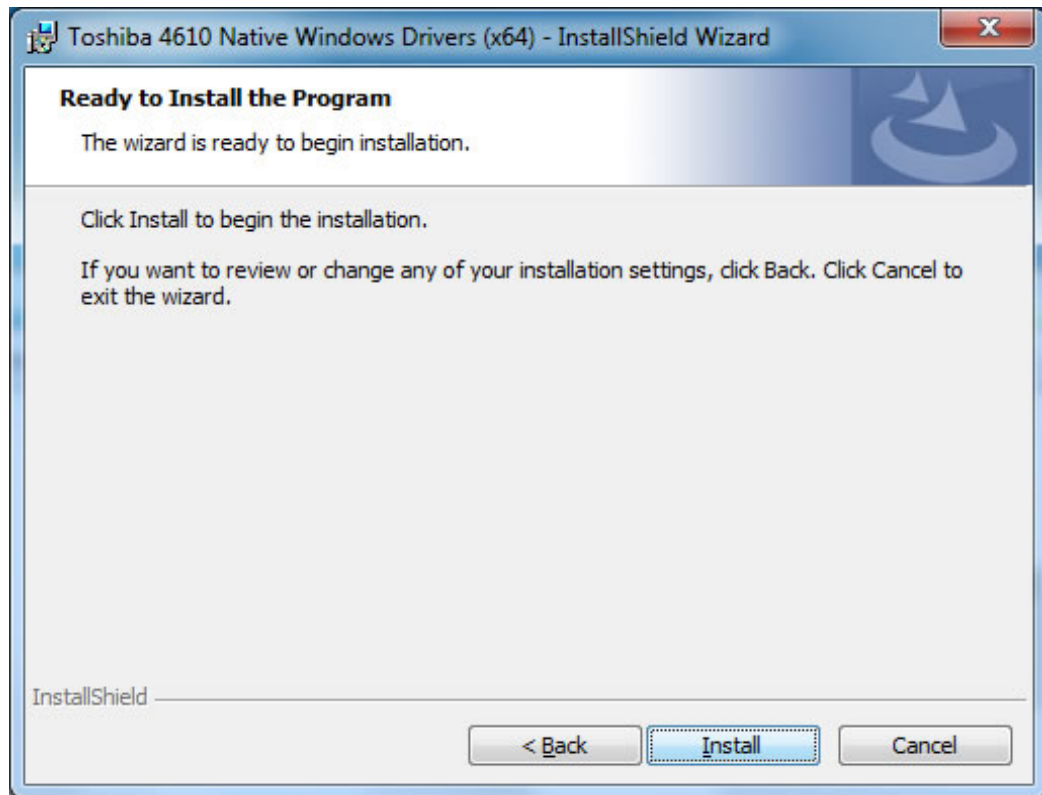


Figure 19. Ready to Install the Program window

8. Click **Install** to initiate the installation procedure.

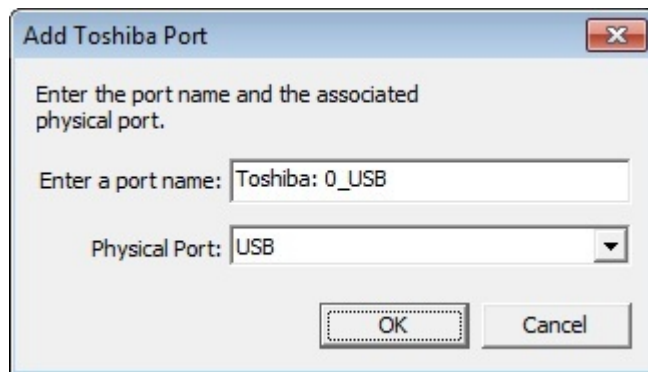


Figure 20. Add Toshiba Port window

9. If you choose the COM1/COM2 physical port:
 - a. Click **OK**, then continue to set COM1/COM2 properties. Click **Restore Defaults** and set the correct Bits per second and flow control, then click **OK**.

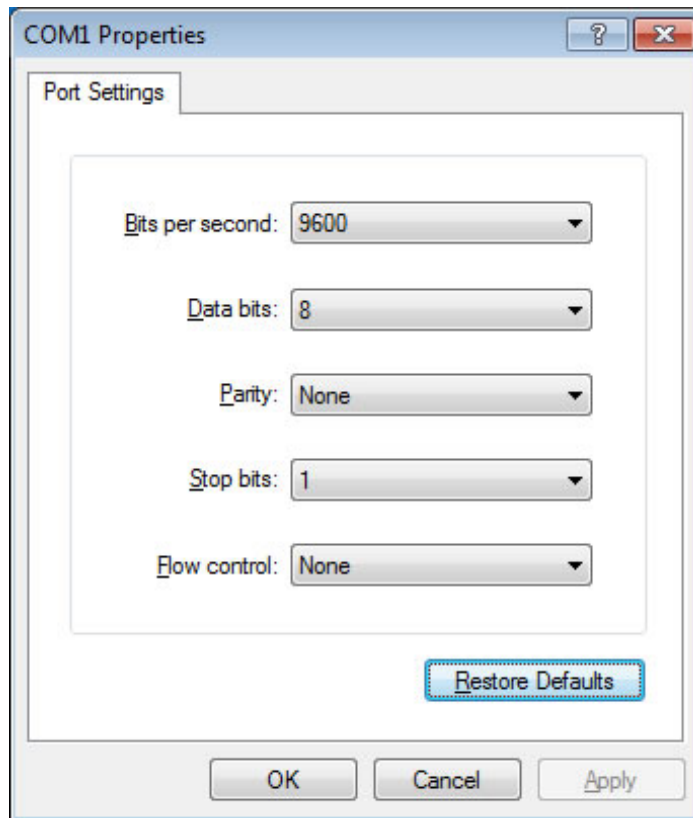


Figure 21. COM1/COM2 properties

- b. If you choose the TCP/IP physical port, confirm that the SureMark 4610 Printer (models 1NR, 2NR, or 2CR) is connected and has received a valid IP address. Click **OK**, then continue to set the TCP/IP configuration. Enter a valid IP address, then click **OK**.

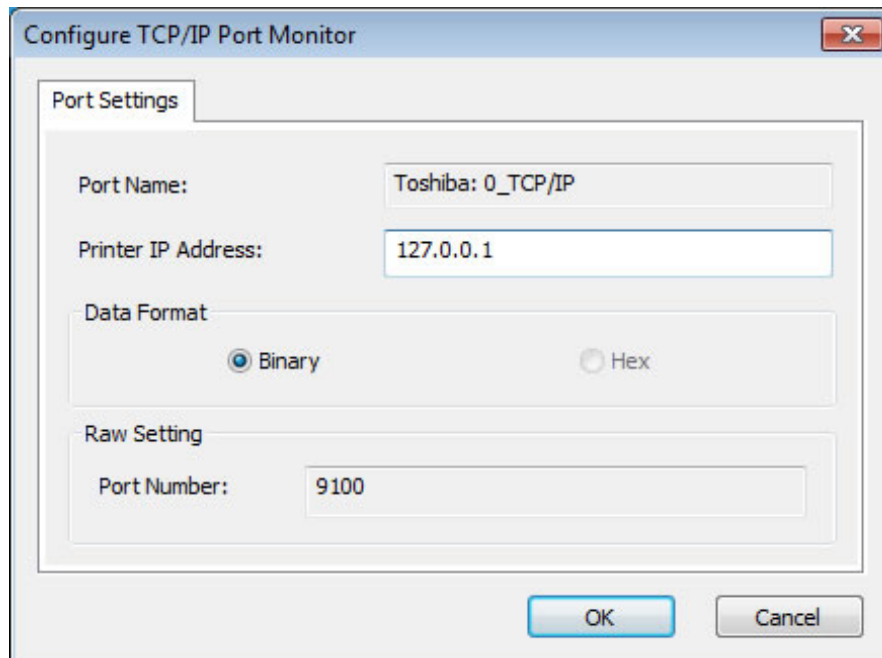


Figure 22. TCP/IP physical port

10. During the installation process, the Add Toshiba Port window opens; see [Figure 20](#). Select the related physical port and click **OK** to continue the installation.
 - a. Click **Continue Anyway** when the Software Installation window opens. See [Figure 23](#).



Figure 23. Software Installation window

11. An "Installation in progress" window opens during the installation process [Figure 24](#).

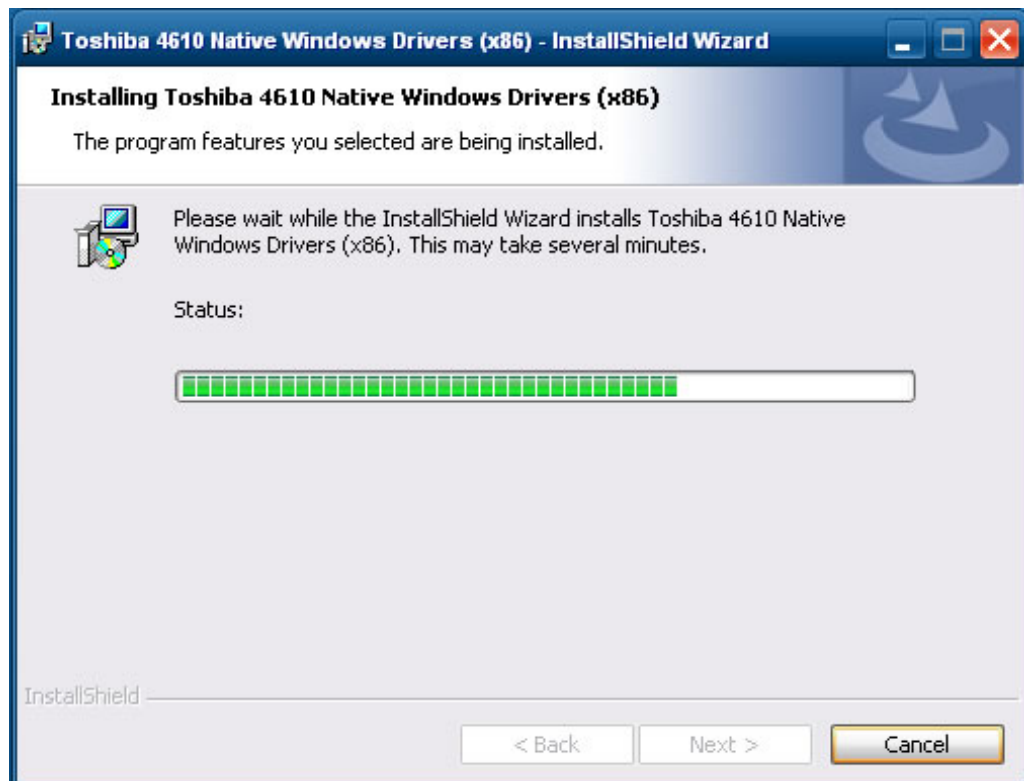


Figure 24. Progress window

12. Once the installation is complete, the InstallShield Wizard Completed window (Figure 25) opens. Click **Finish** to complete the process.

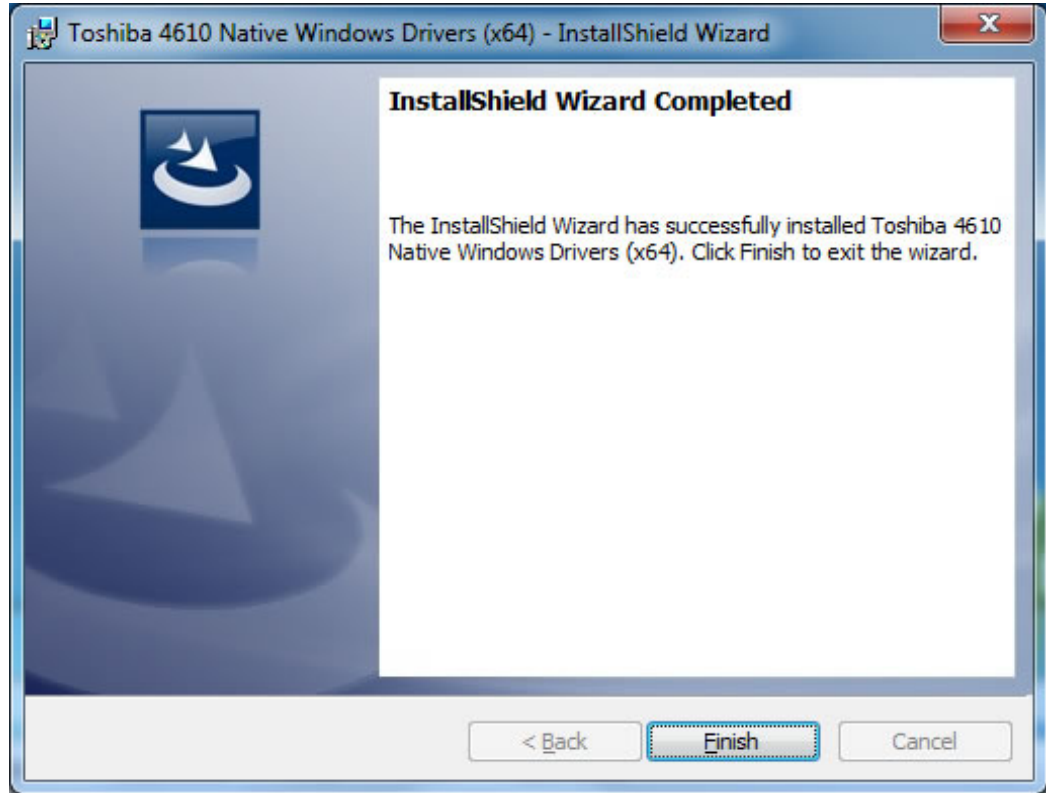


Figure 25. InstallShield Wizard Completed window

13. If the Toshiba 4610 SureMark Printer Native Windows Driver Restart window (Figure 26) opens, click **Yes** to allow the InstallShield Wizard to restart your computer.

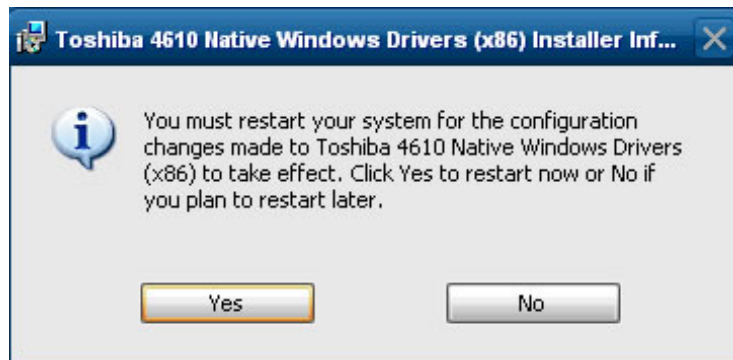


Figure 26. Restart window

Unattended Installation Procedure

For 'silent' install, either run the following command line in the Command Prompt window or encase it in a batch file to be executed on the target system.

```
"setup.exe /s /v"/qn PORT=<port> BAUDRATE=<baudrate>HANDSHAKE=<handshake>IPADDRESS=<ip-address>SETDEFAULTPRINTER=<setdefaultprinter>ENABLESYSMGMT<enablesysmgmt>"
```

The valid values for PORT are: **USB, TCP/IP, COM1, COM2, etc.** The valid values for BAUDRATE are: **9600, 19200, 115200.** The valid values for HANDSHAKE are: **XONXOFF, DTRDSR.** The valid values for <ip-address> are:xxx.xxx.xxx.xxx. The valid values for SETDEFAULTPRINTER and ENABLESYSGMT are: **0, 1.**

BAUDRATE and HANDSHAKE are required if the PORT is a COM port. If no PORT is selected during the silent install, the default will be USB. An IPADDRESS is required if the PORT is a TCP/IP port. If SETDEFAULTPRINTER is not selected, the default will be 1. If ENABLESYSGMT is not selected, the default will be 0.

Connecting a 2xR or 1xR printer for the first time to a NWD host

The 2xR and 1xR printers are enabled with USB Bulk transfer and connecting them for the first time (after installing NWD V2.5.1 or later) will cause Windows to prompt for a selection of the appropriate driver for this device. The following steps may be followed to ensure that the Toshiba Proprietary USB Bulk Driver is selected for optimum data transfer performance for these printers.

1. Upon connecting the 2xR or 1xR printer to the host, the following dialog box will appear. Select **Yes, this time only** and click **Next**.



Figure 27. Welcome to the Found New Hardware Wizard

2. Select **Install from a list or specific location (Advanced)** and click **Next**.

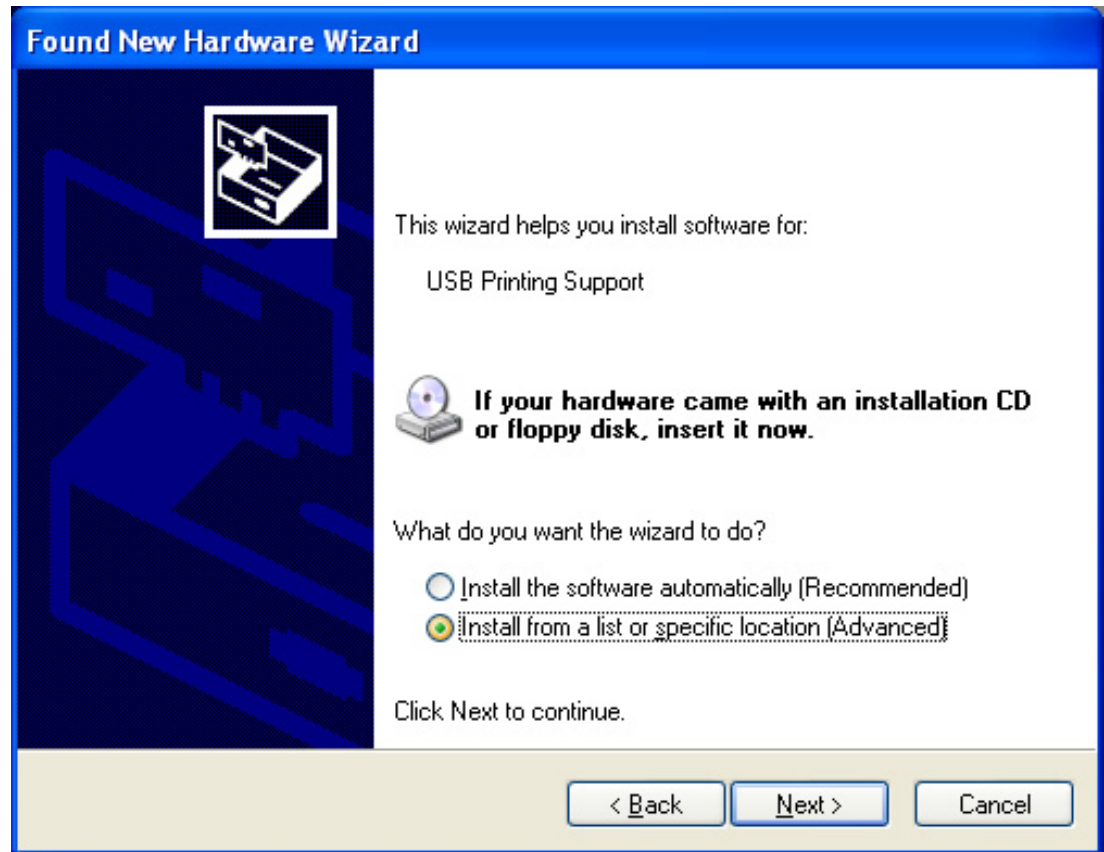


Figure 28. Install from a list or specific location

3. Select **Don't search. I will choose the driver to install**. Click Next.

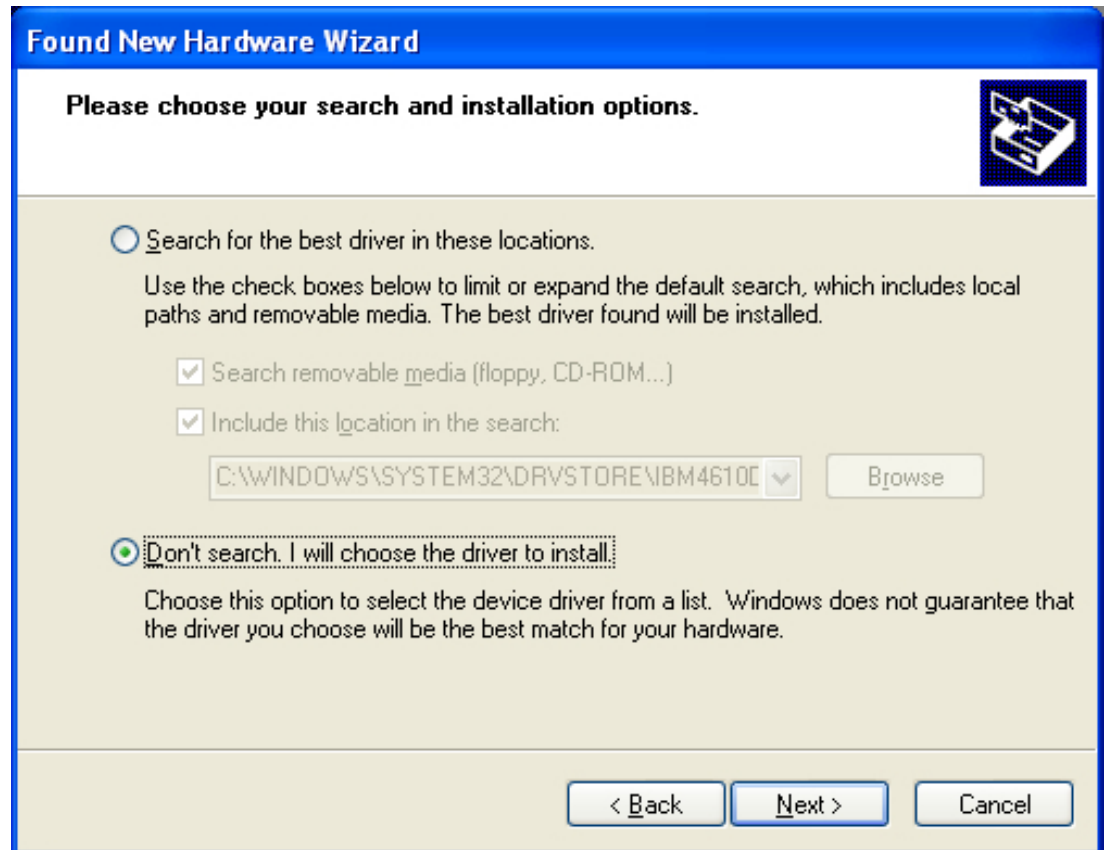


Figure 29. Choose your search and installation options

4. Select **Toshiba 4610 Bulk Driver** and click **Next**.

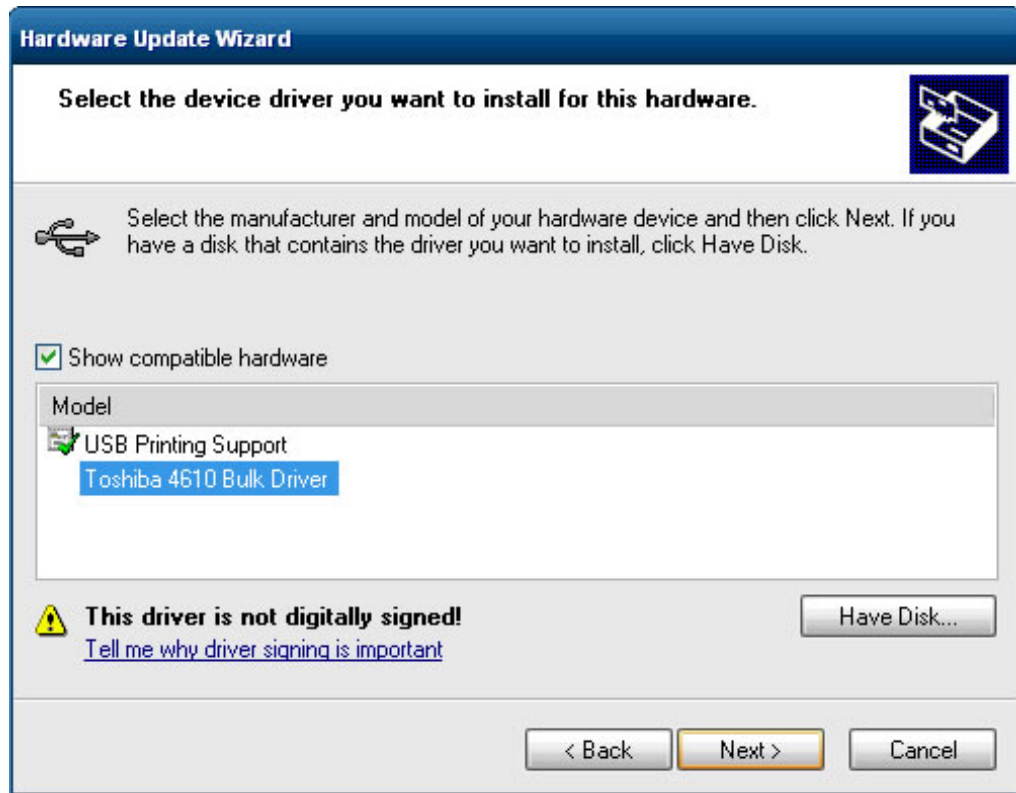


Figure 30. Select the device driver you want to install

5. The Bulk Driver will be installed and set as the preferred driver for this device.



Figure 31. The Hardware Wizard installs the software

6. Click **Finish** to complete the installation process.

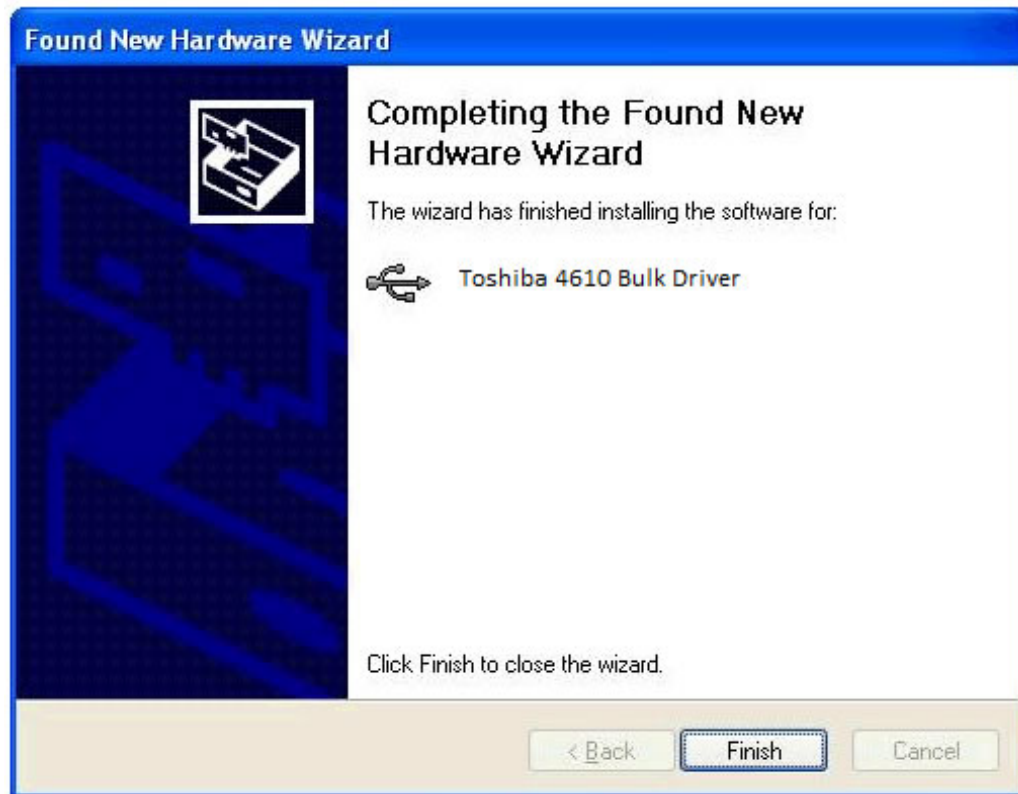


Figure 32. The Hardware Wizard finishes

Support for the Ethernet-attached SureMark 4610 Printer (models 1NR, 2NR, or 2CR)

You can configure NWD 3.1 to support the SureMark 4610 Printer (models 1NR, 2NR, or 2CR) that is connected to one host POS machine.

