

**TOSHIBA**

TOSHIBA TEC SINGAPORE PTE. LTD.

***Specification For :*** TRST-P1X and TRST-P2X  
Windows Driver Manual

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(Software / ~~Product~~)

Model : TRST-P1X / TRST-P2X

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13th Revision : (23-September-2022)

<b>CHANGE RECORD</b>				
REV	DATE	Page	DESCRIPTION OF CHANGE	APPROVAL
01	20/Apr/20		Initial version	
02	24/Apr/20	P4 P13 P22-23 P28-30 P36 P39-41 P43 P43 P58-66	Added information in "Overview" Added information for driver location Modify instruction on "Add Printer with LAN Interface" Added information to change the Printer Interface Update information on uninstallation process Update example of True Type Font Substitution Update information for default log file location Added explanation about ControlA Font Added Printer Device Font	
03	08/May/20	P49-50 P56-57 P63	Modify Document Layout Modify Document Layout Remove comment box that not refer anything	
04	22/May/20	P1,7,61,62 P4,7,13,31 P29-30  P42-43 P64-68	Change TRSTPXX ==> TRST-P1X and TRST-P2X Driver name change to TEC WinDriver Additional information about setting Serial communication parameter Added Example for Control & ControlA Font Remove Italic & Bold Font from sample code	
05	15/June/20	P4 P6,10 P7	Change versioning from V3.XX to V1.3.XX.XXX Change GUI & details for reboot after installation Update folder installation GUI	
06	03/Aug/21	Pi P5,P9	Remove confidential and remove approved table Remove GUI for selected Printer Model	
07	04/Aug/21	P4 P52 P49-