1. Right-click the Toshiba 4610 icon and select **Properties**. The Toshiba 4610 Properties window opens with the General page selected.

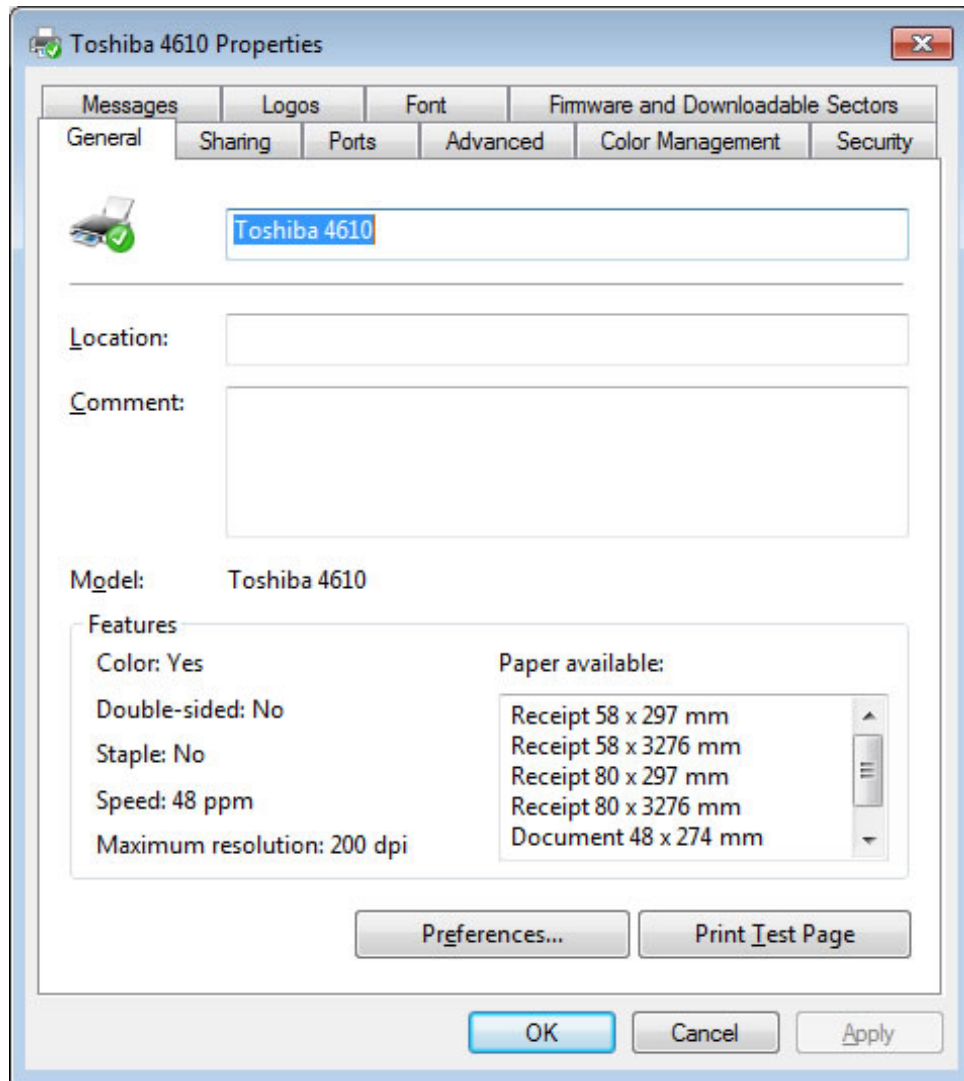


Figure 33. Toshiba 4610 properties window

2. Click the **Ports** tab, next click **Add Port**, then select **Toshiba 4610 Language/Port Monitor**. Click **New Port**.

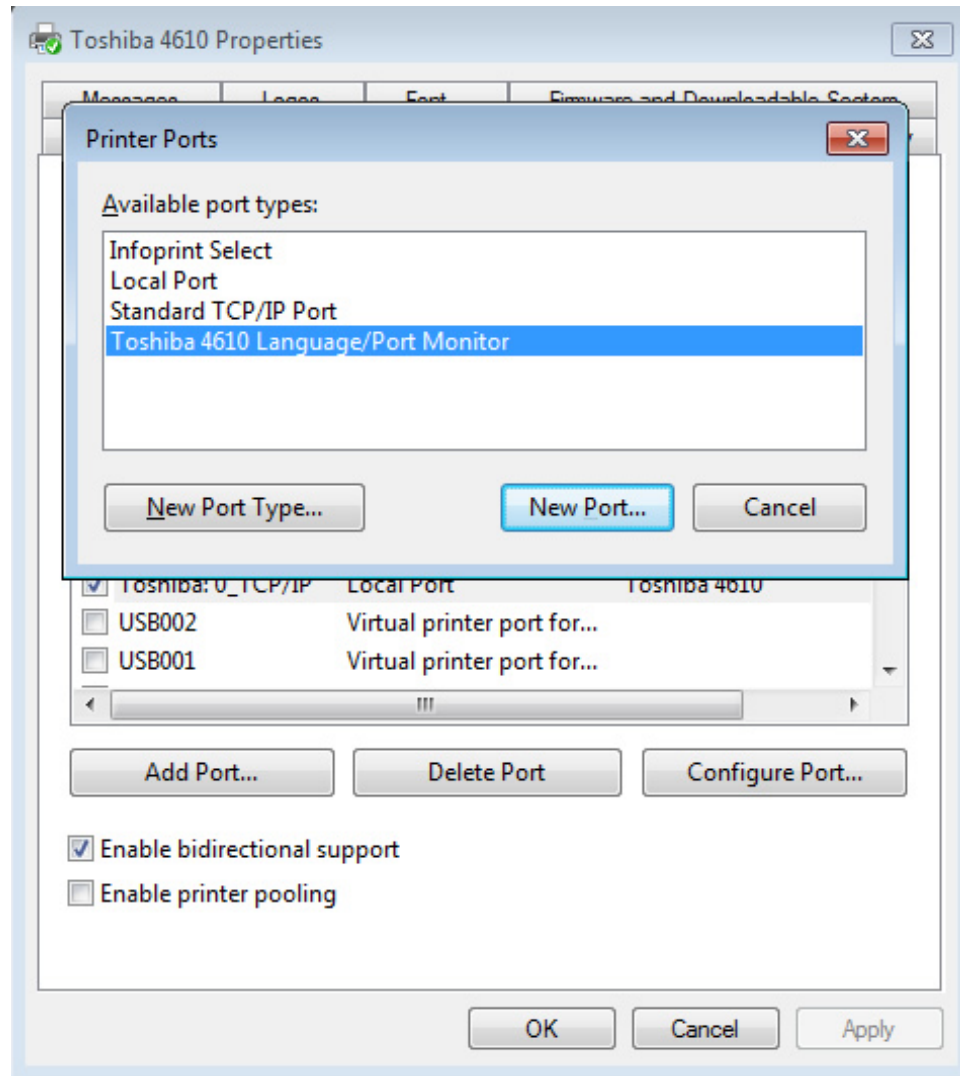


Figure 34. Add ports

3. Select **TCP/IP physical port**, enter a valid IP address, then click **OK**. A new TCP/IP port. "Toshiba: 1_TCP/IP" will be added.
4. Go to **Start -> Devices and Printers**, right-click and select **Add a printer**.

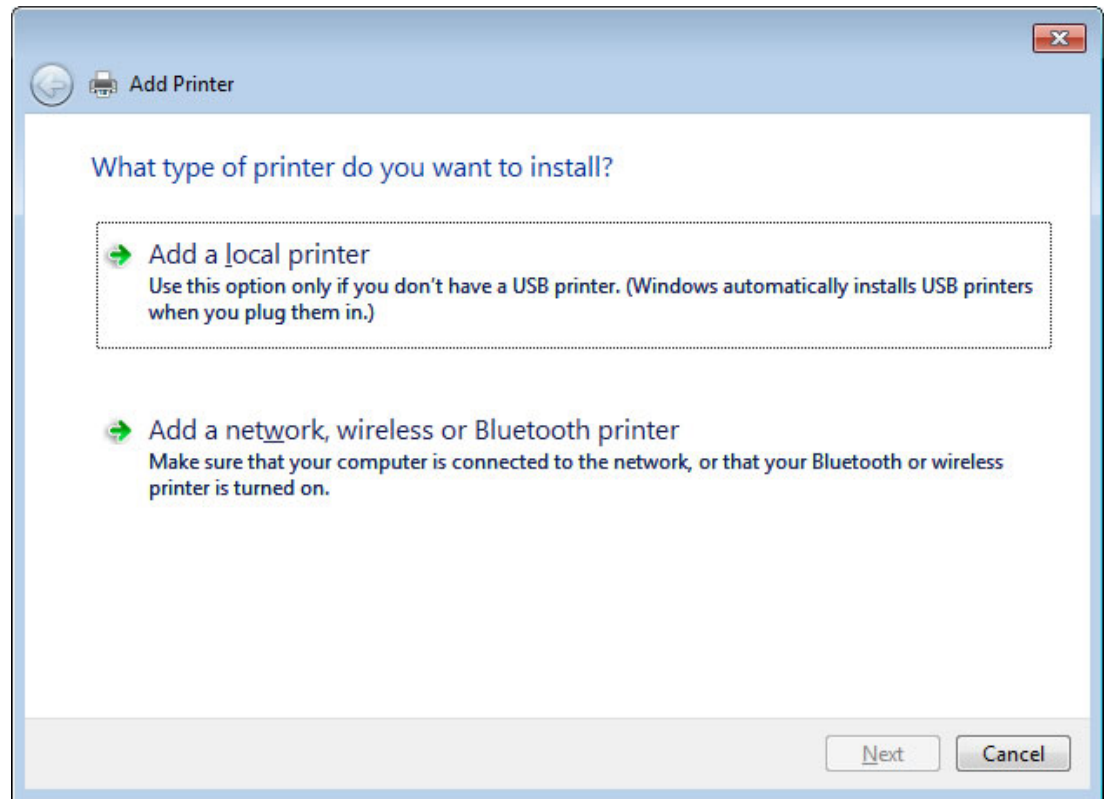


Figure 35. Add a printer

5. Click **Add a local printer**.
6. Select the existing port **Toshiba: 1_TCP/IP**.

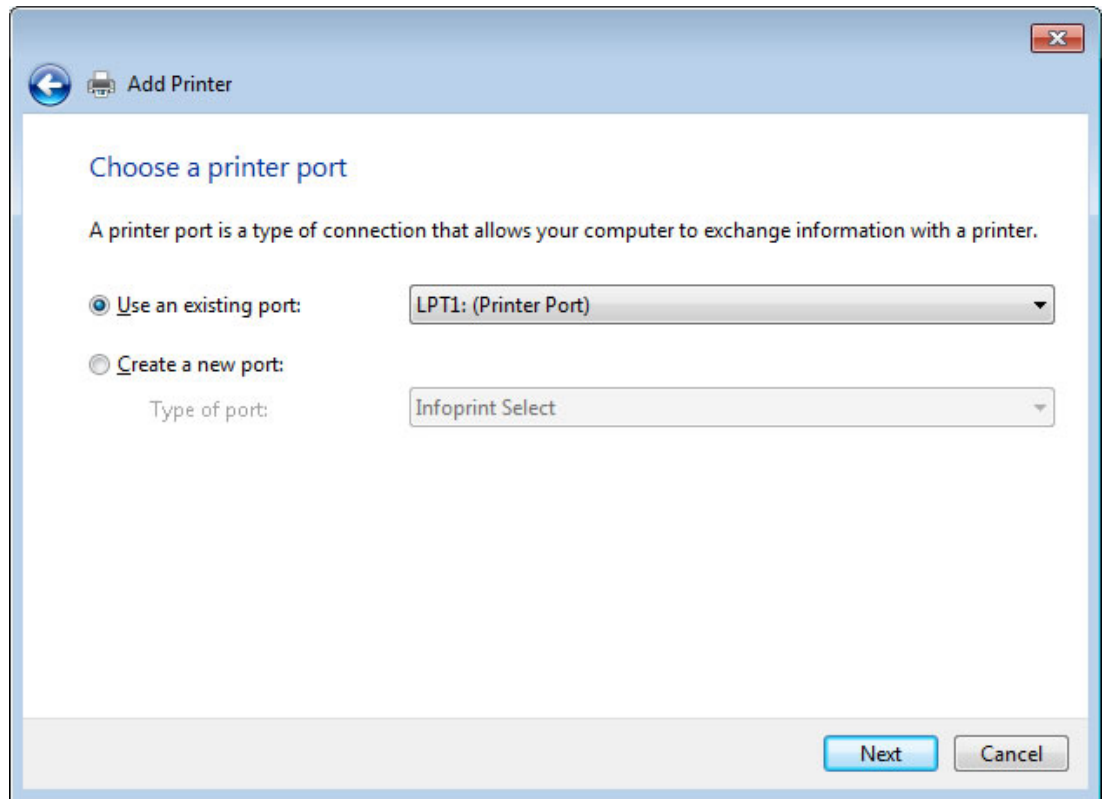


Figure 36. Selecting an existing port

7. Select the manufacturer **TOSHIBA** and the printer **Toshiba 4610**, then click **Next**.

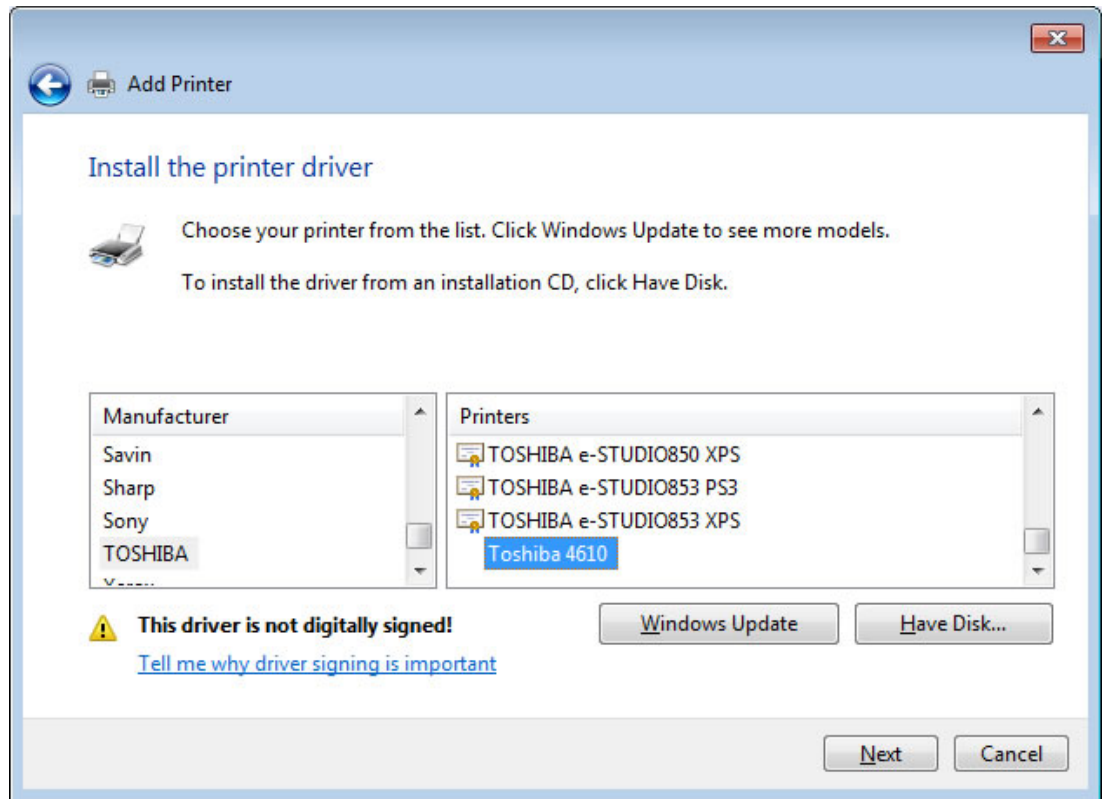


Figure 37. Installing the printer driver

8. Continue to click **Next**, then click **Finish** to complete adding the SureMark 4610 Printer (models 1NR, 2NR, or 2CR).

Sample Configuration File

Note: Should you encounter problems during this procedure, refer to the [Toshiba support site](#) and search on "4610 native Windows driver."

The 4610 native Windows driver supports an unattended installation mode. The process is accomplished through the use of the installation (INI) file 4610config.ini, that is provided below for reference.

Sample configuration file contents

```
;
;           Sample Configuration File
;
;This file is used in conjunction with the NwdConfig.exe tool to
;setup the Toshiba 4610 printer.
;
;Make a copy of this file before modifying!!
;
;Follow the descriptions under the various sections of the
;file and modify them accordingly. After modification, run the
;NwdConfig.exe tool to configure the printer and the user preferences.
;
;Syntax:
;NwdConfig.exe /f:<FilePath> /p:<PrinterName>
;
;Replace <FilePath> with the full file path of the configuration file.
;The full path is unnecessary if the file is in the same location
;as the NwdConfig Tool.
;
```



```

;Replace <PrinterName> with the name of the Toshiba 4610 SureMark Printer.
;The default name of the printer will be \"Toshiba 4610\" if this is not
;defined.
;
;Example:
;NwdConfig.exe /f:\"C:\\sample folder\\config.ini\" /p:\"Toshiba 4610\"
;

[Setup]

; Print station selection
; Options:
; 1 - Customer receipt (default)
; 2 - Document insert
; Uncomment the line below to set a different option
PrintStation=1

; Paper size selection
; Options:
; 1 - Receipt 58 x 297 mm
; 2 - Receipt 58 x 3276 mm
; 3 - Receipt 80 x 297 mm (default)
; 4 - Receipt 80 x 3276 mm
; 5 - Document 48 x 274 mm
; 6 - Document 85.7 x 274 mm
; Uncomment the line below to set a different option
;PaperSize=3

; Paper orientation
; Options:
; 1 - Portrait (default)
; 2 - Landscape
; Uncomment the line below to set a different option
;PaperOrientation=1

;Bar code type selection
; Options:
;0 - Use application settings (default)
;1 - CODABAR
;2 - CODE 128ABC
;3 - CODE 128C
;4 - CODE 39
;5 - CODE 93
;6 - ITF
;7 - JAN13 (EAN-13)
;8 - JAN8 (EAN-8)
;9 - PDF417
;10 - UPC-A
;11 - UPC-E
;12 - QR Code
;13 - GS1 Databar Omni-Directional
;14 - GS1 Databar Omni-Directional Stacked
;15 - GS1 Databar Expanded
;16 - GS1 Databar Expanded Stacked
;Uncomment the line below to set a different option
;BarCodeType=0

; Non-PDF417 bar code settings

; Options:
; 2
; 3 (default)
; 4
; Uncomment the line below to set a different option
;WidthNPDF=3

; Options:
; 1 to 255
; 162 (default)
; Uncomment the line below to set a different option
;HeightNPDF=162

; Options:
; 0 - Not printed (default)
; 1 - Above the bar code

```

```

; 2 - Below the bar code
; 3 - Both above and below the bar code
; Uncomment the line below to set a different option
;HRIPosition=0

; PDF417 bar code settings

; Options:
; 1 to 9
; 2 (default)
; Uncomment the line below to set a different option
;WidthPDF=2

; Options:
; 1 to 9
; 1 (default)
; Uncomment the line below to set a different option
;HeightPDF=1

; Options:
; 0 - disabled (default)
; 1 - enabled
; Uncomment the line below to set a different option
;EnableTruncation=0

; QR Code settings

Options:
;0 - Byte
;1 - Alpha-Numeric Mode
;2 - Numeric Mode
;3 - Kanji Mode
;4 - Extended Channel Interpretation (ECI) Mode
;5 - Mixing Mode
;0 (default)
;Uncomment the line below to set a different option
;EncodingMode=0

;Options:
;0 - L: 7% recovery
;1 - M: 15% recovery
;2 - Q: 25% recovery
;3 - H: 30% recovery
;0 (default)
;Uncomment the line below to set a different option
;RecoveryLevel=0

;Options:
;0 - Cp437
;1 - ISO8859_1
;2 - Cp437
;3 - ISO8859_1
;4 - ISO8859_2
;5 - ISO8859_3
;6 - ISO8859_4
;7 - ISO8859_5
;8 - ISO8859_6
;9 - ISO8859_7
;10 - ISO8859_8
;11 - ISO8859_9
;12 - ISO8859_10
;13 - ISO8859_11
;15 - ISO8859_13
;16 - ISO8859_14
;17 - ISO8859_15
;18 - ISO8859_16
;20 - SJIS
;26 - UTF-8
;0 (default)
;Uncomment the line below to set a different option
;ECIValue=0

;Set Number Of Copies, default value is 1

```

```

NumberOfCopies=1
;::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
;Options
;::::::::::::::::::::::::::::::::::::::::::::::::::::::::::

;Colors selection
;Options:
;0 - 2 colors printing
;1 - monochrome printing (default)
;Uncomment the line below to set a different option
;Monochrome=1

;2 colors printing parameter set
;Options:
;0 to 3
;0 (default for monochrome)
;1 (default for 2 colors)
;Uncomment the line below to set a different option
;PrintParameterSet=0

;Cut the paper / eject document at the end of the job
;Options:
;0 - do not cut the paper / eject document
;1 - cut the paper / eject document (default)
;Uncomment the line below to set a different option
;CutPaper=1

;Cut the paper at the end of the page
;Options:
;0 - do not cut the paper (default)
;1 - cut the paper
;Uncomment the line below to set a different option
;CutPage=0

;Open the cash drawer at the end of the job
;Options:
;0 - do not open the cash drawer (default)
;1 - open the cash drawer
;Uncomment the line below to set a different option
;OpenCashDrawer=0

;Print in burst mode
;Options:
;0 - do not print in burst mode (default)
;1 - print in burst mode
;Uncomment the line below to set a different option
;PrintBurstMode=0

;Print with high quality
;Options:
;0 - do not print with high quality
;1 - print with high quality (default)
;Uncomment the line below to set a different option
;PrintHighQuality=1

;Print upside down
;Options:
;0 - do not print upside down (default)
;1 - print upside down
;Uncomment the line below to set a different option
;PrintUpsideDown=0

;Beeper
;Options:
;0 - OFF (default)
;1 - ON
;Uncomment the line below to set a different option
;Beeper=0

;Code page output
;Options:
;1 - Generic - resident
;2 - 437 (OEM - United States) - resident
;3 - 858 (OEM - Multilingual Latin I + Euro) - resident (default)
;4 - 863 (OEM - Portuguese) - resident

```

```

;5 - 860 (OEM - Canadian French) - resident
;6 - 865 (OEM - Nordic) - resident
;7 - 852 (OEM - Latin II) - non-resident*
;8 - 866 (OEM - Russian) - non-resident*
;9 - 869 (OEM - Greek) - resident*
;10 - 857 (OEM - Turkish) - resident*
;11 - 864 (OEM - Arabic) - resident*
;12 - 867 (OEM - Hebrew) - resident*
;13 - 848 (OEM - Ukraine) - resident*
;14 - 872 (OEM - Cyrillic) - resident*
;15 - 775 (OEM - Baltic Rim) - resident*
;16 - 861 (OEM - Icelandic) - resident*
;17 - 1250 (ANSI - Central Europe) - non-resident*
;18 - 1251 (ANSI - Cyrillic) - non-resident*
;19 - 1252 (ANSI - Latin I) - non-resident*
;20 - 1253 (ANSI - Greek) - resident*
;21 - 1254 (ANSI - Turkish) - resident*
;22 - 1255 (ANSI - Hebrew) - non-resident*
;23 - 1256 (ANSI - Arabic) - resident*
;24 - 1257 (ANSI - Baltic) - resident*
;*For 2CR/2NR and later printers only
;Uncomment the line below to set a different option
;CodePageOutput=3

;Override font from application
;Options:
;1 - Do not override
;2 - Override using Font A
;3 - Override using Font B
;4 - Override using Font C
;5 - Override using Tall A
;6 - Override using SBCS #1 font
;7 - Override using SBCS #2 font
;8 - Override using DBCS
;Uncomment the line below to set a different option
;OverrideFont=1

;::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
;Document Header and Footer
;::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::

;Document header settings

;Logo header
;Options:
;0 - no logo (default)
;1 to 40
;Uncomment the line below to set a different option
;LogoHeader=0

;Message header
;Options:
;0 - no message (default)
;1 to 25
;Uncomment the line below to set a different option
;MsgHeader=0

; Message header font
; Default options:
; command
; control
; Font A
; Font B
; Font C
; Tall A
; Uncomment the line below and specify the name of the font to be used
;MsgHeaderFont=<font_name>

; Logo header alignment
; Options:
; 1 - to the left (default)
; 2 - centered
; 3 - to the right
; Uncomment the line below to set a different option
;AlignLogoHeader=3

```

```

; Logo header color
; Options:
; 1 - 2 colors (half-character)
; 2 - 2 colors (full-character)
; 3 - Cancel 2 colors
; Uncomment the line below to set a different option
;LogoHeaderColor=3

; Message header alignment
; Options:
; 1 - to the left (default)
; 2 - centered
; 3 - to the right
; Uncomment the line below to set a different option
;AlignMsgHeader=2

; Message header color
; Options:
; 1 - 2 colors (half-character)
; 2 - 2 colors (full-character)
; 3 - Cancel 2 colors
; Uncomment the line below to set a different option
;MsgHeaderColor=3

; Header layout
; Options:
; 0 - message after logo (default)
; 1 - logo after message
; Uncomment the line below to set a different option
;HeaderLayout=0

; Document footer settings

; Logo footer
; Options:
; 0 - no logo (default)
; 1 to 40
; Uncomment the line below to set a different option
;LogoFooter=0

; Message footer
; Options:
; 0 - no message (default)
; 1 to 25
; Uncomment the line below to set a different option
;MsgFooter=0

; Message footer font
; Default options:
; command
; control
; Font A
; Font B
; Font C
; Tall A
; Uncomment the line below and specify the name of the font to be used
;MsgFooterFont=<font_name>

; Logo footer alignment
; Options:
; 1 - to the left (default)
; 2 - centered
; 3 - to the right
; Uncomment the line below to set a different option
;AlignLogoFooter=1

; Logo footer color
; Options:
; 1 - 2 colors (half-character)
; 2 - 2 colors (full-character)
; 3 - Cancel 2 colors
; Uncomment the line below to set a different option
;LogoFooterColor=3

; Message footer alignment

```

```

; Options:
; 1 - to the left (default)
; 2 - centered
; 3 - to the right
; Uncomment the line below to set a different option
;AlignMsgFooter=1

; Message footer color
; Options:
; 1 - 2 colors (half-character)
; 2 - 2 colors (full-character)
; 3 - Cancel 2 colors
; Uncomment the line below to set a different option
;MsgFooterColor=3

; Footer layout
; Options:
; 0 - message after logo (default)
; 1 - logo after message
; Uncomment the line below to set a different option
;FooterLayout=0

[Logos]

; Replace the 'n' in 'Logo#nm' with a number from 1 to 40
; - the logo slot destination in the printer
; and the 'm' with R or D (R = Customer receipt station and
; D = Document insert station)
; Specify the full path to the image file (must be in bitmap format)
; Do note that if the image is larger than the maximum supported
; dimensions (Thermal 576 x 2040,
; Impact 472 x 40), the image will be truncated.
; Do ensure that the total size of the images do not
; exceed the maximum capacity of the
; target printer. Refer to the printer user guide for more information.
; Uncomment the line below to download a logo to the printer or duplicate
; the line below to download more logos to different slots to the printer
;Logo#nm=<full_path_to_image_file>

[Messages]

; Replace the 'n' in 'Message#n' with a number from 1 to 25 -
; the message slot destination in the printer
; Specify the message you want to download after = sign. For new line use '\n'
; Uncomment the line below to download a message to the printer or duplicate
; the line below to download more messages to different slots to the printer
;Message#n=<message>

[Fonts]

; Specify the SBCS font you want to download like this:
; SBCSFont#n=<font_name> <font_type> <font_script> m
; where n is the printer's font slot - can be 1 or 2
; <font_name/> is the font name as it appears in
; applications. Ex.: Arial
; <font_type> can be one of the following strings:
; "Regular", "Bold", "Italic" or "BoldItalic"
; <font_script> is the language script (character set) desired for
; downloading and can be:
; Western
; Japanese
; Hangul
; Hangul(Johab)
; CHINESE_GB2312
; CHINESE_BIG5
; Hebrew
; Arabic
; Greek
; Turkish
; Baltic
; Central European
; Cyrillic
; Thai
; Vietnamese

```

```

; m is the font size in points - can be 8, 9 or 10
; Ex. Arial BoldItalic Western 9 will download the Arial font
; using BoldItalic type with size 9 pts
; Uncomment the line below to download a SBCS font to the
; printer or duplicate the line below to download two fonts
; to different slots to the printer
;SBCSFont#n=<font_name> >font_type> <font_script> m

; Specify the DBCS font you want to download like this:
; DBCSFont#n=<path_to_the_DBCS_font_file>
; where n is the printer's station - must be 1 (Customer receipt
;or Document insert)
;< path_to_the_DBCS_font_file > is the DBCS font file path
;Uncomment the line below to download a DBCS font to the printer
;DBCSFont#n=<path_to_the_DBCS_font_file>

Motion Detection
; Options:
; 0 - OFF (default)
; 1 - ON
; Uncomment the line below to set a different option
;MotionDetection=0

; Partial Cut Detection
; Options:
; 0 - OFF (default)
; 1 - ON
; Uncomment the line below to set a different option
;PartialCutDetection=0

; Low Paper Sensing Detection
; Options:
; 0 - OFF (default)
; 1 - ON
; Uncomment the line below to set a different option
;LowPaperSensingDetection=0

; Low Paper Sensing LED
; Options:
; 0 - OFF (default)
; 1 - ON
; Uncomment the line below to set a different option
;LowPaperSensingLED=0

[Firmware]

; For updating the printer firmware:
; Uncomment the line below and specify the full path to
; the printer firmware update file
; PrinterFirmware=<update_firmware_file_path>
; Paper Saving
; Dots between Printer Line
; Options:
; 0 - DEFAULT
; 1 - 2 dots
; 2 - 4 dots
; Uncomment the line below to set a different option
;ReductionOfBlankSpace=0

; Barcode Height Reduction
; Options:
; 0 - DEFAULT
; 1 - 25% reduction
; 2 - 50% reduction
; 3 - 75% reduction
; Uncomment the line below to set a different option
;BarcodeHeightReduction=0

```

Using the 4610config.ini file

Download the native Windows driver from the Toshiba Global Commerce Solutions Web site at: [Toshiba support site](#).

Use the INI file to configure the installation attributes during an unattended installation. You should modify the INI as appropriate for your installation, and then apply it by running the driver install executable, using this command line syntax:

Create a batch file with the following command lines:

```
setup.exe /s /v"/qn PORT="portnumber"  
"C:\Toshiba\Toshiba 4610\NWdConfig\NwdConfig.exe"  
/f:config.inidriver-installation-file-name -s -a -file-location
```

Using the Ethernet-attached SureMark 4610 Printer (models 1NR, 2NR, or 2CR) print share mode

An Ethernet-attached SureMark 4610 Printer (models 1NR, 2NR, or 2CR) can be shared on multiple POS machines. You will need to run the **NwdConfig.exe** with same config.ini file on every POS machine.

For example, in share mode there are two POS machines, for example, POS A and POS B. After modifying config.ini, you can run different commands with the same config.ini on two POS machines.

POS A:

```
NwdConfig.exe /f:"C:\config.ini" /p:"Toshiba 4610" /master
```

POS B:

```
NwdConfig.exe /f:"C:\config.ini" /p:"Toshiba 4610" /slave
```

If there are more POS machines, all commands will have a /slave parameter. For example:

POS C:

```
NwdConfig.exe /f:"C:\config.ini" /p:"Toshiba 4610" /slave
```

POS Z:

```
NwdConfig.exe /f:"C:\config.ini" /p:"Toshiba 4610" /slave
```

What is the difference between a /master and /slave POS machine?

If you run a POS machine as a /master, **NwdConfig.exe** will download logos, messages, SBCS/DBCS fonts and the firmware file into the SureMark 4610 Printer (models 1NR, 2NR, or 2CR) and update the **toshibanwdconfig.xml** file. Otherwise, the /slave **NwdConfig.exe** will ignore all downloading tasks and will only update the **toshibaconfig.xml** file. In the end, all POS machines will keep the same configurations and only download data into the SureMark 4610 Printer once.

Chapter 2. Configuring the native Windows driver

This chapter explains how to configure the Toshiba SureMark 4610 printer native Windows driver. The following topics are included:

- Configuring the basic printer options
- Setting margins
- Downloading logos and messages to the printer
- Creating headers and footers
- Downloading fonts to the printer

Note: Not all SureMark printers support all features of the native Windows driver. In such cases, the option to configure the feature or features is not available (grayed out).

For more than one Ethernet-attached SureMark 4610 Printer (models 1NR, 2NR, or 2CR), select the corresponding downloading fonts for printing if you are using a text-edit tool such as WordPad. Since all downloading fonts would be listed on WordPad, if you select an unmatched font, it will reduce the printing speed.

Manual configuration

To perform the basic configuration:

1. From the Windows Start Menu, select **Printer and Faxes**. A window containing icons for all of your installed printers and fax machines opens.
2. Right-click the **Toshiba 4610** icon and select **Properties**. The Toshiba 4610 Properties window opens with the General page selected (see [Figure 38](#)).

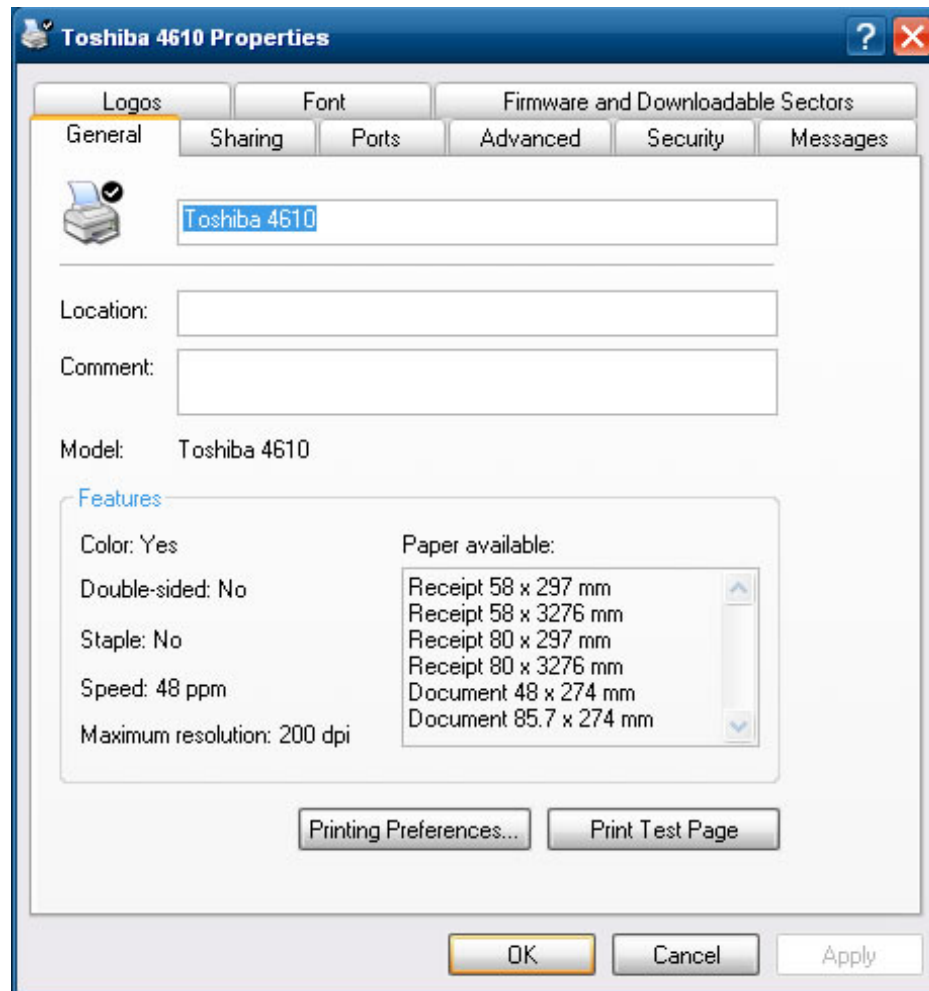


Figure 38. Toshiba 4610 Properties

3. Click **Printing Preferences**. The Toshiba 4610 Printing Preferences window opens with the **Setup** page selected (see [Figure 39](#)).

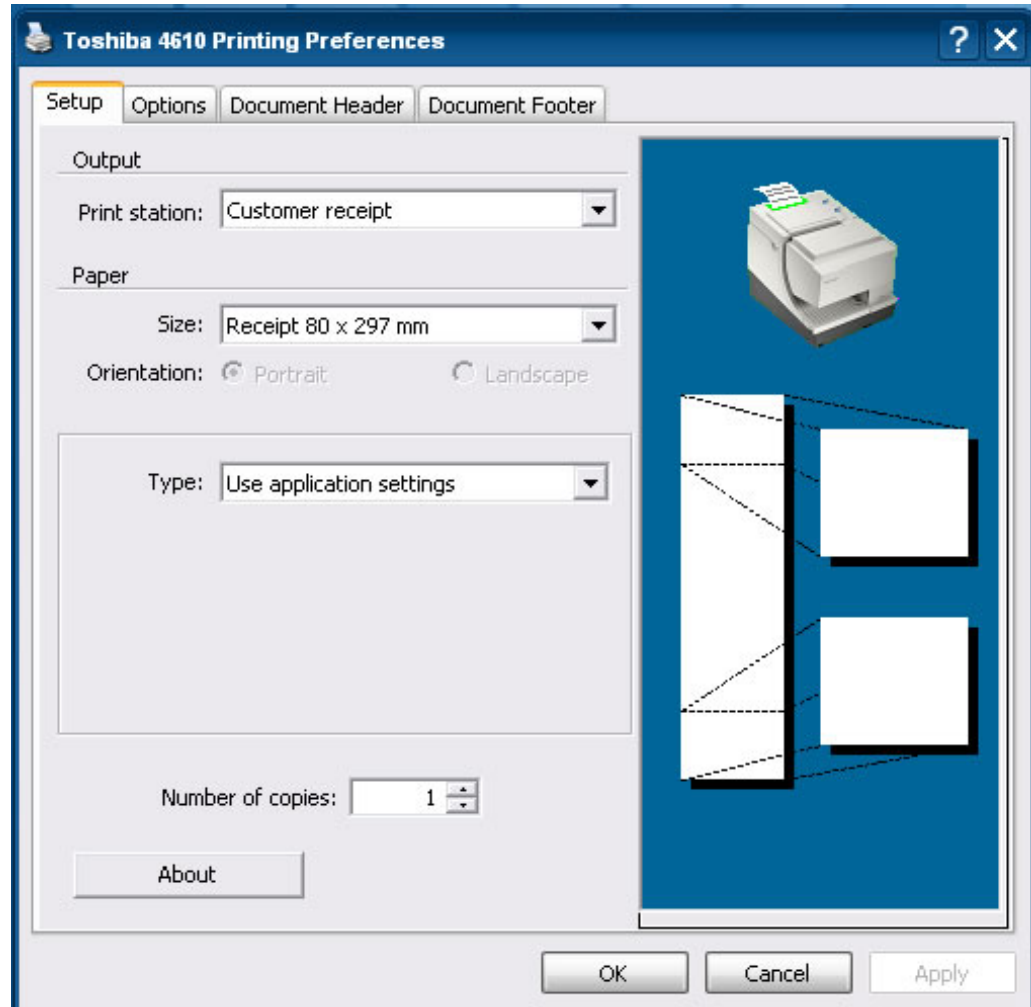


Figure 39. Toshiba 4610 Printing Preferences

- a. Under Output, select a print station:

Customer receipt

Send output to the thermal print station.

Document insert

Send output to the impact print station.

- b. Under Paper, select the paper size that you are using.
- c. Under Bar Code, select the bar code type that is appropriate for your environment.

Note: If you are not "using the application settings" option of the Bar Code Type on the Setup Page, the barcode data will be overwritten by bar code selected, excluding the GS1 DataBar and QR Code. The GS1 DataBar can only be overwritten by the new GS1 DataBar that is selected. The QR Code will not be overwritten, and the driver only supports customization with Encoding mode, Error Correction Level, and ECI mode for QR Code.

4. Click the **Options** tab, and set the options that you require (see [Figure 40](#)).

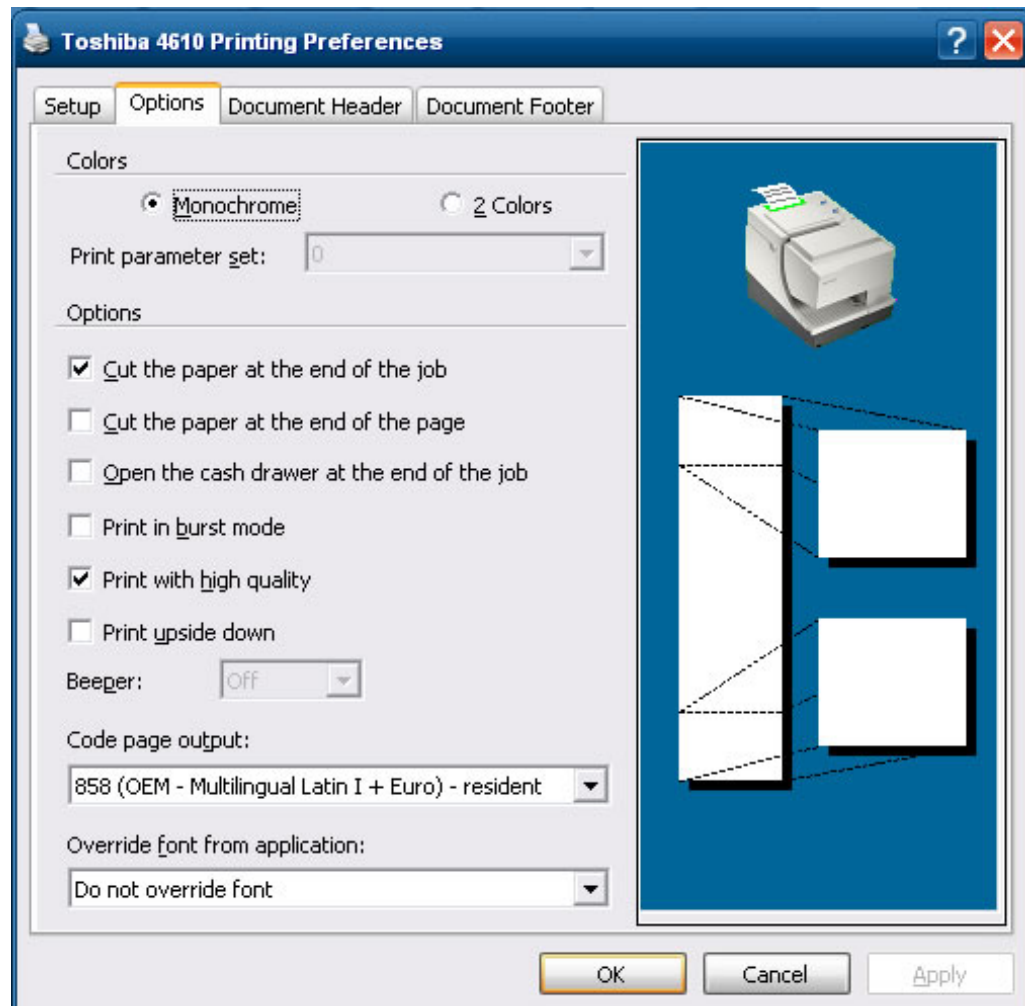


Figure 40. Options tab

Monochrome

Sets the printer to print using one color.

2 Color

Sets the printer to print using two colors. If you select **2 Color** then select a **Print parameter set**.

The parameter set specifies the print head energy level that is applied to the paper, which will affect print speed.

Experiment with this setting to find the best option for your color thermal paper.

Cut the paper at the end of the job

After printing is completed, the printer cuts the paper.

Cut the paper at the end of the page

At the end of the page, the printer cuts the paper

Open the cash drawer at the end of the job

After printing is completed, the cash drawer opens.

Print in burst mode

Causes the printer to wait until it receives the entire document before printing. Otherwise, the printer begins to print when it receives the first line.

Note: The burst mode is not required for the SureMark 4610 Printer (models 1NR, 2NR, or 2CR) with an Ethernet interface.

Print with high quality

Prints at 38 lines per second instead of 52. Selecting this option produces printouts that are clearer and sharper, but slows down the printing process.

Print upside down

Prints the receipt upside down. This option is useful if your printer is mounted on a wall.

Beeper

Turns the printer beeper on or off.

Code page output

Defines the character set that is printed when the printer is sent ASCII code values.

Override font from application**Do not override**

Prints using the font chosen in the source application, regardless of whether the font is the printer resident. If the font is not printer resident, it will print as an image at very slow print speeds.

Note: Choose this setting if:

- You care about the output font.
- The application is sending text in the desired printer resident size and font (usually indicated in the application by the



icon or by no icon).

- The application is not sending text in the



OpenFace,



TrueType,



PostScript, or any other version of that font.

Override using...

The printer always uses the printer resident font that you indicate with this choice.

Note: Choose one of these settings if:

- You *do not* care about the output font.
- The font is already a printer resident font or you can download it to make it one, *and* you can not change the font in the application that is sending the text (usually because the source is not editable).

5. Click **OK** to save your printing preferences, then **OK** again to close the Toshiba 4610 Properties window.

Setting margins

For best printing results, you might have to adjust the margin settings used by your point-of-sale (POS) application. [Table 1](#) lists the minimum margin values for the paper sizes supported by the 4610 printers.

Table 1. Minimum margin values

Paper size	Left and right	Top and bottom
Customer Receipt		
58 x 297 mm	4 mm (0.16 inches)	3 mm (0.12 inches)
58 x 3276 mm	4 mm (0.16 inches)	3 mm (0.12 inches)
80 x 297 mm	4 mm (0.16 inches)	4 mm (0.16 inches)
80 x 3276 mm	4 mm (0.16 inches)	4 mm (0.16 inches)
Document Insert		
48 x 274 mm	2 mm (0.08 inches)	Top - 2 mm (0.08 inches)Bottom - 35 mm (1.38 inches)
85.7 x 274 mm	2 mm (0.08 inches)	Top - 2 mm (0.08 inches)Bottom - 35 mm (1.38 inches)

Logos and messages

If there are logos (graphic images) or messages (text strings) that you want to print on every document, you can download them to the internal memory of the printer. You can then use these logos and messages to create a *header* and a *footer* (see ["Header and footer" on page 66](#)).

Downloading a logo

You can use any bitmap (BMP), Graphics Interchange Format (GIF), or Joint Photographic Experts Group (JPG, JPEG) graphic as a logo.

To download a logo to the internal memory of the printer:

1. From the Windows Start Menu, select **Printer and Faxes**. A window containing icons for all of your installed printers and fax machines opens.
2. Right-click the Toshiba 4610 icon and select **Properties**. The Toshiba 4610 Properties window opens with the General page selected (see [Figure 38](#)).
3. Click the Logos tab (see [Figure 41](#)).

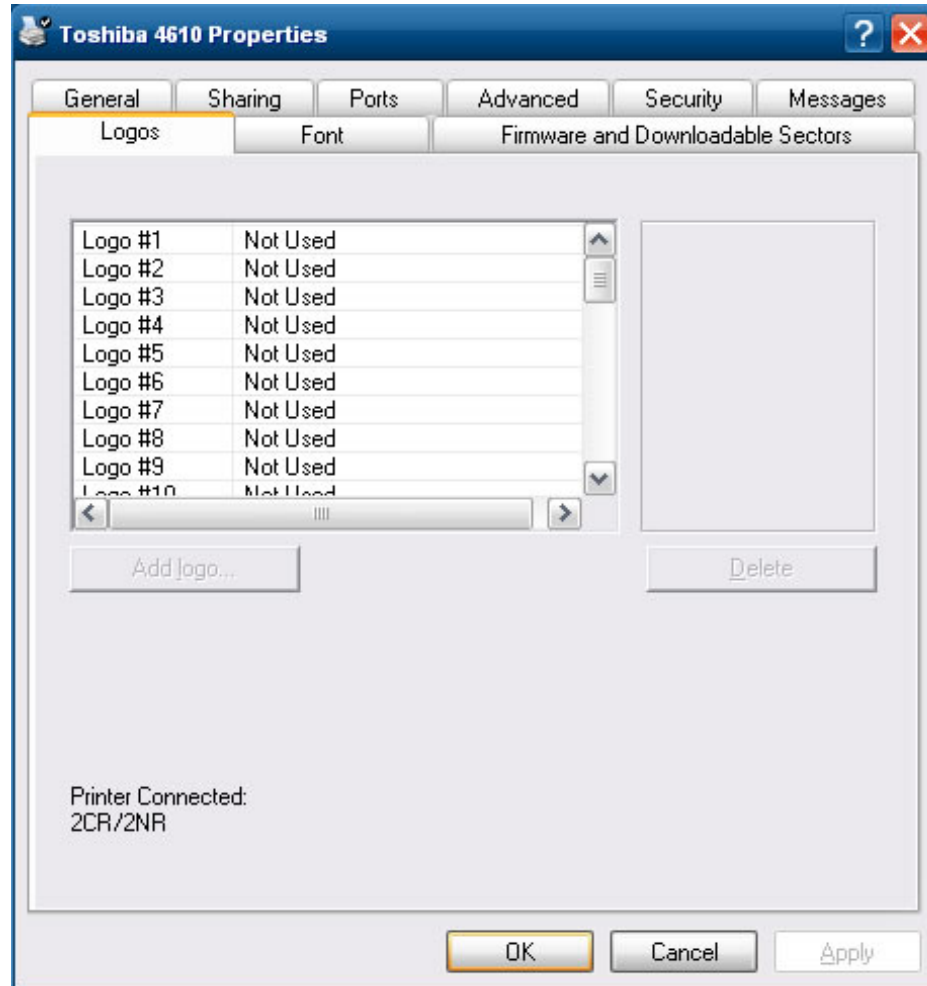


Figure 41. Logos tab

4. Select an empty Logo slot (indicated by the words "Not Used").
5. Click **Add logo**.
6. Select the logo file (see [Figure 42](#)).

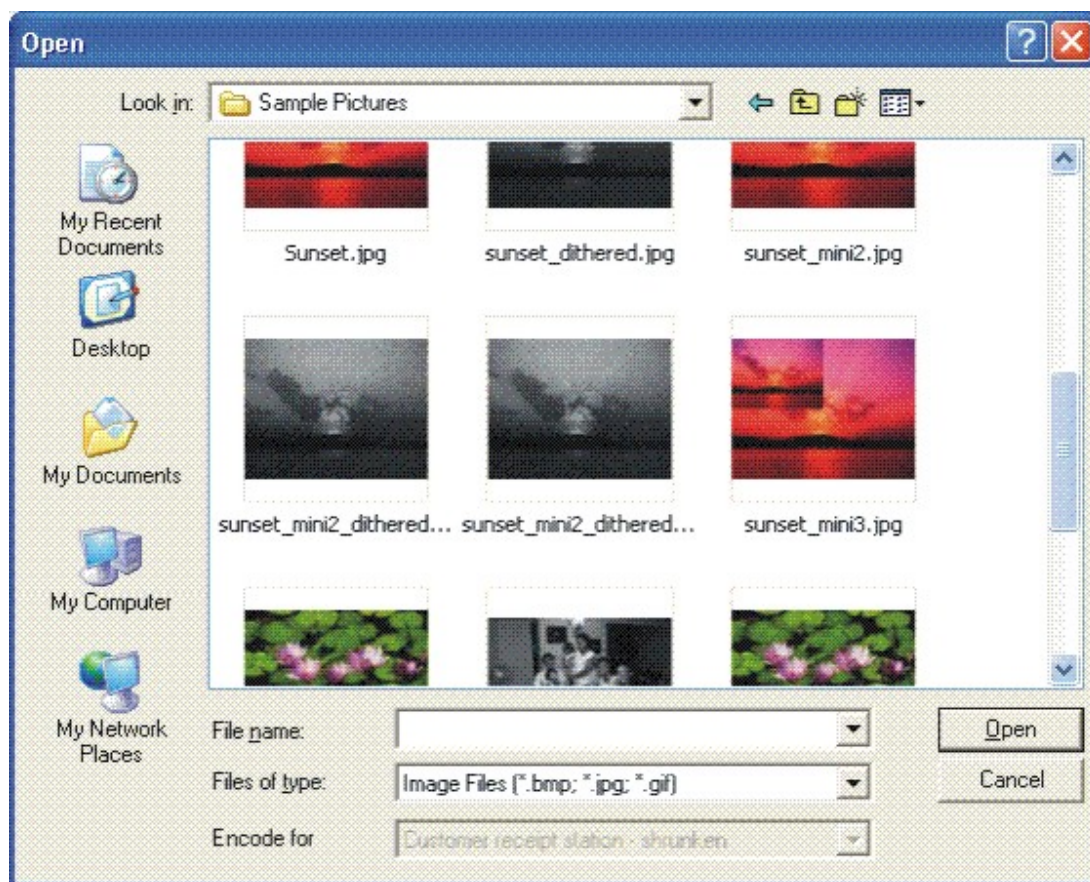


Figure 42. Selecting the logo file

7. From the "Encode for" list, select the print station that will use the logo and how the logo should be handled if it is over the image size limit:

shrunken

Scales the logo down so that it fits within the image size limit of 576 pixels wide × 2040 pixels high, while preserving its aspect ratio.

truncated

Cuts off any part of the logo that is outside of the image size limit of 576 pixels wide × 2040 pixels high, while preserving its aspect ratio.

Note: If your logo fits within the image size limit of 576 pixels wide × 2040 pixels high, then this choice is not relevant: the logo will not be shrunken or truncated.

8. Click **OK**. The logo is stored in the internal memory of the printer.
9. Click **OK** to save your settings and to close the Toshiba 4610 Properties window.

Creating a message

To create a message:

1. From the Windows Start Menu, select **Printer and Faxes**. A window containing icons for all of your installed printers and fax machines opens.
2. Right-click the Toshiba 4610 icon and select **Properties**. The Toshiba 4610 Properties window opens with the General page selected (see [Figure 38](#)).

3. Click the **Messages** tab (see [Figure 43](#)).

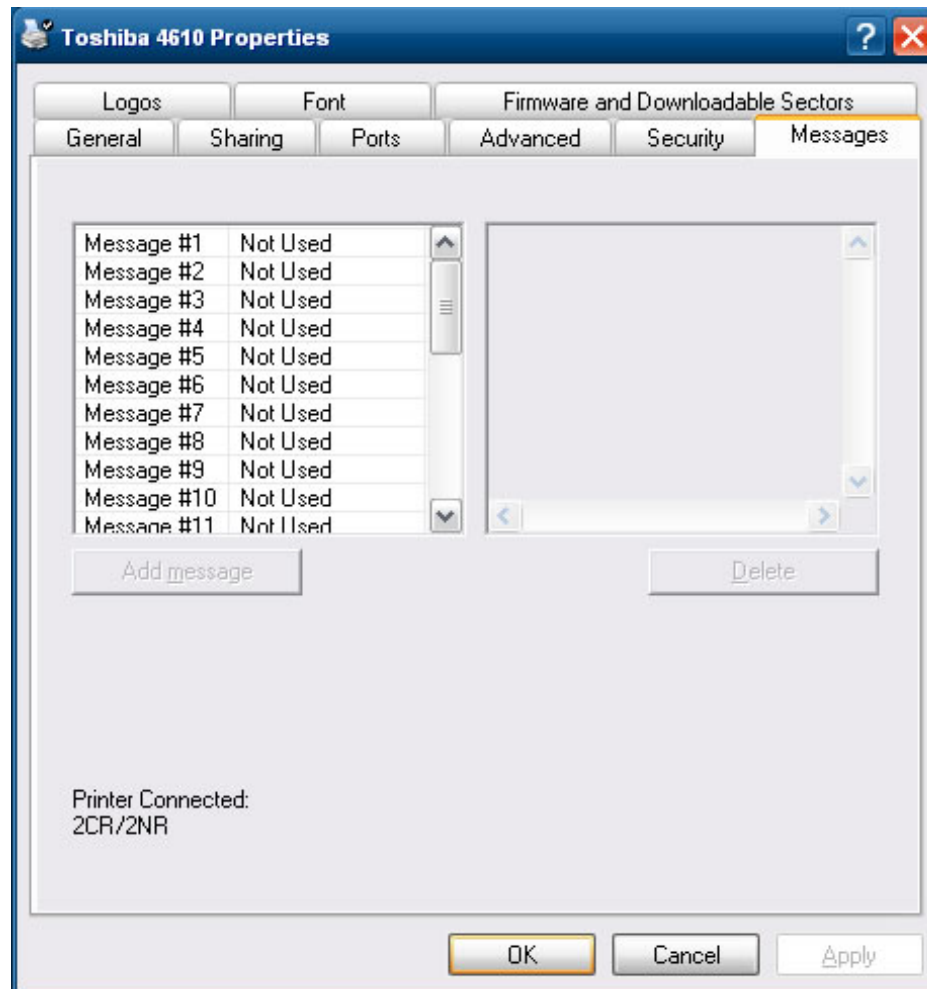


Figure 43. Creating a message (1 of 2)

4. Select an empty Message slot (indicated by the words "Not Used").
5. Type your message in the box to the right of the Message slots list (see [Figure 44](#)). The maximum number of characters in a message is 255.

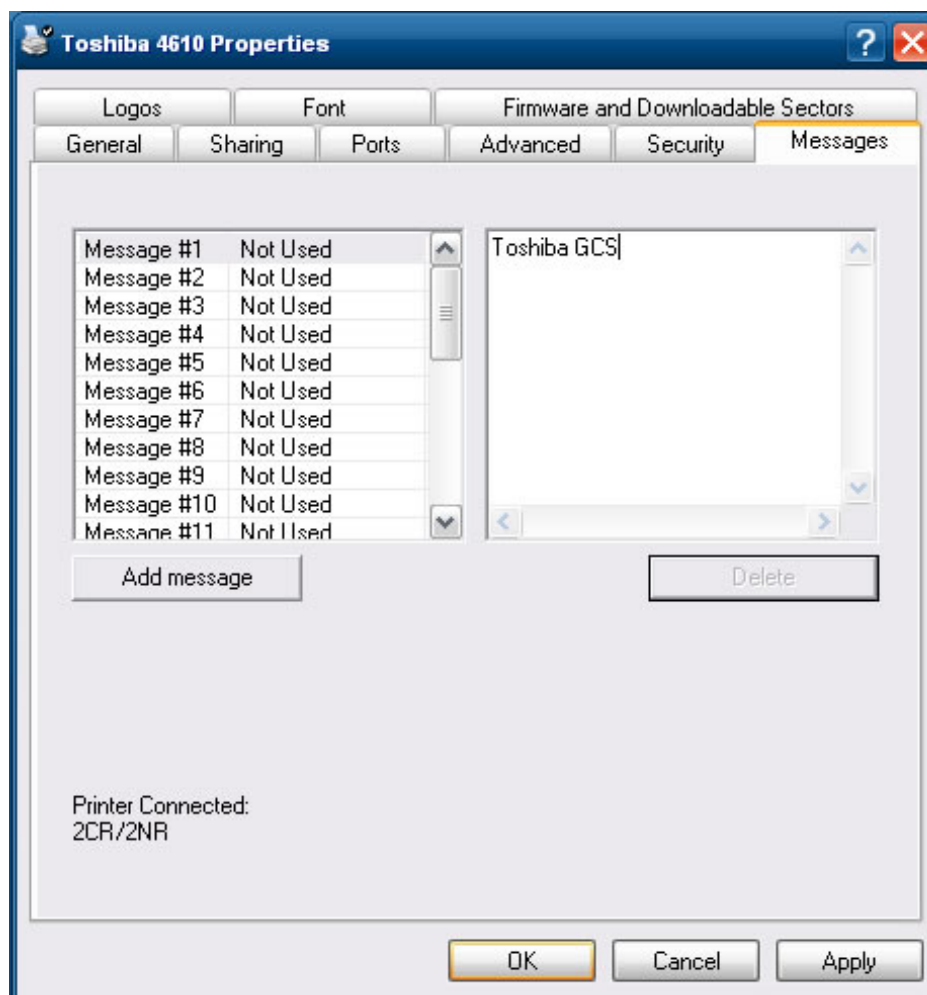


Figure 44. Creating a message (2 of 2)

6. Click **Add message**. The message is stored in the internal memory of the printer.
7. Click **OK** to save your settings and to close the Toshiba 4610 Properties window.

Header and footer

If you have stored logos or messages in the internal memory of the printer (see ["Logos and messages"](#) on page 62), you can use them to define a header or footer that is automatically added to every document that you send to the printer.

Configuring the header

The header is automatically printed at the top of every document. It can contain a logo, a message, or both.

To configure the header for all documents:

1. From the Windows Start Menu, select **Printer and Faxes**. A window containing icons for all of your installed printers and fax machines opens.
2. Right-click the Toshiba 4610 icon and select **Properties**. The Toshiba 4610 Properties window opens with the General page selected (see [Figure 38](#)).

3. Click **Printing Preferences**. The Toshiba 4610 Printing Preferences window opens with the Setup page selected (see [Figure 39](#)).
4. Click the **Document Header** tab (see [Figure 45](#)).
5. Select Use Document Header. The header is empty until you specify a logo, a message, or both.

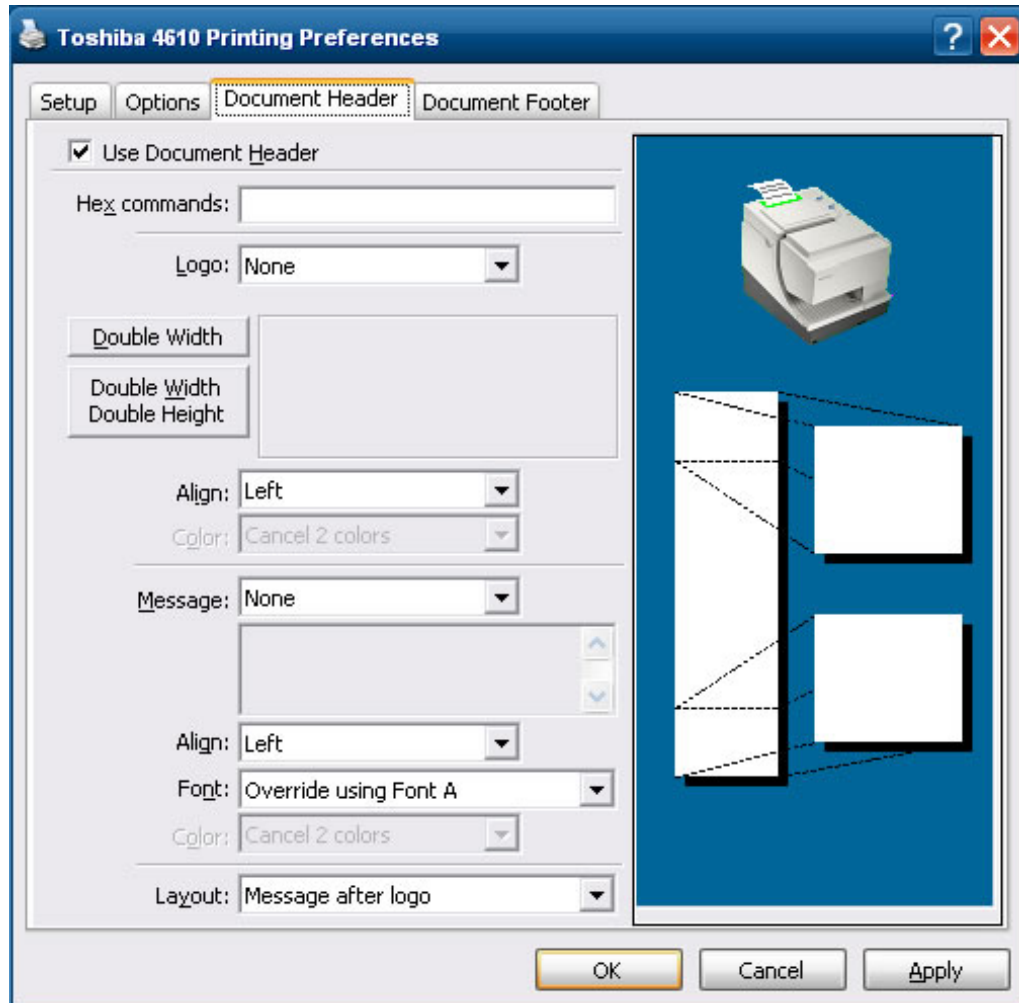


Figure 45. Document Header tab

6. To specify a logo (see [Figure 46](#)):
 - a. From the **Logo** list, select one of the logos stored in the printer's memory.
 - b. If necessary, click one of the following buttons:

Double Width

Doubles the pixel width of the logo, but leaves the height the same.

Double Width Double Height

Doubles the pixel width and height of the logo.
 - c. From the **Align** list, select whether the logo should be aligned to the left, centered, or to the right.
 - d. From the **Color** list, select one of the following:

2 colors (half-character)

Prints the top half of the header logo in color and the bottom half of the header logo in black.

2 colors (full-character)

Prints the header logo entirely in color.

Cancel 2 colors

Prints the header logo in black only.

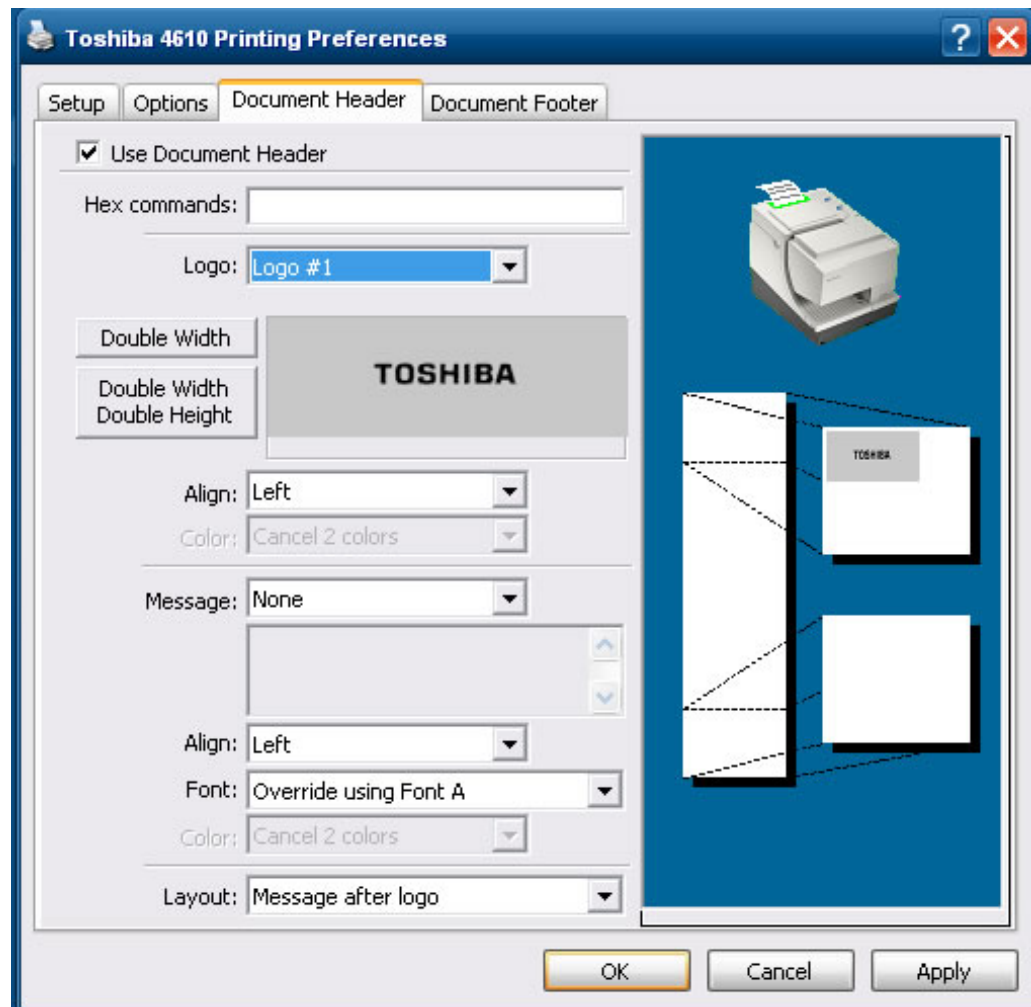


Figure 46. Selecting a header logo

7. To specify a message (see [Figure 47](#)):
 - a. From the **Message** list, select one of the list of messages stored in the printer's memory.
 - b. From the **Align** list, select whether the message should be aligned to the left, centered, or to the right.
 - c. From the **Font** list, select one of the fonts stored in the printer's memory. Refer to the appropriate SureMark User's Guide for a description of these fonts and defaults.
 - d. From the **Color** list, select one of the following:

2 colors (half-character)

Prints the top half of the header message characters in color and the bottom half of the header message characters in black.

2 colors (full-character)

Prints the header message characters entirely in color.

Cancel 2 colors

Prints the header message characters in black only.

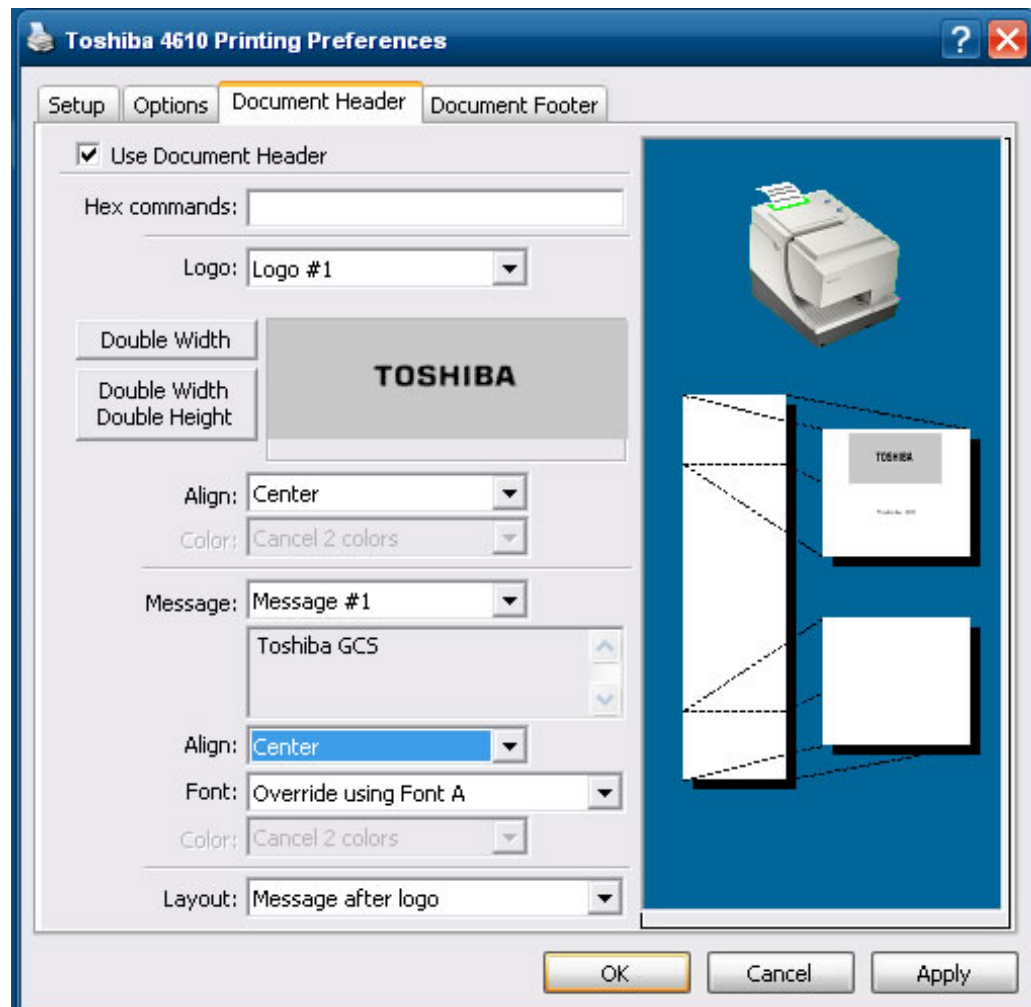


Figure 47. Selecting a header message

8. If you specify both a logo *and* a message, the logo is printed above the message by default. To reverse the order and print the message above the logo, select **Logo after message** from the **Layout** list.
9. Click **OK** to save your settings and to close the Toshiba 4610 Properties window.

Configuring the footer

The footer is automatically printed at the bottom of every document. It can contain a logo, a message, or both.

To configure the footer for all documents:

1. From the Windows Start Menu, select **Printer and Faxes**. A window containing icons for all of your installed printers and fax machines opens.
2. Right-click the Toshiba 4610 icon and select **Properties**. The Toshiba 4610 Properties window opens with the General page selected (see ["Manual configuration" on page 57](#)).
3. Click **Printing Preferences**. The Toshiba 4610 Printing Preferences window opens with the Setup page selected (see ["Manual configuration" on page 57](#)).
4. Click the **Document Footer** tab (see [Figure 48](#)).
5. Select **Use Document Footer**. The footer is empty until you specify a logo, a message, or both.

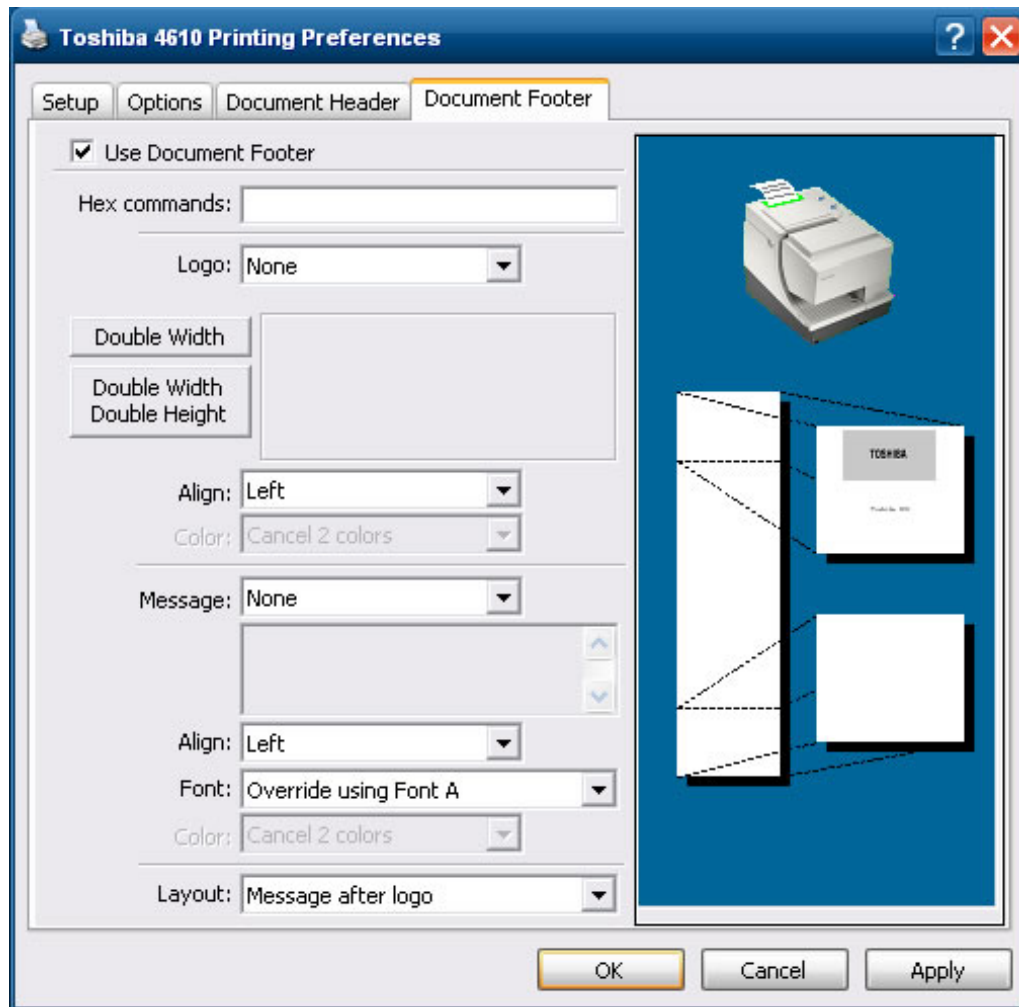


Figure 48. Document Footer tab

6. To specify a logo (see [Figure 49](#)):
 - a. From the **Logo** list, select one of the logos stored in the printer's memory.
 - b. If necessary, click one of the following buttons:

Double Width

Doubles the pixel width of the logo, but leaves the height the same.

Double Width Double Height

Doubles the pixel width and height of the logo.

- c. From the **Align** list, select whether the logo should be aligned to the left, centered, or to the right.
- d. From the **Color** list, select one of the following:

2 colors (half-character)

Prints the top half of the footer logo in color and the bottom half of the footer logo in black.

2 colors (full-character)

Prints the footer logo entirely in color.

Cancel 2 colors

Prints the footer logo in black only.

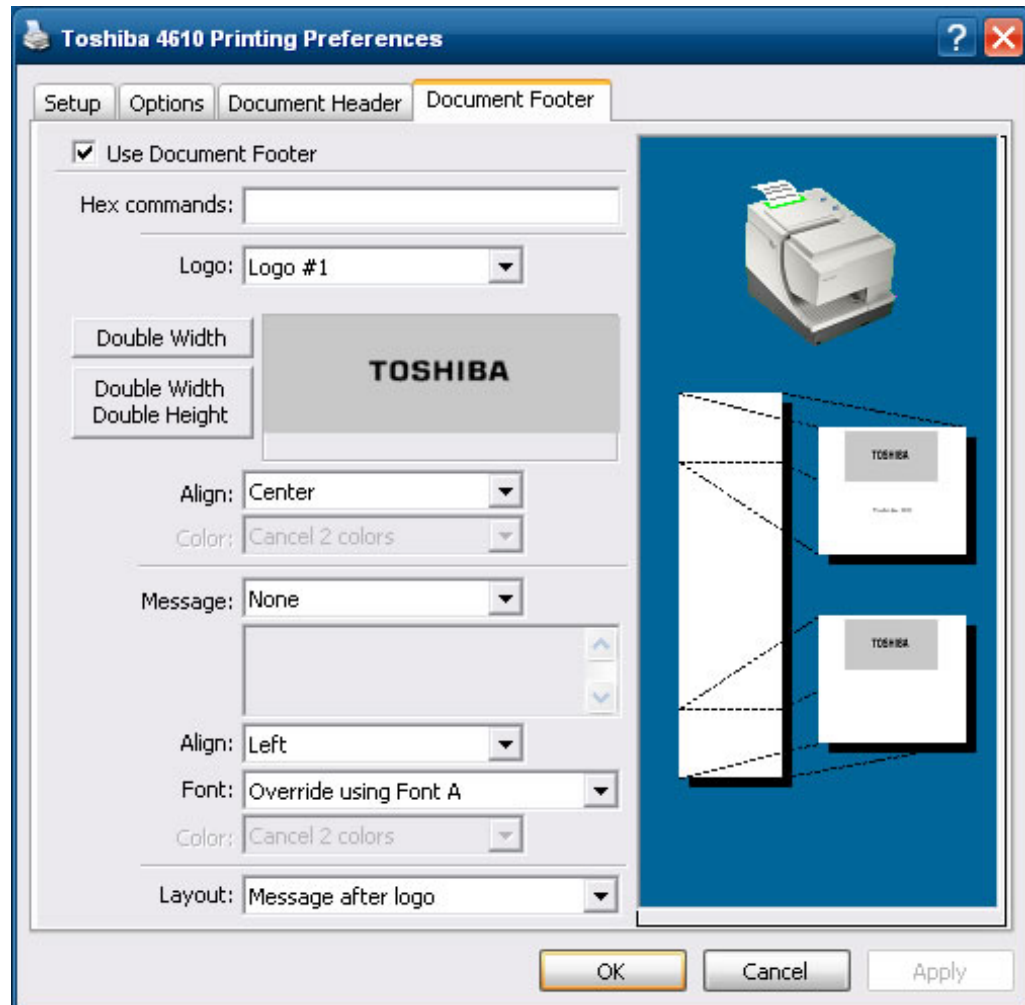


Figure 49. Selecting a footer logo

7. To specify a message (see [Figure 50](#)):
 - a. From the **Message** list, select one of the list of messages stored in the printer's memory.
 - b. From the **Align** list, select whether the message should be aligned to the left, centered, or to the right.
 - c. From the **Font** list, select one of the fonts stored in the printer's memory. Refer to the appropriate SureMark User's Guide for a description of these fonts and defaults.

- d. From the **Color** list, select one of the following:

2 colors (half-character)

Prints the top half of the footer message characters in color and the bottom half of the footer message characters in black.

2 colors (full-character)

Prints the footer message characters entirely in color.

Cancel 2 colors

Prints the footer message characters in black only.

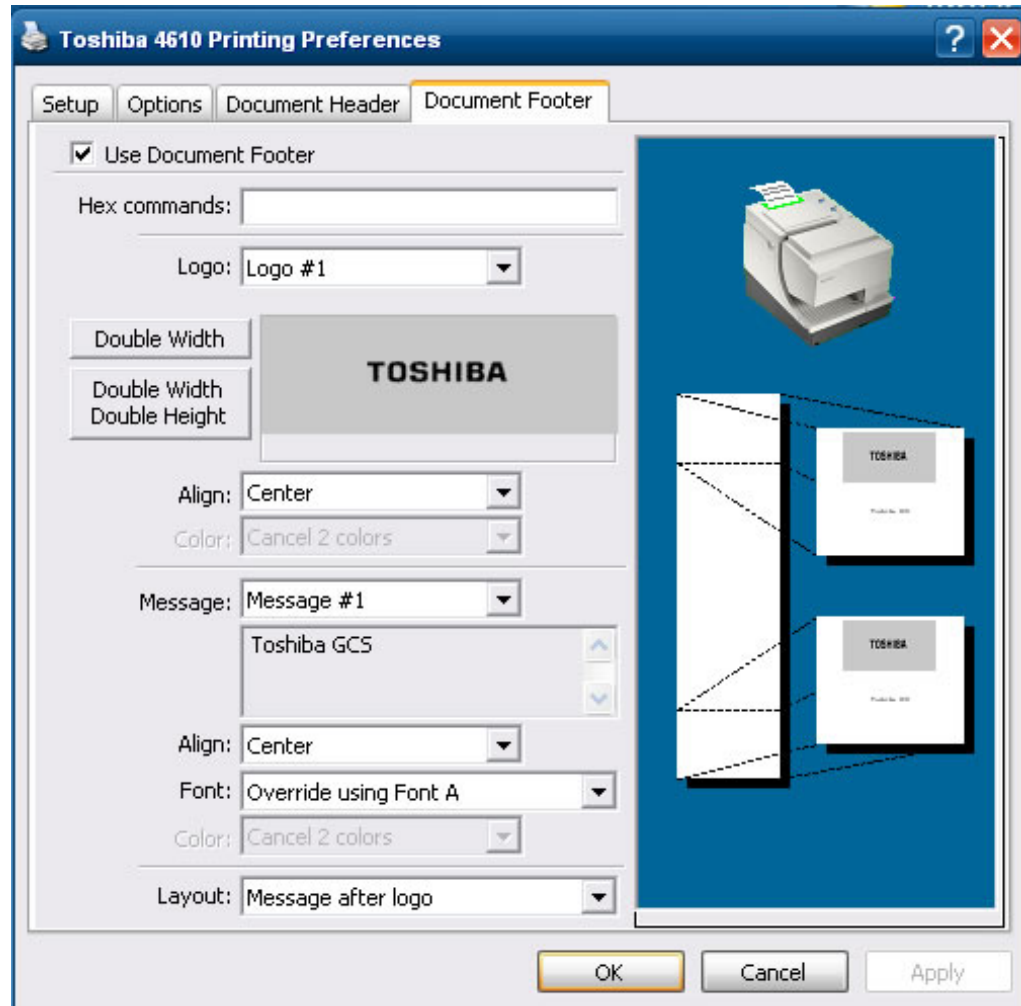


Figure 50. Selecting a footer message

8. If you specify both a logo and a message, the logo is printed above the message by default. To reverse the order and print the message above the logo, select **Logo after message** from the **Layout** list.
9. Click **OK** to save your settings and close the Toshiba 4610 Properties window.

Downloading fonts

To improve printer performance, you can copy fonts to the internal memory of the printer. These fonts are used whenever a document requiring them is printed. The downloadable fonts come from one of the following sources:

- Royalty-free POS fonts provided by Toshiba (see [“POS fonts from Toshiba” on page 73](#))
- Other TrueType fonts that exist on your computer (see [“Other TrueType fonts” on page 80](#))

POS fonts from Toshiba

For SureMark printers users, a collection of royalty-free, TrueType fonts is available from the [Toshiba support site](#).

Obtaining the POS fonts

To obtain the POS fonts from Toshiba:

1. Go to the [Toshiba support site](#).
2. Select **Support**.
3. Select **SureMark Printers**.
4. Select the model of your printer.
5. Select the link that refers to **Fonts** or to **Fonts and Logos Utilities**. The installer is downloaded to your computer to the folder that you specify.

Note: NWD 2.6.0 and later supports only FON fonts. To learn how to convert FNT fonts to FON fonts, refer to the Toshiba Point of Sale Knowledge base and search on article R1001042.

To install the fonts, double-click the installer icon in the folder that you specified, and follow the installation wizard instructions.

Downloading the POS fonts to the printer

To download the POS fonts to the printer:

1. From the Windows Start Menu, select **Printer and Faxes**. A window containing icons for all of your installed printers and fax machines opens.
2. Right-click the Toshiba 4610 icon and select **Properties**. The Toshiba 4610 Properties window opens with the General tab selected (see [Figure 38](#)).
3. Click the **Fonts** tab (see [Figure 51](#)).

Note: If you intend to use double-byte character set (DBCS) fonts, select **DBCS user-defined fonts**. (This option is not available in this example.)

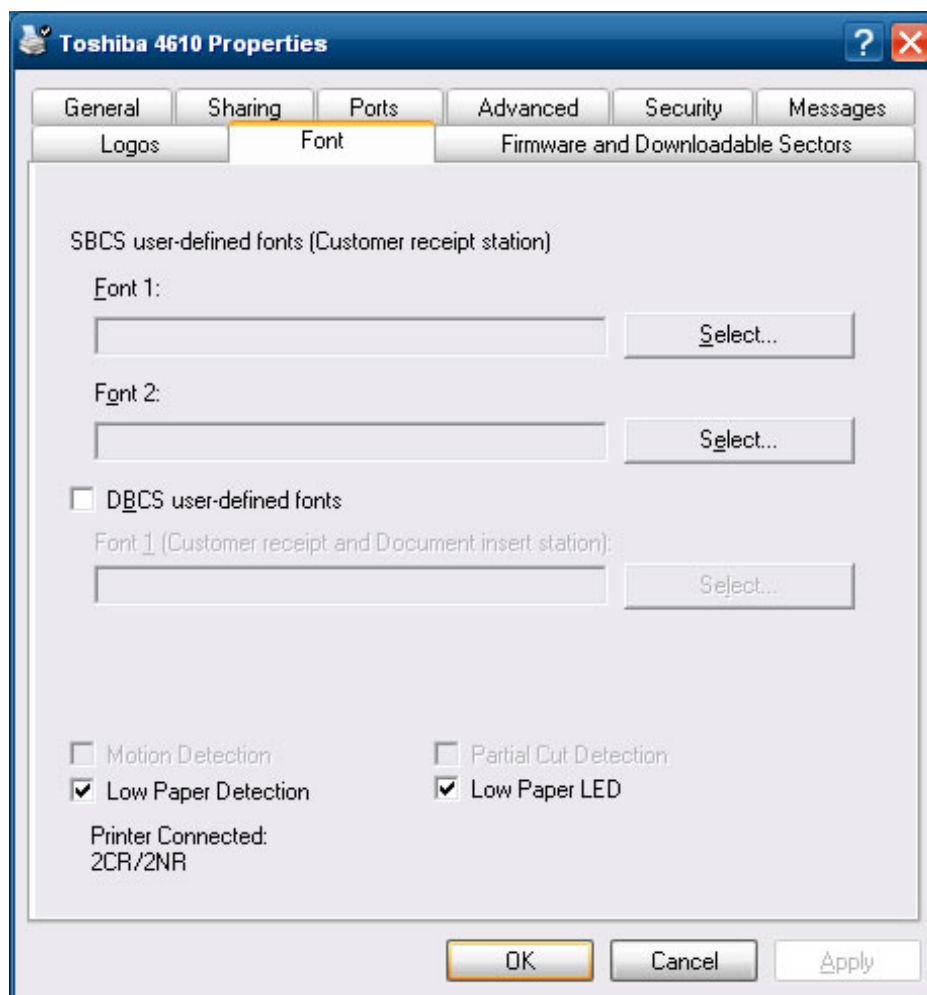


Figure 51. Fonts tab

4. Click **Select** for Font 1 or Font 2. The Select Font window opens (see [Figure 52](#)).

Note: If you are downloading DBCS fonts to the printer, Font 1 can only be used for the customer receipt station and Font 2 can only be used for the document insert station.

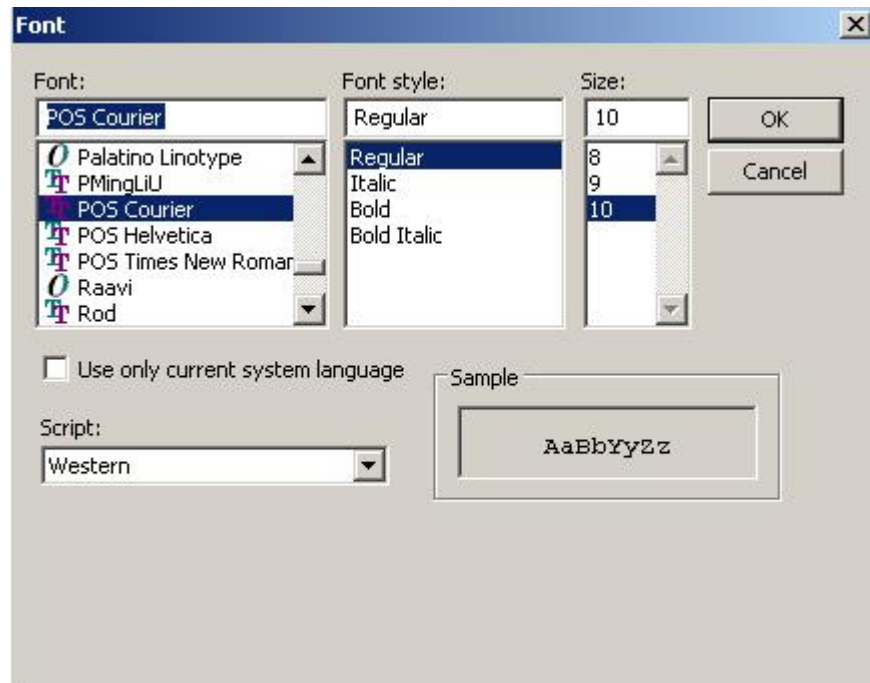


Figure 52. Select Font window

5. Select a POS font, style, and size.
6. Click **OK**. The font is copied to the internal memory of the printer.
7. Click **OK** to save your settings and to close the Toshiba 4610 Properties window.

For SBCS fonts in Windows 7: After selecting the font in the **Fonts** tab in the Toshiba 4610 Properties window, the driver will create a font copy from the original TrueType Font into the <InstalledDir>\Toshiba\Toshiba 4610\dat\<printer_serial>\fonts folder and load that file into the system. The downloaded TrueType Font in the system is available for selection. The driver picks up the font name and converts the Unicode characters to ASCII for printing.

Note: You have to restart the application after downloading the TrueType Font to the printer.

Downloading DBCS fonts

A collection of DBCS fonts are available from the [Toshiba support site](#). Currently, the supported Double Byte Character Sets are:

1. Japanese Codepage 932
2. Korean Codepage 949
3. Traditional Chinese Codepage 950b
4. Traditional Chinese Codepage 950n
5. Simplified Chinese Codepage 1381

To download the DBCS fonts to the printer:

1. Select **Printer and Faxes** from the Windows Start Menu. A window opens that shows icons for all of your installed printers and fax machines.
2. Right-click the **Toshiba 4610 icon** and select **Properties**. The Toshiba 4610 Properties window opens with the **General** tab selected. See [Figure 53](#).

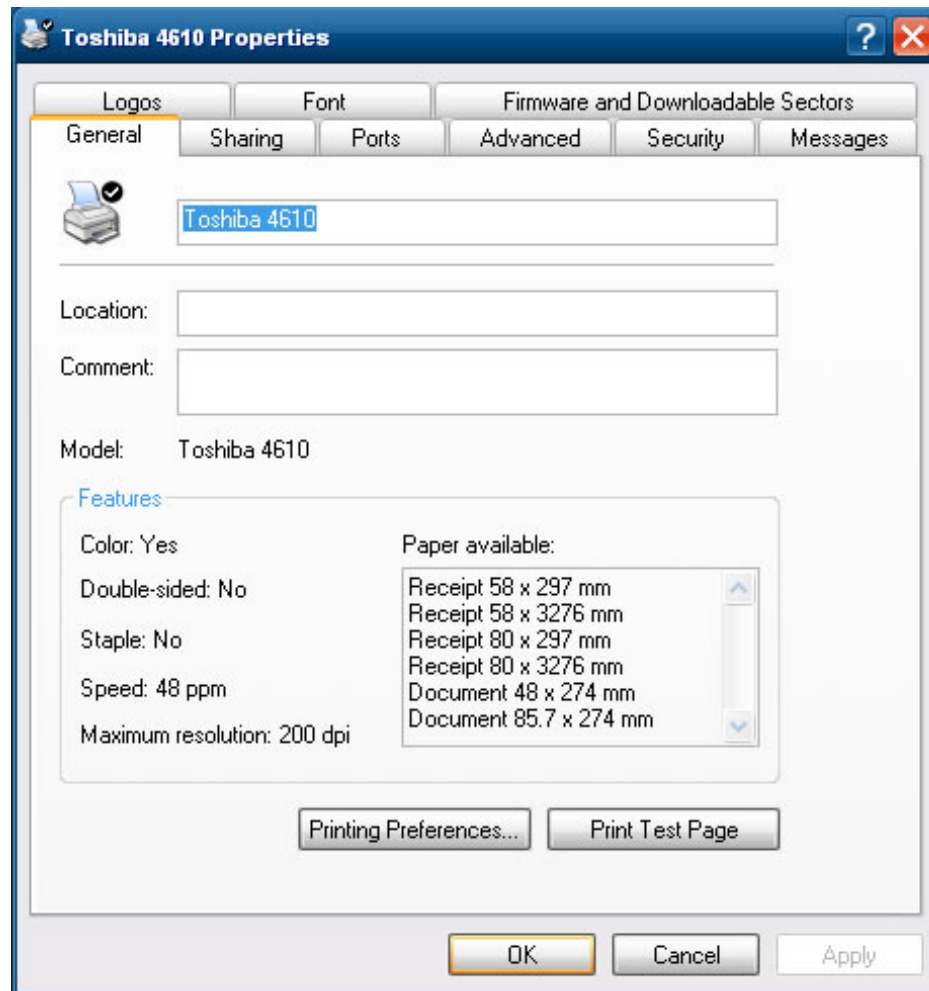


Figure 53. The Toshiba 4610 Properties window

3. Click the **Font** tab. See [Figure 54](#).

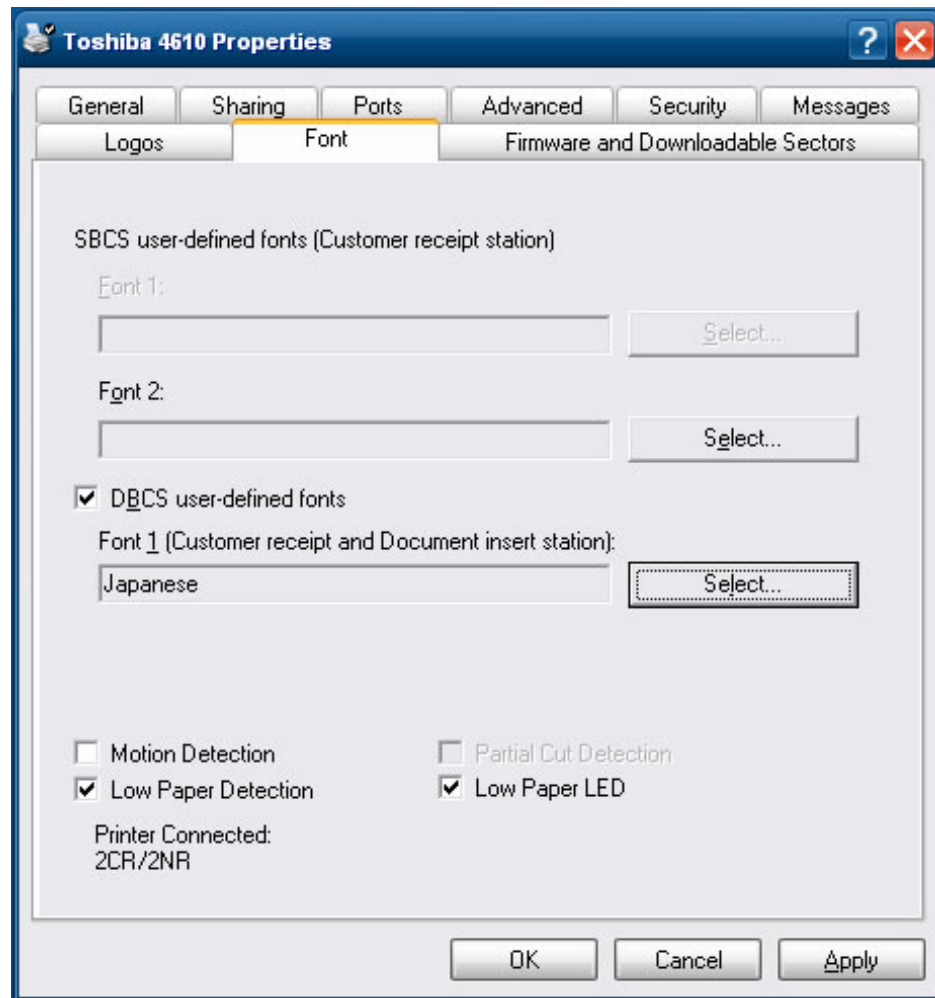


Figure 54. The General Tab window

4. Click **Select** for Font 1 (Customer Receipt Station) or Font 2 (Document Insert Station).
5. Browse to the file location, select, and click to open and download to the printer. See [Figure 55](#).

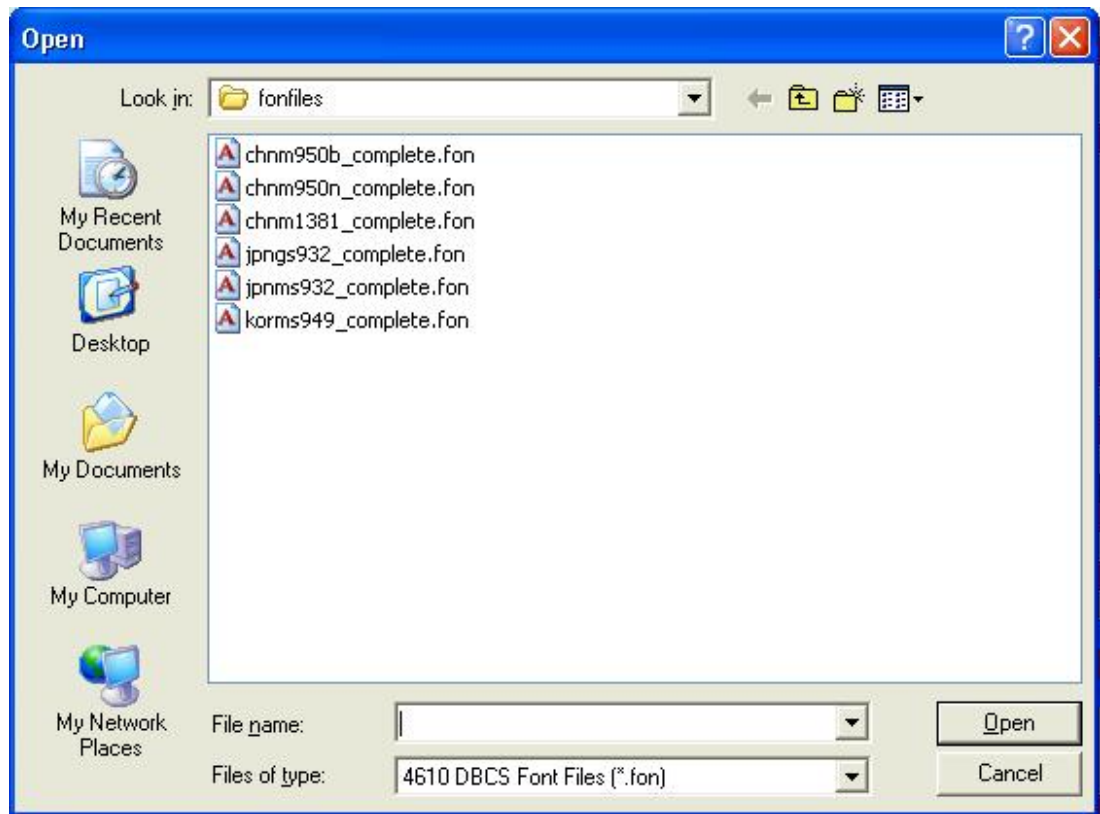


Figure 55. Select DBCS Font File for Customer receipt station

6. Click **OK** to download the font to the printer.
7. Upon completion, the Properties Font Tab will contain the downloaded character set (see [Figure 56](#)).

Note: Due to printer limitations when DBCS fonts are used, only SBCS font 2 is available. Any previously downloaded SBCS font 1 will be erased from the printer.

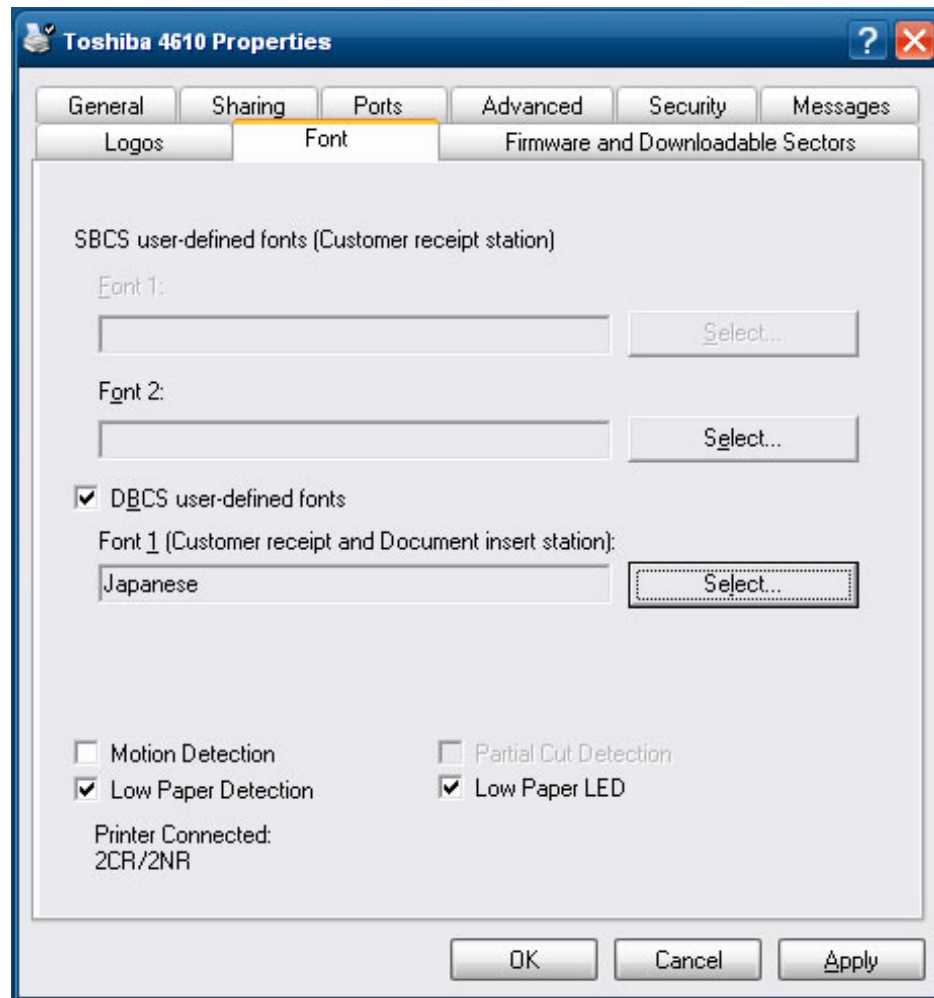


Figure 56. Properties Font Tab

For DBCS fonts in Windows 7: The downloaded DBCS font will no longer be reflected in the application such as wordpad in Windows 7/POSReady 7 or later versions. If the user wants to print using the downloaded DBCS font, this can be done by setting the override font as a downloaded DBCS font in the printer preferences.

Table 2. DBCS default fonts

DBCS Font	Corresponding Default MS Font
Japanese	MS Mincho
Simplified Chinese	SimSun
Traditional Chinese	SimSun
Korean	Maigun Gothic

For example, after downloading *Japanese.fon*, the printer property page dialog will show *Japanese* in the DBCS slot. Using Wordpad, to utilize the downloaded font, specify *MS Mincho* as the font and the driver will convert the Unicode characters and render an ASCII print job. To print in image, use a font other than MS Mincho. To use MS Mincho for image printing, delete the DBCS font from the printer via the printer properties page.

Other TrueType fonts

Other TrueType fonts (in addition to the POS fonts provided by Toshiba) might exist on your computer. If so, you can download them to the printer; however, your license for the fonts must authorize you to do so. You are responsible for confirming that you are authorized to download TrueType fonts to the printer.

To download non-Toshiba fonts:

1. From the Windows Start Menu, select **Printer and Faxes**. A window opens that contains icons for all of your installed printers and fax machines.
2. Right-click the Toshiba 4610 icon and select **Properties**. The Toshiba 4610 Properties window opens with the General tab selected (see [Figure 38](#)).
3. Click the **Fonts** tab (see [Figure 51](#)).

Note: If you intend to use DBCS fonts, select **DBCS user-defined fonts**.

4. Click **Select** for Font 1 or Font 2. The Select Font window opens (see [Figure 52](#)).

Note: If you are downloading DBCS fonts to the printer, Font 1 can only be used for the customer receipt station and Font 2 can only be used for the document insert station.

5. A message appears, reminding you that you must confirm that you are authorized to download TrueType fonts before doing so.
6. If you have received authorization, click **Yes**. The Select Font window is updated to list all of the TrueType fonts installed on your computer (see [Figure 57](#)).

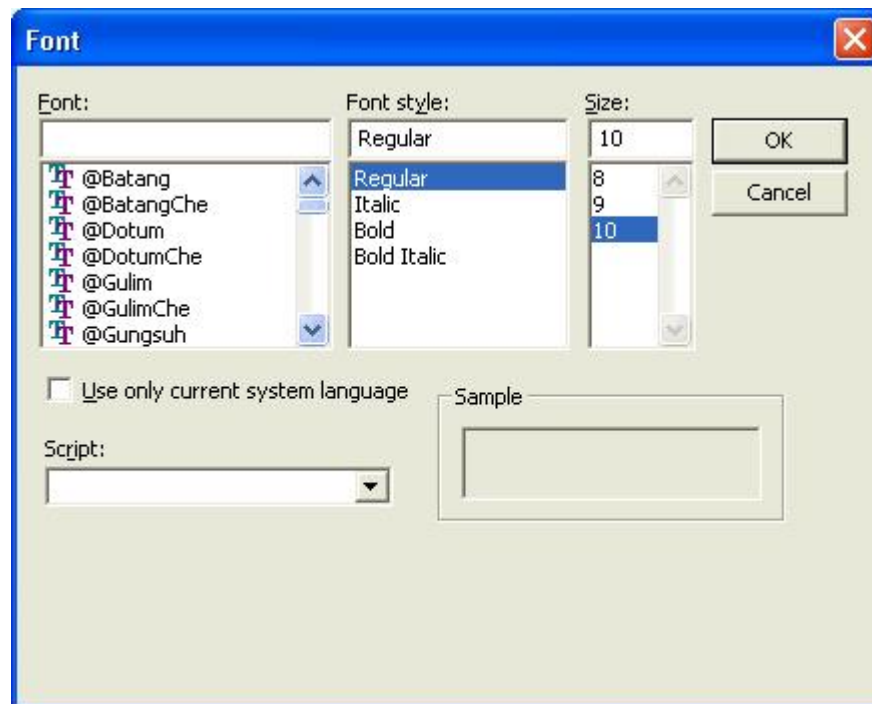


Figure 57. Example Select Font window including non-IBM TrueType fonts

7. Select a TrueType font, style, and size.
8. Click **OK**. The font is copied to the internal memory of the printer.
9. Click **OK** to save your settings and to close the Toshiba 4610 Properties window.

Note: The SBCS font download has a problem when font MS Sans serif and MS Serif font are downloaded. For the workaround and to download this specific combination, do the following:

- a. Select **MS Sans Serif** as Font 1.
- b. Select **MS Serif** as Font 2.

Do not change this combination. If change is desired, clean out the printer memory (erase flash) and re-download both fonts again in the stated sequence.

For Windows 7, Font A, B, C, and other _toshiba_* fonts are available in the TrueTypeFont download selection, which is a known limitation in Windows 7.

Enable/Disable Sensors

The Font Tab in Printer Properties includes these four functions:

- Motion Detection
- Partial Cut Detection
- Low Paper Detection
- Low Paper LED

These sensor settings are *only* available in Native Mode of 2CR/2NR and 1NR.

Motion Detection

This is to turn on/off the paper motion detection sensor of the printer. Motion Detection is only available when the minimum printer firmware version is 0D, and the physical motion sensor is a Type 1 Sensor.

1. Enable the motion detection
 - Select the **Motion Detection** check box
 - Click Apply or OK
2. Disable the motion detection
 - Clear the **Motion Detection** check box
 - Click Apply or OK

Partial Cut Detection

Partial Cut Detection is to turn on/off the partial cut capability of the printer. The partial cut detection is always available in 1NR. The partial cut detection is not available in certain 2NR/2CR models.

1. Enable the partial cut detection:
 - Select the **Partial Cut Detection** check box
 - Click Apply or OK
2. Disable the partial cut detection
 - Clear the **Partial Cut Detection** check box
 - Click Apply or OK

Low Paper Detection

Low paper detection is to turn on/off the low paper detection sensor of the printer.

1. Enable the Low Paper Detection

- Click the **Low Paper Detection** check box
 - Click Apply or OK
2. Disable the Low Paper Detection
 - Clear the **Low Paper Detection** check box
 - Click Apply or OK

Low Paper LED

Low paper LED is to turn on/off low paper LED of the printer.

1. Enable the Low Paper LED
 - Select the **Low Paper LED** check box
 - Click Apply or OK
2. Disable the Low Paper LED
 - Clear the **Low Paper LED** check box
 - Click Apply or OK

Paper Saving Setting

The Paper Saving button is located on the **Firmware and Advanced Configuration** tab. Click the **Paper Saving** button to display the Paper Saving windows.

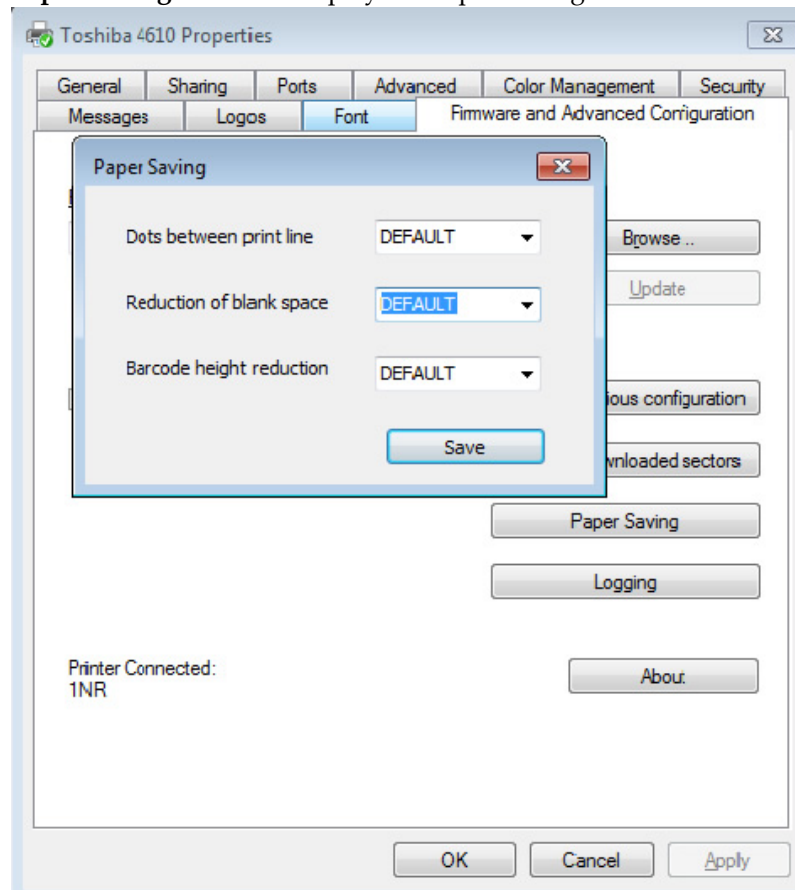


Figure 58. Firmware and Advanced Configuration

The Paper Saving window includes three functions:

Dots between Print Line

DEFAULT

2 dots

4 dots

Reduction of Blank Space

DEFAULT

50% reduction

75% reduction

Barcode Height Reduction

DEFAULT

25% reduction

50% reduction

75% reduction.

These paper saving settings are only available in Native Mode 2CR/2NR and 1NR with firmware EC level 0F.xx and above.

Multiple Logical Printers

One physical Toshiba SureMark 4610 printer can be configured into multiple logical printers with native windows driver. Each logical printer has its own `Printer Preferences` but they all share the same `Printer Properties`. This is particularly useful when you want to deliver printing job to the specific printer preferences configuration (for example, a printer station) repeatedly as you will no longer need to keep on changing the printer preferences before sending the job.

Multiple Logical Printers can be configured with the following steps:

1. Press **Start** and select **Devices and Printers**
2. Right click on the empty spaces and select **Add a printer** from the context menu
3. Select **Add a local printer**
4. Select **Use an existing port** and from the combo box select the port you added for native windows driver during installation (for example, **Toshiba_RSS:0_USB (Local Port)**), and press **Next** button
5. Select **Toshiba** from the *Manufacturer* list and **Toshiba 4610** from the *Printers* list, and press **Next** button
6. Select **Use driver that is currently installed (recommended)**
7. Type the printer name and press **Next** button
8. Select **Do not share this printer** and press **Next** button
9. Press **Finish** button

The steps described above are for Windows 7, but it should also follow suit for other supported operating systems.

Logging configuration

You can configure the logging system of the Native Windows driver to create a trace file with different trace levels and modules. This feature can be used by support teams to resolve problems. To access this feature:

1. Go to the **Firmware and Advanced Configuration** tab.
2. Select the **Logging** button to display the Logging configuration window.

The following module options are available on the Logging configuration window:

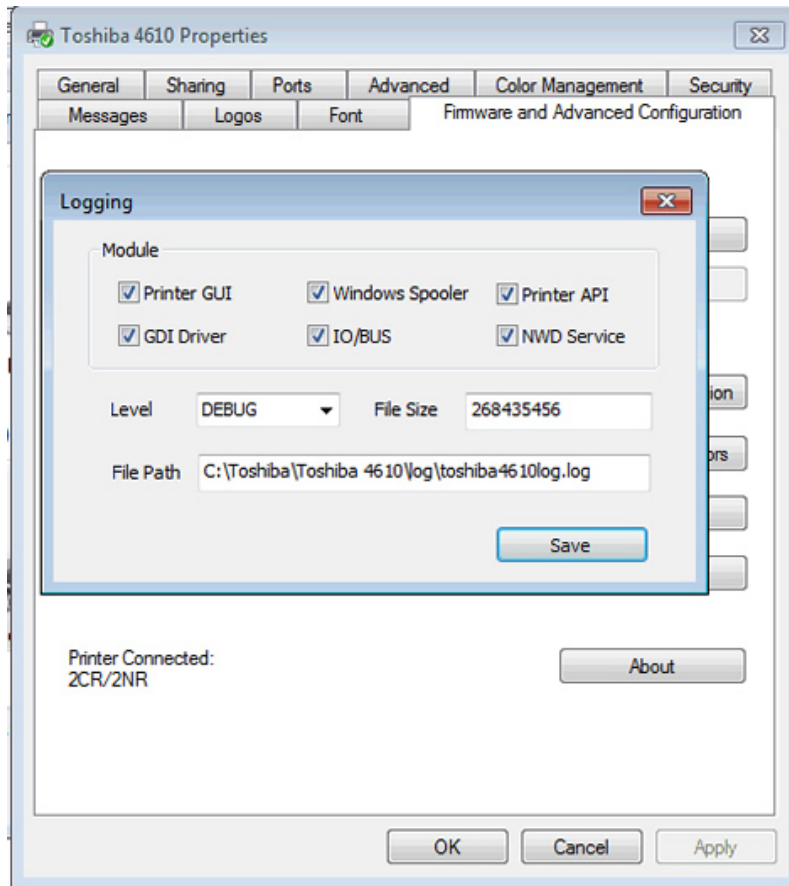


Figure 59. Logging configuration

Note: This trace information can only be configured and recorded for items that are checked.

Printer GUI

Printer properties or preferences setting.

Windows Spooler

Windows printer spooler.

Printer API

A group of API function provided by NWD.

GDI Driver

Windows GDI Driver.

IO/BUS

Operates the interface of the USB/RS232/Ethernet printer.

NWD Service

Maintains all threading and processing of the virtual and physical device interfaces.

Level Settings

- OFF
- CRITICAL

- ERROR
- WARNING
- INFO
- VERBOSE
- DEBUG
- TRACE

File Size

You can create a customized file size for the `toshiba4160.log` file.

File Path

You can create a customized file path for the `toshiba4160.log` file.

Automatic Firmware Upgrade

Use the following steps to perform an automatic firmware upgrade:

1. Change the firmware filename to the appropriate corresponding filename.

Printer Model	Firmware update filename
Tx 3/4/5/6/7	T4610Legacy.hex
Ti 8/9	T4610Ti8.hex
1NR/1NA/1ND/2NR/2CR	T4610.hex

Figure 60. Firmware update filenames

2. Copy the new HEX file into the `C:\Toshiba\Toshiba 4610\firmware` folder.
3. Restart the POS machine.

The automatic firmware version is higher than the printer's firmware version. Native Windows Driver (NWD) will automatically upgrade the printer's firmware at OS startup. During this period the color of printer's indicator lights are yellow, and the yellow lights will flash continuously. The printer will not print until the yellow light turns to green.

Note:

1. The Automatic Firmware Upgrade feature is only available for the USB interface.
2. Command Line Utilities is an optional component for POS Ready 2009. Install the component manually for the Automatic Firmware Upgrade feature before you install NWD 3.4.0:
 - a. Go to the Control Panel, click **Add and remove programs** and **Add/Remove Windows Components**.
 - b. Select **Accessories and Utilities** -> **Utilities** -> **Command Line Utilities** to install.

Chapter 3. Using the printer

This chapter explains how to perform key tasks after the Toshiba SureMark 4610 printer native Windows driver is installed. The following topics are covered:

- Monitoring printer and job status
- Printing with resident or downloaded fonts
- Resident font support with Windows 7
- Printing bar codes
- Compatibility issues for specific applications
- Sending commands to the printer

Monitoring printer and job status

The Language/Port Monitor provides printer and job status for Toshiba 4610 printers directly through COM port, the USB driver, or Ethernet interface. Printer and job status are displayed in the status column on the Windows printer queue view, but there are additional places where you can find printer and job status. Any application can make standard Win32 API calls to get printer or job status information, and display that information to the user. Because it is the 4610's port monitor that sets the information being shown by the application, that application is displaying information that essentially comes straight from the port monitor.

The first place to check status is the standard Printers and Faxes folder (**Start > Control Panel > Printers and Faxes**). Select View > Details to show the status of each printer icon in the Status column of that folder view.

The best place to get status information is the standard Windows print queue view for a printer (double-click the relevant printer in the Printers folder). You should check the Windows print queue first for status because:

- This is the only standard way to get job status information for a specific job on a Windows operating system.
- This is the standard way to get printer status on a Windows operating system.
- All status information in the queue view, including the printer status information, is kept up-to-date by the system. This is not true for the Details view of the Printers and Faxes folder. For example, if the port monitor sets the port status for some port to Out of paper, the queue view for any printers using that port will immediately show the printer as out of paper, whereas the Status column in the Printers and Faxes folder might not update for minutes.

Note: The Language/Port Monitor reports end-of-job status at the time the job completes printing, not at the time it completes sending. This is known as true end-of-job, and is one of the major benefits of using the port monitor.

These values can be returned for the status of the printer:

- Door open/Out of paper on Receipt Station
- Paper absent on Document insert station
- Door open on Document insert station
- Offline
- Print buffer full
- Out of memory
- Print Head in Open Throat Position

The Language/Port Monitor can set the status of a job to any string it chooses. One (or more) of the following values can be returned for the status of a particular print job:

- Printing

- Printed
- Canceling
- Canceled

Note: More than one string can be displayed at a time for a job. For example:

- Printing - Out of paper

This would indicate that the job was a normal job; but the printer is currently out of paper.

- Error - Printing - Canceling - Out of paper

In this example, the spooler adds the first two words (though `Printing` might instead be `Printed`, if the spooler considered the job fully sent).

For the Ethernet-attached SureMark 4610 Printer (models 1NR, 2NR, or 2CR), if there are no print jobs in the Windows spooler, the Language/Port Monitor will not provide a printer status. If you need to set up monitoring for the SureMark 4610 Printer, use SNMP configuration to retrieve printer status. Refer to *SureMark 4610 Printer User's Guide*.

Printing with fonts

1. Select **Toshiba 4610** as the default printer.
2. Open the text editor (such as Microsoft Word or WordPad) of the document you are printing and perform the following steps:
 - Select the text to be printed.
 - Specify the resident or downloaded font you want to use.
 - Specify a point size for the selected text.
 - Print the document.

Note: The screen appearance of text that is edited using the resident or downloaded fonts of the printer might not always match the paper printout. For more information, refer to the [Toshiba support site](#) and search on "4610 native Windows driver."

Resident font support for Windows 7

TrueType Font representation of the resident font character set is installed for Windows 7. The resident font character set that is supported to print bar codes include:

- Font A
- Font B
- Font C
- Tall A
- Font A Width X 2
- Font B Width X 2
- Font C Width X 2
- command
- Control

The resident font character set that is supported to print bar codes include:

- `_ibm_Codabar`
- Code 39
- Code 93
- `_ibm_Code 128ABC`
- Code 128C
- ITF
- JAN 8
- JAN 13

- PDF 417
- UPC A
- UPC E
- QR Code
- GS1 DataBar Omni-Directional
- GS1 DataBar Omni-Directional Stacked
- GS1 DataBar Expanded
- GS1 DataBar Expanded Stacked

These fonts can invoke the printer to use the internal resident fonts available on the printer. These fonts should not be used as downloaded TrueType fonts in the Download Fonts Tab in the Printer Properties.

Note: The size of the resident fonts are limited on the printer. It is not a what-you-see-what-you-get (WYSIWYG) representation on the application. For actual WYSIWYG printing, you should only use non-resident fonts on 2xR and 1xR printers.

Printing bar codes

To create a bar code for printing:

1. Select **Toshiba 4610** as the default printer.
2. Open a document in an editing application (such as Microsoft Word or WordPad).
3. Type the text to be printed as a bar code.
4. Select the text and change the font to one of the following bar code fonts:
 - ibm_Codabar
 - ibm_Code 128ABC
 - Code 128C
 - Code 39
 - Code 93
 - ITF
 - JAN13 (EAN-13)
 - JAN8 (EAN-8)
 - PDF417 (Receipt Station only)
 - UPC-A
 - UPC-E
 - QR Code
 - GS1 DataBar Omni-Directional
 - GS1 DataBar Omni-Directional Stacked
 - GS1 DataBar Expanded
 - GS1 DataBar Expanded Stacked
5. Specify a point size for the selected text.
6. Print the document.

Note: IBM Lotus® Word Pro® does not display point sizes correctly for bar codes (see ["Bar codes" on page 90](#)).

Compatibility notes

Native Windows Driver supports printing from the following 32 bit (in 32 bit and 64 bit Windows) and 64 bit (in 64 bit Windows) applications in Windows operating system:

- Microsoft Wordpad

- Microsoft Internet Explorer
- Microsoft Notepad

Please note that the behavior of a 32 bit application and a 64 bit application may be different and the printing from the file created in 32 bit application may not give the same result when it is printed from 64 bit application. The use of other third party applications is at your own risk and not officially supported. The following sections denote the compatibility issues with some of the third party applications for reference purpose.

Paper sizes

The following applications do not use the paper sizes specified by the SureMark 4610 printer native Windows driver:

- Microsoft PowerPoint
- Corel Draw

Resident fonts

The following applications do not use the resident fonts specified by the SureMark 4610 printer native Windows driver:

- Microsoft PowerPoint
- Corel Draw
- Notepad

Note: Italic resident fonts do not appear italic.

Bar codes

Lotus Word Pro does not display bar code font sizes correctly.

To edit and print bar codes in Word Pro:

1. Select a bar code font. Lotus Word Pro displays an incorrect font size range (for example, from 4 to 72 logical points).
2. Select the last font size (72). The incorrect font size range changes to the correct one.
3. Edit the text using any font size in the list except the last one.
4. Print the document.

Sending commands to the printer

You can send commands to the printer with a command font or control font.

Using the command font

The “command” font is usually indicated in an application by the



icon or no icon. Use the font to pass native printer escape sequence commands directly to the printer as ASCII characters in the following ranges:

- 0–9
- a–f
- A–F

Any other character outside of this range is ignored.

To generate commands, the characters are grouped in pairs and the result is sent unaltered to the printer. If there is an odd number of characters, a trailing 0 is added.

Note: When using only the set left margin command (1B 24 n1 n2) — or in conjunction with the set print station parameters (1b 63 31 n 1B 24 n1 n2) — these command sequences must be posted at the beginning of a new line. This will avoid conflicts between these commands and the similar commands that could be sent from the printer driver.

For more information, refer to the *SureMark 4610 Printers: User's Guide for Models TI1, TI2, TI3, TI4, TI8, TI9, TG3, TG4, TG8, TG9, TF6, and TM6* (GA27-4151) or the *SureMark 4610 Printers: DBCS User's Guide for Models TI5, TG5, TF7, and TM7* (GA27-4256).

Using the control font

The “control” font is usually indicated in an application by the



icon or no icon. Use the font to send commands directly to the printer as ASCII characters; each character sent to the printer in the control font represents a specific command (see [Table 3](#)).

Table 3. Control font mapping

ASCII character	Command
2	Print to the customer receipt station
4	Print to the document insert station (portrait mode)
8	Print to the document insert station (landscape mode)
a	Open drawer 2 (50 ms drive pulse width)
b	Open drawer 2 (100 ms drive pulse width)
c	Open drawer 2 (150 ms drive pulse width)
d	Open drawer 2 (200 ms drive pulse width)
e	Open drawer 2 (250 ms drive pulse width)
f	Cut receipt
g	Cut receipt
h	Flip check
i	Cancel color printing
j	Enable full-character color printing
k	Enable half-character color printing
l	Enable upside down printing
m	Cancel upside down printing
p	Do not add HRI characters to bar code
q	Add HRI characters (in Font B) to top of bar code
r	Add HRI characters (in Font B) to bottom of bar code
s	Add HRI characters (in Font A) to top of bar code

ASCII character	Command
t	Add HRI characters (in Font A) to bottom of bar code
w	Left-align text
x	Center-align text
y	Right-align text
A	Open drawer 1 (50 ms drive pulse width)
B	Open drawer 1 (100 ms drive pulse width)
C	Open drawer 1 (150 ms drive pulse width)
D	Open drawer 1 (200 ms drive pulse width)
E	Open drawer 1 (250 ms drive pulse width)
F	Cut receipt
G	Print predefined graphics (logo) #1 (normal mode)
H	Print predefined graphics (logo) #2 (normal mode)
I	Print predefined graphics (logo) #3 (normal mode)
J	Print predefined graphics (logo) #4 (normal mode)
K	Print predefined graphics (logo) #5 (normal mode)
P	Cut receipt
R	Right-align column
[Print predefined graphics (logo) #1 (double-height double-width mode)
]	Print predefined graphics (logo) #2 (double-height double-width mode)
^	Print predefined graphics (logo) #3 (double-height double-width mode)
_	Print predefined graphics (logo) #4 (double-height double-width mode)
'	Print predefined graphics (logo) #5 (double-height double-width mode)

API programming

The Toshiba 4610 API module that is provided in the Toshiba 4610 Windows Printer Driver Installation Kit is useful for developers that build 4610 printer-related applications. This module offers the possibility to do check processing using 4610 printers and to monitor the 4610 printer status, in conjunction with the Toshiba 4610 Windows Printer Driver.

The Toshiba 4610 API module supports both 32 bit and 64 bit applications. The module names are as follow:

- ibm4610api.dll (32 bit API module)
- ibm4610api64.dll (64 bit API module)

Use the correct module version accordingly.

This section describes the functions that are exported by the 4610 API module. It also provides the definitions for all possible return values, with specific possible values listed within each function. Finally, it lists legacy functions that are not exported by the module.

API overview

Table 4 shows the functions grouped by operational categories.

Table 4. API functions by category

Function	Description	Page
Starting and ending communications		
BiOpenMonPrinter	Opens a new session and, if is successfully opened, returns a handle to the specified printer.	"Parameters (BiOpenMonPrinter)" on page 114
BiCloseMonPrinter	Closes the opened session and frees all allocated resources.	"BiCloseMonPrinter function" on page 97
Basic operations		
BiGetType	Acquires the printer's type ID (capabilities).	"BiGetType function" on page 104
BiGetStatus	Acquires the current status of a printer.	"BiGetStatus function" on page 102
BiGetOfflineCode	Acquires a code that indicates why the 4610 printer is offline.	"BiGetOfflineCode function" on page 100
BiCancelError	Restores recoverable printer errors by sending a release print buffer command.	"BiCancelError function" on page 96
BiOpenDrawer	Opens the specified cash drawer (1 or 2) after the specified delay (in milliseconds).	"BiOpenDrawer function" on page 113
UpdatePrinterFirmware	Updates the firmware of the connected printer on the specified RSS port.	"UpdatePrinterFirmware function" on page 124
Monitoring operations		
BiSetMonInterval	Specifies the interval of the status monitoring of 4610 printers by the API (in milliseconds).	"BiSetMonInterval function" on page 121
BiSetStatusBackFunction	Enables Automatic Status Back mode and registers the address of the callback function where results are notified.	"BiSetStatusBackFunction function" on page 122
BiCancelStatusBack	Disables Automatic Status Back mode.	"BiCancelStatusBack function" on page 96
Check reading operations		
BiMICRSetReadBackFunction	Enables check reading by BiMICRReadCheck and registers the address of the callback function when the results are notified.	"BiMICRSetReadBackFunction function" on page 111
BiMICRSelectDataHandling	Retransmits the check reading results.	"BiMICRSelectDataHandling function" on page 110

Function	Description	Page
BiMICRReadCheck	Selects the check reading data handling mode.	"BiMICRReadCheck function" on page 108
BiMICRRetransmissionCheckData	Executes check reading.	"BiMICRRetransmissionCheckData function" on page 109
BiMICRLoadCheck	Loads the check to the check printing start position.	"BiMICRLoadCheck function" on page 108
BiMICRGetStatus	Acquires the MICR status.	"BiMICRGetStatus function" on page 107
BiMICREjectCheck	Ejects the check.	"BiMICREjectCheck function" on page 107
BiMICRCancelWaitCheckInsertion	Cancels the current check insertion wait period.	"BiMICRCancelWaitCheckInsertion function" on page 106
BiMICRCancelReadBack	Cancels a reading information notification request registered using BiMICRSetReadBackFunction function.	"BiMICRCancelReadBack function" on page 106
Scanning operations		
BiSCNSetImageFormat	Sets the format of the scanning image data.	"BiSCNSetImageFormat function" on page 118
BiSCNGetImageFormat	Acquires the format of the image set in the printer.	"BiSCNGetImageFormat function" on page 115
BiSCNSetReadBackFunction	Enables image scanning with the BiSCNReadImage function, registers the callback function's address called when sending notification of the results, and registers the memory addresses for setting each type of scanned information.	"BiSCNSetReadBackFunction function" on page 119
BiSCNCancelReadBack	Cancels the scanning information notice request registered using the BiSCNSetReadBackFunction function.	"BiSCNCancelReadBack function" on page 115
BiSCNReadImage	Executes image scanning.	"BiSCNReadImage function" on page 116
BiSCNRetransmissionImage	Retransmits the image scanning results.	"BiSCNRetransmissionImage function" on page 117
BiESCNDeriveCropArea	Registers a Crop Area or deletes all the registered Crop Areas.	"BiESCNDeriveCropArea function" on page 97
BiESCNSaveImage	Registers a Crop image.	"BiESCNSaveImage function" on page 99
BiESCNRetrieveImage	Acquires a Crop image.	"BiESCNRetrieveImage function" on page 98

Function	Description	Page
Output appearance operations		
DownloadLogo	Downloads one or more logos to the connected printer on the specified RSS port.	"DownloadLogo function" on page 123
DownloadMessage	Downloads one or more messages to the connected printer on the specified RSS port.	"DownloadMessage function" on page 124
DownloadFont	Downloads one or two TrueType fonts to the connected printer on the specified RSS port.	"DownloadFont function" on page 122

Note: Some BYTE parameter type values are defined with string descriptors, which must be equated to their ordinal integer values to work in code (for example, the first defined parameter value must be equated to 1; the second, to 2; the third, to 3; and so forth).

Return value definitions

SUCCESS

Execution successfully completed.

ERR_ACCESS

Reading or writing with the printer is not possible (printing in progress).

ERR_CROPAREAID

Crop area selected is not present.

ERR_HANDLE

The handle value that specifies the printer is incorrect.

ERR_NO_MEMORY

Memory is insufficient.

ERR_NO_PRINTER

The specified printer driver does not exist.

ERR_NO_TARGET

An unsupported printer was specified (the printer's power is not ON, the cable connections are faulty, and so forth).

ERR_NOT_SUPPORT

Not supported by this printer.

ERR_NOT_OEM

Not supported by this printer.

ERR_OFFLINE

The printer was opened in the offline state, so it can not be used until the online state is recovered.

ERR_OPENED

The specified printer has already been opened.

ERR_PARAM

Parameter error.

ERR_PRINTER_OPERATION

The command sent to the printer was not correctly processed.

ERR_TIMEOUT

A time out error occurred.

ERR_TYPE

nType parameter error.

ERR_WITHOUT_CB

Can not execute because BiMICRSetReadBackFunction has not been called.

BiCancelError function

This function restores recoverable printer errors by sending a release print buffer command.

```
int WINAPI BiCancelError(  
    int nHandle);
```

Parameters (BiCancelError)

nHandle

Specifies the handle value of the printer being accessed. The **BiOpenMonPrinter** return value is used in the handle value.

Return values (BiCancelError)

- SUCCESS
- ERR_TIMEOUT
- ERR_ACCESS

BiCancelStatusBack function

This function disables Automatic Status Back mode.

```
int WINAPI BiCancelStatusBack(  
    int nHandle);
```

Parameters (BiCancelStatusBack)

nHandle

Specifies the handle value of the printer being accessed. The **BiOpenMonPrinter** return value is used in the handle value.

Return values (BiCancelStatusBack)

- SUCCESS
- ERR_HANDLE

BiCloseMonPrinter function

This function closes the opened session and frees all allocated resources.

```
int WINAPI BiCloseMonPrinter(  
    int nHandle);
```

Parameters (BiCloseMonPrinter)

nHandle

Specifies the handle value of the printer being accessed. The **BiOpenMonPrinter** return value is used in the handle value.

Return values (BiESCNDefineCropArea)

- SUCCESS
- ERR_HANDLE

BiESCNDefineCropArea function

This function registers a Crop Area or deletes all the registered Crop Areas.

```
int WINAPI BiESCNDefineCropArea(  
    int nHandle,  
    BYTE bCropAreaID,  
    WORD wStartX,  
    WORD wStartY,  
    WORD wEndX,  
    WORD wEndY);
```

Parameters (BiESCNDefineCropArea)

nHandle

Specifies the handle value of the printer being accessed. The **BiOpenMonPrinter** return value is used in the handle value.

bCropAreaID

Specifies the cropping area template used for storing images (0 – 255):

- | | |
|---|--------------------------------|
| 0 | Clears the cropping area list. |
| 1 | Entire image. |

wStartX

Specifies the starting X coordinate of the cropping area.

wStartY

Specifies the starting Y coordinate of the cropping area.

wEndX

Specifies the ending X coordinate of the cropping area.

wEndY

Specifies the ending Y coordinate of the cropping area.

Return values (BiESCNDefineCropArea)

- SUCCESS
- ERR_HANDLE
- ERR_NOT_SUPPORT
- ERR_PARAM

BiESCNRetrieveImage function

This function acquires a Crop image.

```
int WINAPI BiESCNRetrieveImage(
    int      nHandle,
    DWORD    dwFileIndex,
    LPSTR    pFileID,
    LPSTR    pImageTagData,
    LPDWORD  pImageSize,
    LPBYTE*  pImageData);
```

Parameters (BiESCNRetrieveImage)**nHandle**

Specifies the handle value of the printer being accessed. The **BiOpenMonPrinter** return value is used in the handle value.

dwFileIndex

Specifies the location of the image to retrieve.

pFileID

(Ignored.)

pImageDataTag

Specifies the identification data of the image to retrieve.

pImageSize

Contains the image size of the *pImageData* buffer.

pImageData

Contains the image data.

Return values (BiESCNRetrievelmage)

- SUCCESS
- ERR_NOT_FOUND
- ERR_NOT_SUPPORT
- ERR_PARAM

BiESCNStoreImage function

This function registers a Crop image.

```
int WINAPI BiESCNStoreImage(  
    int         nHandle,  
    LPDWORD    lpdwFileIndex,  
    LPSTR       pFileID,  
    LPSTR       pImageTagData,  
    BYTE        bCropAreaID);
```

Parameters (BiESCNStoreImage)

nHandle

Specifies the handle value of the printer being accessed. The **BiOpenMonPrinter** return value is used in the handle value.

lpdwFileIndex

Returns the image location where the desired image was stored.

pFileID

(Ignored.)

pImageDataTag

Specifies the identification data of the crop image to be saved. Selectable length of a character string is up to 40 characters. NULL can be used.

bCropAreaID

Specifies the crop area ID defined by the **BiESCNDefineCropArea** function. Selectable values are 1 – 255.

Return values (BiESCNStoreImage)

- SUCCESS
- ERR_CROPAREAID
- ERR_NO_IMAGE
- ERR_NO_MEMORY
- ERR_NOT_SUPPORT
- ERR_PARAM

BiGetOfflineCode function

This function acquires a code that indicates why the 4610 printer is offline (5 bytes).

```
int WINAPI BiGetOfflineCode(  
    int    nHandle,  
    LPBYTE offlinecode);
```

Parameters (BiGetOfflineCode)

nHandle

Specifies the handle value of the printer being accessed. The **BiOpenMonPrinter** return value is used in the handle value.

offlinecode

Sets the bit that indicates the reason for being offline:

Table 5. offlinecode Byte 1 = variable

Bit	Function	Value 0	Value 1	Comments
0	CPU execution error	Did not occur	Occurred	Always 0
1	Read/write (R/W) error in memory	Did not occur	Occurred	Status byte 3 – bit 3
2	R/W error in gate array	Did not occur	Occurred	Always 0
3	Not defined	Fixed at 0		0
4	Not defined	Fixed at 0		0
5	Not defined	Fixed at 0		0
6	Fixed	Fixed at 1		1
7	Fixed	Fixed at 0		0

Table 6. offlinecode Byte 2 = 0x40

Bit	Function	Value 0	Value 1	Comments
0	High voltage error	Did not occur	Occurred	Always 0
1	Low voltage error	Did not occur	Occurred	Always 0
2	Overcurrent error	Did not occur	Occurred	Always 0
3	Not defined	Fixed at 0		0
4	Not defined.	Fixed at 0		0
5	Not defined	Fixed at 0		0
6	Fixed	Fixed at 1		1
7	Fixed	Fixed at 0		0

Table 7. offlinecode Byte 3 = 0x40

Bit	Function	Value 0	Value 1	Comments
0	Thermistor error	Did not occur	Occurred	Always 0
1	Print head high voltage error	Did not occur	Occurred	Always 0
2	Print head low voltage error	Did not occur	Occurred	Always 0
3	RTC error	Did not occur	Occurred	Always 0
4	Number of carriage operations error	Did not occur	Occurred	Always 0
5	Number of pump operations error	Did not occur	Occurred	Always 0
6	Fixed	Fixed at 1		1
7	Fixed	Fixed at 0		0

Table 8. offlinecode Byte 4 = variable

Bit	Function	Value 0	Value 1	Comments
0	Auto cutter error	Did not occur	Occurred	TM6 and TM7 only: Status byte 1 – bit 6 (customer receipt print error) All others: 0
1	Paper roll cover open error (recover automatically)	Did not occur	Occurred	Status byte 1 – bit 6 (customer receipt print error)
2	Not defined	Fixed at 0		0
3	Not defined	Fixed at 0		0
4	Home position detection error	Did not occur	Occurred	Status byte 3 – bit 1 (home error)
5	Carriage detection error	Did not occur	Occurred	Always 0
6	Fixed	Fixed at 1		1
7	Fixed	Fixed at 0		0

Table 9. offlinecode Byte 5 = variable

Bit	Function	Value 0	Value 1	Comments
0	Paper roll cover open error (recover by the command)	Did not occur	Occurred	Status byte 1 – bit 6 (customer receipt print error)
1	Print head high temperature error	Did not occur	Occurred	Always 0

Bit	Function	Value 0	Value 1	Comments
2	Print head low temperature error	Did not occur	Occurred	Always 0
3	Not defined	Fixed at 0		0
4	Not defined	Fixed at 0		0
5	Not defined	Fixed at 0		0
6	Fixed	Fixed at 1		1
7	Fixed	Fixed at 0		0

Return values (BiGetOfflineCode)

- SUCCESS
- ERR_ACCESS
- ERR_HANDLE
- ERR_NO_MEMORY
- ERR_OFFLINE
- ERR_PARAM
- ERR_TIMEOUT

BiGetStatus function

This function acquires the current status of a printer (4-bytes status).

```
int WINAPI BiGetStatus(
    int      nHandle,
    LPDWORD lpStatus);
```

Parameters (BiGetStatus)

nHandle

Specifies the handle value of the printer being accessed. The **BiOpenMonPrinter** return value is used in the handle value.

lpStatus

Represents the current status of the specified printer:

Table 10. lpStatus status definitions

EPSON status	Value	OFF	ON	Comments
ASB_NO_RESPONSE	0x00000001	Printer responds	Printer does not respond	If 4610 printer responds this bit will be set to 0 (OFF)
ASB_PRINT_SUCCESS	0x00000002	—	Printing finished	This will be internally handled.

EPSON status	Value	OFF	ON	Comments
ASB_UNRECOVER_ERR	0x00002000	No non-recoverable error	A non-recoverable error has occurred	Status byte 1 – bit 7 (command reject)
ASB_AUTORECOVER_ERR	0x00004000	No auto-recoverable error	An auto-recoverable error has occurred	Always OFF
ASB_OFF_LINE	0x00000008	Online	Offline	If 4610 printer responds then this bit will be set to 0 (OFF)
ASB_PRINTER_FEED	0x00000040	Not feeding paper by the paper feed switch	Feeding paper by the paper feed switch	Status byte 7 – bit 4 (printer key pressed)
ASB_PANEL_SWITCH	0x00000200	Panel switch OFF	Panel switch ON.	Always OFF0
ASB_MECHANICAL_ERR	0x00000400	No mechanical error.	A mechanical error has occurred	Always OFF0
ASB_AUTOCUTTER_ERR	0x00000800	No cutter error.	A cutter error has occurred	Status byte 1 – bit 6 (customer receipt print error)
ASB_DRAWER_KICK	0x00000004	Drawer kick-out; connector pin 3 is LOW	Drawer kick-out; connector pin 3 is HIGH	Status byte 7 – bit 3 (cash drawer status)
ASB_RECEIPT_END	0x00080000	Paper at the receipt end detector	No paper at the receipt end detector	Status byte 1 – bit 6 (customer receipt print error)
ASB_COVER_OPEN	0x00000020	Cover is closed	Cover is open	Status byte 1 – bit 6 (customer receipt print error)
ASB_RECEIPT_NEAR_END	0x00020000	Paper at the receipt near end detector	No paper at the receipt near end detector	Status byte 1 – bit 6 (customer receipt print error)
ASB_SLIP_TOF	0x00200000	Paper at the Slip TOF detector	No Paper at the Slip TOF detector	Status byte 2 – bit 1 (document present under the front sensor)
ASB_SLIP_BOF	0x00400000	Paper at the Slip BOF detector	No Paper at the Slip BOF detector	Status byte 2 – bit 2 (document present under the top sensor)
ASB_SLIP_SELECTED	0x01000000	Slip is selected.	Slip is not selected	Status byte 7 – bit 4 (station select)
ASB_PRINT_SLIP	0x02000000	Can print on slip	Can not print on slip	Status byte 2 – bit 0 (document ready)

EPSON status	Value	OFF	ON	Comments
ASB_VALIDATION_SELECTED	0x04000000	Validation is selected	Validation is not selected	Always ON1
ASB_PRINT_VALIDATION	0x08000000	Can print on validation	Can not print on validation	Always ON1
ASB_VALIDATION_TOF	0x20000000	Paper at the validation TOF detector	No Paper at the validation TOF detector	Always ON1
ASB_VALIDATION_BOF	0x40000000	Paper at the validation BOF detector	No Paper at the validation BOF detector	Always ON1

Return values (BiGetStatus)

- SUCCESS
- ERR_HANDLE
- ERR_PARAM

BiGetType function

This function acquires the printer's type ID (capabilities) (1-byte).

```
int WINAPI BiGetType (
    int    nHandle,
    LPBYTE typeID,
    LPBYTE font,
    LPBYTE exrom,
    LPBYTE typeID(B) );
```

Parameters (BiGetType)

nHandle

Specifies the handle value of the printer being accessed. The **BiOpenMonPrinter** return value is used in the handle value.

typeID

Sets the printer's type ID:

Table 11. typeID bit value definitions

Bit	Function	Value 0	Value 1	Comments
0	2-byte code	Not supported	Supported	Not supported for 46100
1	A/C	Without	With	With1
2	Customer display direct connection	Without	With	Without0
3	Equipped with MICR	Without	With	With for TI3/TI4/TI8/TI9Without for TM6/TM7
4	not used	Fixed at 0		0

Bit	Function	Value 0	Value 1	Comments
5	not defined	—		0
6	Equipped with endorse printer	Without	With	With for TI3/TI4/TI8/TI9 Without for TM6/TM7
7	not used	Fixed at 0		0

- Example (TI3): `*typeID = 0x46`
- Example (TI4, TI8, TI9): `*typeID = 0x4E`
- Example (TM6, TM7): `*typeID = 0x06`

font

Sets the font mounted on the printer. Refer to the list of installed fonts (ignored for 4610 printers). Example: `*font = 0x00`

exrom

Sets the capacity of the printer's expanded flash ROM. For example, `*exrom = 0x00`.

typeID(B)

Sets another type ID for the printer. For example, `*typeID(B) = 0x7A`.

Table 12. typeID(B) bit value definitions

Bit	Function	Value 0	Value 1	Comments
0	2-byte code	Not supported	Supported	Not supported0
1	A/C	Without	With	With1
2	DM-D connection	OFF	ON	Without0
3	Equipped with MICR	Without	With	With1
4	Equipped with scanner	Without	With	With1
5	Equipped with endorse printer	Without	With	With1
6	not used	Fixed at 1		1
7	not used	Fixed at 0		0

Return values (BiGetType)

- SUCCESS
- ERR_ACCESS
- ERR_HANDLE
- ERR_OFFLINE
- ERR_PARAM
- ERR_TIMEOUT

BiMICRCancelReadBack function

This function cancels a reading information notification request registered using BiMICRSetReadBackFunction function.

```
int WINAPI BiMICRCancelReadBack(  
    int nHandle);
```

Parameters (BiMICRCancelReadBack)

nHandle

Specifies the handle value of the printer being accessed. The **BiOpenMonPrinter** return value is used in the handle value.

Return values (BiMICRCancelReadBack)

- SUCCESS
- ERR_HANDLE
- ERR_NOT_SUPPORT
- ERR_OFFLINE

BiMICRCancelWaitCheckInsertion function

This function cancels the current check insertion wait period.

```
int WINAPI BiMICRCancelWaitCheckInsertion(  
    int nHandle);
```

Parameters (BiMICRCancelWaitCheckInsertion)

nHandle

Specifies the handle value of the printer being accessed. The **BiOpenMonPrinter** return value is used in the handle value.

Return values (BiMICRCancelWaitCheckInsertion)

- SUCCESS
- ERR_HANDLE
- ERR_NOT_SUPPORT
- ERR_OFFLINE

BiMICREjectCheck function

This function ejects the check.

```
int WINAPI BiMICREjectCheck(  
    int nHandle);
```

Parameters (BiMICREjectCheck)

nHandle

Specifies the handle value of the printer being accessed. The BiOpenMonPrinter return value is used in the handle value.

Return values (BiMICREjectCheck)

- SUCCESS
- ERR_HANDLE
- ERR_NOT_SUPPORT
- ERR_OFFLINE

BiMICRGetStatus function

This function acquires the MICR status.

```
int WINAPI BiMICRGetStatus(  
    int nHandle,  
    LPBYTE pStatus);
```

Parameters (BiMICRGetStatus)

nHandle

Specifies the handle value of the printer being accessed. The BiOpenMonPrinter return value is used in the handle value.

pStatus

Specifies the memory address where the MICR status is set:

Table 13. pStatus bit value definitions for BiMICRGetStatus

Bit	Function	Value 0	Value 1	Comments
0	Fixed	Fixed at 0		0
1	Fixed	Fixed at 1		1
2	Selects the MICR Function.	Selected.	Not selected	This bit is 0 after a BiMICRSetReadBackFunction function call, until the MICR status is actually returned or until the command is cancelled by a BiMICRCancelReadBack function call.

Bit	Function	Value 0	Value 1	Comments
3	Waits for insertion of a check or cleaning sheet	Do not wait for insertion	Wait for insertion	API internal handling
4	Fixed	Fixed at 1		1
5	TOF Detector	With form	Without form	Status byte 2 – bit 1 (document present under the front sensor)
6	BOF Detector	With form	Without form.	Status byte 2 – bit 2 (document present under the top sensor)
7	Fixed	Fixed at 0		0

Return values (BiMICRGetStatus)

- SUCCESS
- ERR_HANDLE
- ERR_NOT_SUPPORT
- ERR_OFFLINE
- ERR_PARAM

BiMICRLoadCheck function

This function loads the check to the check printing start position.

```
int WINAPI BiMICRLoadCheck(
    int nHandle);
```

Parameters (BiMICRLoadCheck)

nHandle

Specifies the handle value of the printer being accessed. The **BiOpenMonPrinter** return value is used in the handle value.

Return values (BiMICRLoadCheck)

- SUCCESS
- ERR_HANDLE
- ERR_NOT_SUPPORT
- ERR_OFFLINE

BiMICRReadCheck function

This function selects the check reading data handling mode.

```
int WINAPI BiMICRReadCheck(
    int nHandle,
    BYTE readFont,
    BYTE waitInsertionTime);
```

Parameters (BiMICRReadCheck)

nHandle

Specifies the handle value of the printer being accessed. The **BiOpenMonPrinter** return value is used in the handle value.

readFont

Specifies the reading font (ignored because 4610 printers can not be set to read checks with only one of these fonts; they always try to read both fonts):

0	E13B
1	CMC7

waitInsertionTime

Specifies the check insertion wait time, from 0 – 15 minutes (*waitInsertionTime* × 60 seconds). The printer's default is 0 minutes.

Return values (BiMICRReadCheck)

- SUCCESS
- ERR_HANDLE
- ERR_NOT_SUPPORT
- ERR_OFFLINE
- ERR_PARAM
- ERR_WITHOUT_CB

BiMICRRetransmissionCheckData function

This function executes check reading.

```
int WINAPI BiMICRRetransmissionCheckData(  
    int    nHandle,  
    LPBYTE pReadBuffSize,  
    LPBYTE readCharBuff,  
    LPBYTE pStatus,  
    LPBYTE pDetail,  
    DWORD  timeout);
```

Parameters (BiMICRRetransmissionCheckData)

nHandle

Specifies the handle value of the printer being accessed. The **BiOpenMonPrinter** return value is used in the handle value.

pReadBuffSize

Specifies the size of the memory where the reading data is set. After a successful execution of this function, the size of the data that was actually read is set.

readCharBuff

Specifies the memory address where the check reading data is set.

pStatus

Specifies the memory address where the check reading status is set (see [Table 14](#)).

pDetail

Specifies the memory address where a check being read ends in an error, which is returned in cases where detailed information is added in accordance with the BiMICRSelectDataHandling function (see [Table 15](#)).

Return values (BiMICRRetransmissionCheckData)

- SUCCESS
- ERR_HANDLE
- ERR_NOT_SUPPORT
- ERR_OFFLINE
- ERR_PARAM

BiMICRSelectDataHandling function

This function retransmits the check reading results.

```
int WINAPI BiMICRSelectDataHandling(  
    int nHandle,  
    BYTE charSelect,  
    BYTE detailSelect,  
    BYTE errorSelect);
```

Parameters (BiMICRSelectDataHandling)***nHandle***

Specifies the handle value of the printer being accessed. The BiOpenMonPrinter return value is used in the handle value.

charSelect

Specifies handling of characters that can not be analyzed:

0

Interrupts analysis processing at the point when characters that can not be analyzed are detected; and does not add the reading data.

1

Replaces characters that can not be analyzed with a ? and continues analysis processing. If the reading data size is equal or less than the reading data size specified in BiMICRSetReadBackFunction, the reading data is added (ignored).

detailSelect

Specifies whether to add detailed information after a reading error:

0

Detailed information is not added.

1

Detailed information is added.

errorSelect

Specifies whether to end the MICR function or continue after an error. This setting has no effect if the function ends normally without an error or if an error in adding the reading results is encountered:

0

The MICR function is ended after there is an error.

1

If reading ends due to one of these errors, the MICR function continues even after notification of the reading results:

- A check with a nonstandard length is inserted.
- The magnetic waveform can not be detected.
- Characters that can not be analyzed are detected in analysis processing.
- Errors were detected in the noise measurements.

Return values (BiMICRSelectDataHandling)

- SUCCESS
- ERR_HANDLE
- ERR_NOT_SUPPORT
- ERR_OFFLINE
- ERR_PARAM

BiMICRSetReadBackFunction function

This function enables check reading by BiMICRReadCheck and registers the address of the callback function where results are sent.

```
int WINAPI BiMICRSetReadBackFunction(  
    int nHandle,  
    int (CALLBACK *pMicrCB) (void),  
    LPBYTE pReadBuffSize,  
    LPBYTE readCharBuff,  
    LPBYTE pStatus,  
    LPBYTE pDetail);
```

Parameters (BiMICRSetReadBackFunction)

nHandle

Specifies the handle value of the printer being accessed. The **BiOpenMonPrinter** return value is used in the handle value.

pMicrCB

Specifies the address of the callback function for notifying the results from reading of a check.

pReadBuffSize

Specifies the size of the memory where the reading data is set. After a successfully execution of this function, the size of the data that was actually read is set.

readCharBuff

Specifies the memory address where the check reading data is set.

pStatus

Specifies the memory address where the check reading status is set:

Table 14. pStatus bit value definitions for BiMICRSetReadBackFunction and BiMICRRetransmissionCheckData

Bit	Function	Value 0	Value 1	Comments
0	Reading font	E13B	CMC7	The 4610 printers can read both these fonts. The API can determine which font was read according to the characters returned. <ul style="list-style-type: none"> E13B supports characters 0x24 0x2D 0x41 0x54; and CMC7 does not. CMC7 supports characters 0x61 0x62 0x63 0x64 0x65; and E13B does not.
1	Reserved	Fixed at 0.		0
2	Reserved	Fixed at 0.		0
3	Detailed information	Not added	Added	The value of parameter <i>detailSelect</i> of the BiMICRSelectDataHandling function. Default is 1, if the BiMICRSelectDataHandling function was not called.
4	Reread	Enabled	Disabled	Always 0
5	Reading results	Normal end	Abnormal end	Status byte 7 – bit 7 (document feed error) If the printer returns only 0x3F (question mark), this bit will also be 1.
6	Reading data overflow	No	Yes	Always 0
7	Fixed	Fixed at 0		0

pDetail

Specifies the memory address of an error when reading a check. This error is returned in cases where detailed information is added, in accordance with the BiMICRSelectDataHandling function:

Table 15. pDetail byte value definitions for BiMICRSetReadBackFunction and BiMICRRetransmissionCheckData

Value	Information	Comments
0x40	No abnormality	API internal handling
0x41	Check reading was not executed even once. (The BiMICRREADCheck function has not been called.)	API internal handling
0x42	Check insertion wait was canceled. (The BiMICRCancelWaitCheckInsertion function was called.)	API internal handling
0x43	Check insertion wait was canceled because the set time was exceeded. (The timeout set time passed while the BiMICRReadCheck function was being called.)	API internal handling

Value	Information	Comments
0x44	A check with a non-standard length was inserted.	Never sent
0x45	The magnetic waveform was not detected.	Never sent
0x46	Characters that could not be analyzed were detected in analysis processing.	Never sent
0x47	An error occurred during check reading processing.	Status byte 7 – bit 7 (document feed error)
0x48	An error was detected in the noise measurement.	Never sent
0x49	Check reading processing was interrupted by the cover being opened.	Never sent

Return values (BiMICRSetReadBackFunction)

- SUCCESS
- ERR_HANDLE
- ERR_NOT_SUPPORT
- ERR_OFFLINE
- ERR_PARAM

BiOpenDrawer function

This function opens the specified cash drawer (1 or 2) after the specified delay (in milliseconds).

```
int WINAPI BiOpenDrawer(
    int nHandle,
    BYTE drawer,
    BYTE pulse);
```

Parameters (BiOpenDrawer)

nHandle

Specifies the handle value of the printer being accessed. The **BiOpenMonPrinter** return value is used in the handle value.

drawer

Specifies the drawer to be opened.

EPS_BI_DRAWER_1

Operates drawer 1.

EPS_BI_DRAWER_2

Operates drawer 2.

pulse

Specifies the interval until drawer operation.

EPS_BI_PULSE_100

Operates the drawer after 100 milliseconds.

EPS_BI_PULSE_200

Operates the drawer after 200 milliseconds.

EPS_BI_PULSE_300

Operates the drawer after 300 milliseconds.

EPS_BI_PULSE_400

Operates the drawer after 400 milliseconds.

EPS_BI_PULSE_500

Operates the drawer after 500 milliseconds.

EPS_BI_PULSE_600

Operates the drawer after 600 milliseconds.

EPS_BI_PULSE_700

Operates the drawer after 700 milliseconds.

EPS_BI_PULSE_800

Operates the drawer after 800 milliseconds.

Return values (BiOpenDrawer)

- SUCCESS
- ERR_HANDLE
- ERR_OFFLINE

Note:

Calling this function using *nType* = TYPE_PORT will cause the API to check whether there is a Toshiba Port created and associated with the specified physical port *pName*. If there is more than one Toshiba Port associated to the physical port *pName*, the API will open the first printer found.

BiOpenMonPrinter function

This function opens a new session and if it is successfully opened, returns a handle to the specified printer.

Note: You must execute this function before you can perform any other API function.

```
int WINAPI BiOpenMonPrinter(
    int    nType,
    LPSTR  pName);
```

Parameters (BiOpenMonPrinter)***nType***

One of the following two types is specified:

TYPE_PORT

The port name is specified in *pName*.

TYPE_PRINTER

The printer name is specified in *pName*.

pName

Specifies the printer that is opened.

Return values (BiOpenMonPrinter)

- Handle to the specified printer (*nHandle* in other functions), if successful.
- ERR_NO_MEMORY
- ERR_NO_PRINTER
- ERR_NO_TARGET
- ERR_OPENED
- ERR_PARAM
- ERR_TYPE

Note: Calling this function using `nType = TYPE_PORT` will cause the API to check whether there is a Toshiba Port created and associated with the specified physical port *pName*. If there is more than one Toshiba Port associated to the physical port *pName*, the API will open the first printer found.

BiSCNCancelReadBack function

This function cancels the scanning information notice request registered using `BiSCNSetReadBackFunction` function.

```
int WINAPI BiSCNCancelReadBack(  
    int nHandle);
```

Parameters (BiSCNCancelReadBack)

nHandle

Specifies the handle value of the printer being accessed. The **BiOpenMonPrinter** return value is used in the handle value.

Return values (BiSCNCancelReadBack)

- SUCCESS
- ERR_HANDLE
- ERR_NOT_SUPPORT
- ERR_OFFLINE

BiSCNGetImageFormat function

This function acquires the format of the image set in the printer.

```
int WINAPI BiSCNGetImageFormat(  
    int nHandle,  
    LPBYTE pFormat);
```

Parameters (BiSCNGetImageFormat)

nHandle

Specifies the handle value of the printer being accessed. The **BiOpenMonPrinter** return value is used in the handle value.

bFormat

Receives the selected image format in the printer. After a successfully execution, *bFormat* will be:

EPS_BI_SCN_TIFF

TIFF format compressed data (TIFF with CCIT compression)

EPS_BI_SCN_RASTER

Raster format uncompressed data (grayscale with no compression)

EPS_BI_SCN_BITMAP

Bitmap format uncompressed data (BMP with no compression)

EPS_BI_SCN_TIFF256

TIFF format uncompressed data (TIFF with no compression)

EPS_BI_SCN_JPEGNORMAL

JPEG format normal compression data (JPEG with compression)

Return values (BiSCNGetImageFormat)

- SUCCESS
- ERR_ACCESS
- ERR_HANDLE
- ERR_NOT_SUPPORT
- ERR_OFFLINE
- ERR_PARAM
- ERR_TIMEOUT

BiSCNReadImage function

This function executes image scanning.

Note: If not set, the paper insertion wait time defaults to zero (0), and the printer wait time is canceled.

```
int WINAPI BiSCNReadImage(  
    int     nHandle,  
    WORD    wId,  
    BYTE    bSelectSheet,  
    BYTE    bWaitInsertionTime,  
    BYTE    bAddInforDataSize,  
    LPBYTE  pAddInforData,  
    BYTE    bMemory);
```

Parameters (BiSCNReadImage)

nHandle

Specifies the handle value of the printer being accessed. The **BiOpenMonPrinter** return value is used in the handle value.

wId

(Ignored)

bWaitInsertionTime

Specifies the paper insertion wait time, from 0 – 15 minutes (*bWaitInsertionTime* × 60 seconds). The printer's default is 0 minutes.

bAddInforDataSize

(Ignored)

pAddInforData

(Ignored)

bMemory

(Ignored)

Return values (BiSCNReadImage)

- SUCCESS
- ERR_ACCESS
- ERR_HANDLE
- ERR_NOT_SUPPORT
- ERR_OFFLINE
- ERR_PARAM
- ERR_WITHOUT_CB

BiSCNRetransmissionImage function

This function retransmits the image scanning results.

```
int WINAPI BiSCNRetransmissionImage(  
    int      nHandle,  
    WORD     wId,  
    LPDWORD  pBuffSize,  
    LPBYTE*  pBuff,  
    LPBYTE   pImageXsize,  
    LPBYTE   pStatus,  
    LPBYTE   pDetail,  
    DWORD    dwTimeout);
```

Parameters (BiSCNRetransmissionImage)

nHandle

Specifies the handle value of the printer being accessed. The **BiOpenMonPrinter** return value is used in the handle value.

wld

(Ignored.)

pBuffSize

Specifies the size of memory where image data is to be set. After execution of this function, the actual size of the scanned data is set.

pBuff

Specifies the memory address where image data is set.

pImageXsize

(Ignored.)

pStatus

Specifies the memory address where the read status is set (see [Table 16](#)).

pDetail

Specifies the memory address where detailed information is set after scanning ends with an error (see [Table 17](#)).

dwTimeout

Specifies the data reading timeout time, in milliseconds. This timeout is a value that is measured from the point when there is no response from the printer after a rereading request.

Return values (BiSCNRetransmissionImage)

- SUCCESS
- ERR_ACCESS
- ERR_HANDLE
- ERR_NOT_SUPPORT
- ERR_OFFLINE
- ERR_PARAM
- ERR_TIMEOUT
- ERR_WITHOUT_CB

BiSCNSetImageFormat function

This function sets the format of the scanning image data.

```
int WINAPI BiSCNSetImageFormat(  
    int nHandle,  
    BYTE bFormat);
```

Parameters (BiSCNSetImageFormat)

nHandle

Specifies the handle value of the printer being accessed. The **BiOpenMonPrinter** return value is used in the handle value.

bFormat

Specifies image format:

EPS_BI_SCN_TIFF

TIFF format compressed data (TIFF with CCIT compression)

EPS_BI_SCN_RASTER

Raster format uncompressed data (grayscale with no compression)

EPS_BI_SCN_BITMAP

Bitmap format uncompressed data (BMP with no compression)

EPS_BI_SCN_TIFF256

TIFF format uncompressed data (TIFF with no compression)

EPS_BI_SCN_JPEGNORMAL

JPEG format normal compression data (JPEG with compression)

Return values (BiSCNSetImageFormat)

- SUCCESS
- ERR_ACCESS
- ERR_HANDLE
- ERR_NOT_SUPPORT
- ERR_OFFLINE
- ERR_PARAM

BiSCNSetReadBackFunction function

This function enables image scanning by the function **BiSCNReadImage**, registers the callback function's address called when sending notification of the results, and registers the memory addresses for setting each type of scanned information.

```
int WINAPI BiSCNSetReadBackFunction(
    int      nHandle,
    int      (CALLBACK *pScnCB) (void),
    LPDWORD  pBuffSize,
    LPBYTE*  pBuff,
    LPBYTE   pImageXsize,
    LPBYTE   pStatus,
    LPBYTE   pDetail);
```

Parameters (BiSCNSetReadBackFunction)***nHandle***

Specifies the handle value of the printer being accessed. The **BiOpenMonPrinter** return value is used in the handle value.

pScnCB

Specifies the callback function address for sending notification of the results of image scanning.

pBuffSize

Specifies the size of memory where image data is to be set. After execution of this function, the actual size of the scanned data is set.

pBuff

Specifies the memory address where image data is set.

pImageXsize

Specifies the memory address where the number of data (bytes) of image data in the X direction is set.

pStatus

Specifies the memory address where the read status is set:

Table 16. pStatus bit value definitions for BiSCNSetReadBackFunction and BiSCNRetransmissionImage

Bit	Function	Value 0	Value 1	4610 status mapping
0	Reserved	Fixed at 0		0
1	Reserved	Fixed at 0		0
2	Reserved	Fixed at 0		0
3	Reserved	Fixed at 0		0
4	Rescanned	Possible	Not (fixed)	0
5	Scanning results	Ends normally	Ends with an error	Status byte 5 – bit 6 Status byte 7 – bit 7
6	Scanning data overflow	No overflow	Overflow	0
7	Scanning data translation error	No error	Error	0

pDetail

Specifies the memory address where detailed information is set after scanning ends with an error:

Table 17. pDetail byte value definitions for BiSCNSetReadBackFunction and BiSCNRetransmissionImage

Value	Information	4610 status mapping
0x40	No error.	Status byte 5 – bit 6
0x41	The image scanning result does not exist.	Status byte 5 – bit 7
0x44	The cover was opened, so image scanning was interrupted.	Status byte 1 – bit 5
0x45	A recoverable error/automatic reset error occurred during image scanning.	Status byte 1 – bit 5
0x46	Paper with nonstandard length was inserted (longer than approximately 333 mm).	Status byte 7 – bit 7
0x47	Compressed data error—the amount of data increased in data compression processing, and there was insufficient memory.	Status byte 3 – bit 0
0x48	Paper insertion status or paper feed error.	Status byte 7 – bit 7
0x60	Lack of remaining capacity in nonvolatile (NV) memory for saving reading result of images.	Status byte 3 – bit 0

Value	Information	4610 status mapping
0x61	Failure of writing process of reading result of images to the NV memory.	Status byte 3 – bit 0
0x62	Failure of deletion process of the NV memory for reading result of images.	Status byte 3 – bit 0

Return values (BiSCNSetReadBackFunction)

- SUCCESS
- ERR_HANDLE
- ERR_NO_MEMORY
- ERR_NOT_SUPPORT
- ERR_OFFLINE
- ERR_PARAM

BiSetMonInterval function

This function specifies the interval of the status monitoring of 4610 printers by the API (in milliseconds).

```
int WINAPI BiSetMonInterval(
    int nHandle,
    WORD wNoPrnInterval,
    WORD wPrnInterval);
```

Parameters (BiSetMonInterval)

nHandle

Specifies the handle value of the printer being accessed. The **BiOpenMonPrinter** return value is used in the handle value.

wNoPrnInterval

Specifies the interval to get information from the printer, expressed in milliseconds during non-printing.

wPrnInterval

Specifies the interval to get information from the printer, expressed in milliseconds during printing (ignored).

Return values (BiSetMonInterval)

- SUCCESS
- ERR_HANDLE
- ERR_PARAM

BiSetStatusBackFunction function

This function enables Automatic Status Back mode and registers the address of the callback function to which results are sent. When a printer status change occurs, the API will call the registered callback function with the new 4-bytes status as a parameter.

```
int WINAPI BiSetStatusBackFunction(  
    int nHandle,  
    int (CALLBACK *pStatusCB) (DWORD dwStatus));
```

Parameters (BiSetStatusBackFunction)

nHandle

Specifies the handle value of the printer being accessed. The **BiOpenMonPrinter** return value is used in the handle value.

pStatusCB

Specifies the address of the callback function to which the 4610 printer status is sent.

Return values (BiSetStatusBackFunction)

- SUCCESS
- ERR_HANDLE
- ERR_PARAM

BiResetPrinter function

This function resets with all default setting values.

```
int WINAPI BiResetPrinter(  
    int nHandle);
```

Parameters (BiResetPrinter)

nHandle

Specifies the handle value of the printer being accessed. The **BiOpenMonPrinter** return value is used in the handle value.

Return values (BiResetPrinter)

- SUCCESS
- ERR_HANDLE

DownloadFont function

This function downloads one or two TrueType fonts to the connected printer on the specified RSS port. The user passes the name of an installed TrueType font on the system, the font type (Regular, Bold, Italic, or BoldItalic), and the font size in logical points (8, 9, or 10). Each call of

this function erases the proportional fonts sector of the connected printer before writing all of the new fonts.

```
int WINAPI DownloadFont(  
    char* sPrinterName,  
    LPVOID lpFonts);
```

Parameters (DownloadFont)

sPrinterName

Specifies the printer name.

lpFonts

A list of two FONT_API structures. The FONT_API structure is defined as follows:

```
typedef struct _tagFONT_API  
{  
    char sName[MAX_PATH];  
    int nType;  
    char sScript[25];  
    int nSize;  
} FONT_API, FAR * LPFONT_API;
```

Return values (DownloadFont)

- SUCCESS
- ERR_OFFLINE
- ERR_PARAM
- ERR_PRINTER_OPERATION

DownloadLogo function

This function downloads one or more logos to the connected printer on the specified RSS port. The user passes an array containing the slot number where the logo should be downloaded, the encoding mode (customer receipt or document insert station), and the full path to the desired bitmap. Each call of this function erases the logos sector of the connected printer before writing all of the new logos.

```
int WINAPI DownloadLogo(  
    char* sPrinterName,  
    LPVOID lpLogos);
```

Parameters (DownloadLogo)

sPrinterName

Specifies the printer name.

lpLogos

A list of 40 LOGO_API structures. The LOGO_API structure is defined as follows:

```
typedef struct _tagLOGO_API  
{  
    char sImgFilePath[MAX_PATH];
```

```

    BOOL bReceiptStation;
} LOGO_API, FAR * LPLOGO_API;

```

Return values (DownloadLogo)

- SUCCESS
- ERR_ACCESS
- ERR_NO_MEMORY
- ERR_OFFLINE
- ERR_PARAM
- ERR_PRINTER_OPERATION

DownloadMessage function

This function downloads one or more messages to the connected printer on the specified RSS port. The user passes an array containing the slot number where the message should be downloaded and the message text. New lines should be specified by \n. Each call of this function erases the messages sector of the connected printer before writing all of the new messages.

```

int WINAPI DownloadMessage(
    char* sPrinterName,
    LPVOID lpMessages);

```

Parameters (DownloadMessage)

sPrinterName

Specifies the printer name.

lpMessages

A list of MSG_API structures. The MSG_API structure is defined as follows:

```

typedef struct _tagMSG_API
{
    char sMessage[MAX_MESSAGE_LEN];
} MSG_API, FAR * LPMSG_API;

```

Return values (DownloadMessage)

- SUCCESS
- ERR_OFFLINE
- ERR_PARAM
- ERR_PRINTER_OPERATION

UpdatePrinterFirmware function

This function updates the firmware of the connected printer on the specified RSS port.

```

int WINAPI UpdatePrinterFirmware(
    char* sPrinterName,
    char* sFirmwareFilePath);

```

Parameters (UpdatePrinterFirmware)

sPrinterName

Specifies the printer name.

sFirmwareFilePath

Designates the full path to the update firmware file.

Return values (UpdatePrinterFirmware)

- SUCCESS
- ERR_OFFLINE
- ERR_PARAM
- ERR_PRINTER_OPERATION

Functions not exported by the API

The following legacy functions always return SUCCESS:

- BiSetDefaultEchoTime
- BiSetEtherEchoTime

The following legacy functions always return ERR_NOT_OEM:

- BiDirectIO
- BiDirectIOEx

The following legacy functions always return ERR_NOT_SUPPORT:

- | | | |
|------------------------------|---------------------------|----------------------------|
| • BiGetCounter | • BiSCNGetScanArea | • BiESCNSetAutoSize |
| • BiResetCounter | • BiSCNSetReadBackWnd | • BiESCNGetCutSize |
| • BiGetInkStatus | • BiSCNGetClumpStatus | • BiESCNSetCutSize |
| • BiSetInkStatusBackFunction | • BiSCNClumpPaper | • BiESCNGetRotate |
| • BiSetInkStatusBackWnd | • BiSCNSetCroppingArea | • BiESCNSetRotate |
| • BiCancelInkStatusBack | • BiSCNGetCroppingArea | • BiESCNGetDocumentSize |
| • BiMICRSetReadBackWnd | • BiSCNDeleteCroppingArea | • BiESCNSetDocumentSize |
| • BiMICRCleaning | • BiSCNDeleteImage | • BiESCNGetMaxCropAreas |
| • BiSCNPreScan | • BiSCNGetImageList | • BiESCNClearImage |
| • BiSCNGetImageQuality | • BiSCNSetImageQuality | • BiESCNGetRemainingImages |
| • BiSCNSetScanArea | • BiESCNEnable | • BiGetPrnCapability |
| | • BiESCNGetAutoSize | • BiSetMonEtherInterval |

Appendix A. Systems Management Information

Native Windows Driver (NWD) Version 3.5 includes the NWD service that will also act as a WMI provider to support System Management. NWD printers are classified under the **TOSHIBA_NwdPrinter** class.

`DeviceID` is the printer name that is seen in the Windows Control panel and if left unchanged after installation, the printer name is **Toshiba 4610**. The following properties are supported by the NWD System Management and the `DeviceID` property and is used to uniquely identify the device.

Name	Type
DeviceID	string
FirmwareVersion	string
ModelName	string
NWDVersion	string
PortName	string
PrinterInterface	string
BarCodePrintedCount	uint32
CashDrawerOpenCount	uint32
CashDrawerOpenFailCount	uint32
CheckFlipCount	uint32
CheckFlipFailCount	uint32
CheckQualityFailCount	uint32
CheckScanCount	uint32
CRNumOfMotorSteps	uint32
DINumOfMotorStarts	uint32
DINumOfMotorSteps	uint32
FailedPaperCutCount	uint32
FormInsertionCount	uint32
HomeErrorCount	uint32
MaximumTempReachedCount	uint32
MICRFailedCount	uint32
MICRNumHighInterferenceReads	uint32
MICRReadCount	uint32
NumOfFailedFlashWrites	uint32
NVRAMWriteCount	uint32

Name	Type
PaperCutCount	uint32
PartialCutCount	uint32
ReceiptCharacterPrintedCount	uint32
ReceiptCoverOpenCount	uint32
ReceiptPaperJamCount	uint32
ReceiptRemainingPaperCount	uint32
ReceiptSlipCount	uint32
SlipCharacterPrintedCount	uint32
SlipCoverOpenCount	uint32
SlipFeedCount	uint32
ManufactureDate	string
SerialNumber	string
ToneSoundedCount	unit32
UnexpectedCoverOpenCount	unit32
UnexpectedRibbonCoverOpenCount	unit32

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When you attach a monitor to the equipment, you must use the designated monitor cable and any interference suppression devices that are supplied with the monitor.

Federal Communications Commission statement

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.

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

Industry Canada Class A Emission Compliance statement

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

Avis de conformité à la réglementation d'Industrie Canada

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Attention: This is a Class A product. In a domestic environment this product may cause radio interference, in which case the user may be required to take adequate measures.

Responsible manufacturer:

Toshiba Global Commerce Solutions
3039 Cornwallis Road
Building 307
Research Triangle Park, North Carolina 27709
United States of America

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Toshiba Global Commerce Solutions, Inc.
Brand Manager - Europe, Middle East & Africa
3 New Square, Bedfront Lakes, FELTHAM, TW14 8HB, UK
Tel: 44-7967-275819
e-mail: robin.lyon@toshibagcs.com

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Dieses Produkt entspricht den Schutzanforderungen der EU-Richtlinie 2004/108/EG zur Angleichung der Rechtsvorschriften über die elektromagnetische Verträglichkeit in den EU-Mitgliedsstaaten und hält die Grenzwerte der EN 55022 Klasse A ein.

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Verantwortlich für die Einhaltung der EMV Vorschriften ist der Hersteller:

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3039 Cornwallis Road
Building 307
Research Triangle Park, North Carolina 27709
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中华人民共和国“A类”警告声明

声 明

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高調波ガイドライン適合品

高調波ガイドライン適合品

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高調波ガイドライン適合品

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This is electromagnetic wave compatibility equipment for business (Type A). Sellers and users need to pay attention to it. This is for any areas other than home.

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台北市南港區園區街 3-2 號 5 樓之 1
電話：0800-001-939

Toshiba Global Commerce Solutions Taiwan Product Service Contact Info:
Toshiba Global Commerce Solutions, Inc.
Rm. 1, 5F., No.3-2, Park St., Nangang Dist., Taipei City, Taiwan
Telephone: 0800-001-939

Cable ferrite requirement

All cable ferrites are required to suppress radiated EMI emissions and must not be removed.

Electrostatic discharge (ESD)

Attention: Electrostatic discharge (ESD) damage can occur when there is a difference in charge between the part, the product, and the service person. No damage will occur if the service person and the part being installed are at the same charge level.

ESD damage prevention

Anytime a service action involves physical contact with logic cards, modules, back-panel pins, or other ESD sensitive (ESDS) parts, the service person must be connected to an ESD common ground point on the product through the ESD wrist strap and cord.

The ESD ground clip can be attached to any frame ground, ground braid, green wire ground, or the round ground prong on the AC power plug. Coax or connector outside shells can also be used.

Handling removed cards

Logic cards removed from a product should be placed in ESD protective containers. No other object should be allowed inside the ESD container with the logic card. Attach tags or reports that must accompany the card to the outside of the container.

Product recycling and disposal

This unit must be recycled or discarded according to applicable local and national regulations. Toshiba Global Commerce Solutions encourages owners of information technology (IT) equipment to responsibly recycle their equipment when it is no longer needed. Toshiba Global Commerce Solutions offers a variety of product return programs and services in several countries to assist equipment owners in recycling their IT products. Information on Toshiba Global Commerce Solutions product recycling offerings can be found on the [Toshiba Global Commerce Solutions product recycling programs website](#).

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Disposal of IT products should be in accordance with local ordinances and regulations.

Battery safety



警告：本电池包含锂。为避免爆炸，请勿焚烧电池或对其充电。

请勿：把电池投入或浸入水中、把电池加热到 100°C (212°F) 以上、修理或拆卸。 (C003)

注 意

用错误型号电池更换会有爆炸危险

务必按照说明处置用完的电池

Caution: Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.

警 告：

如果更換不正確之電池型式會有爆炸的風險。

請依製造商說明書處裡用過之電池。

Battery return program

This product may contain sealed lead acid, nickel cadmium, nickel metal hydride, lithium, or lithium ion battery. Consult your user manual or service manual for specific battery information. The battery must be recycled or disposed of properly. Recycling facilities may not be available in your area. For information on disposal of batteries outside the United States, go to the [Battery disposal website](#) or contact your local waste disposal facility.

电池回收计划

本产品可能包含密封铅酸、镍镉、镍氢、锂或锂离子电池。有关特定的电池信息，请参阅用户手册或维修手册。必须正确地回收或处理这类电池。在您所在的地区中可能没有回收设施。有关在美国之外处理电池的信息，请访问 <http://www.ibm.com/ibm/environment/products/batteryrecycle.shtml>，或与当地的废品处理机构联系。

For Taiwan:



Please recycle batteries.

For the European Union:



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Les batteries ou emballages pour batteries sont étiquetés conformément aux directives européennes 2006/66/EC, norme relative aux batteries et accumulateurs en usage et aux batteries et accumulateurs usés. Les directives déterminent la marche à suivre en vigueur dans l'Union Européenne pour le retour et le recyclage des batteries et accumulateurs usés. Cette étiquette est appliquée sur diverses batteries pour indiquer que la batterie ne doit pas être mise au rebut mais plutôt récupérée en fin de cycle de vie selon cette norme.

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For California:

Perchlorate material – special handling may apply

Refer to www.dtsc.ca.gov/hazardouswaste/perchlorate.

The foregoing notice is provided in accordance with *California Code of Regulations Title 22, Division 4.5, Chapter 33: Best Management Practices for Perchlorate Materials*. This product/part includes a lithium manganese dioxide battery which contains a perchlorate substance.

Flat panel displays

The fluorescent lamp in the liquid crystal display contains mercury. Dispose of it as required by local ordinances and regulations.

Monitors and workstations

Connecticut: Visit the website of the Department of Energy & Environmental Protection at www.ct.gov/deep for information about recycling covered electronic devices in the State of Connecticut, or telephone the Connecticut Department of Environmental Protection at 1-860-424-3000.

Oregon: For information regarding recycling covered electronic devices in the state of Oregon, go to the Oregon Department of Environmental Quality site at www.deq.state.or.us/kj/electronics.htm.

Washington: For information about recycling covered electronic devices in the State of Washington, go to the Department of Ecology Website at fortress.wa.gov/ecy/recycle/ or telephone the Washington Department of Ecology at 1-800-Recycle.

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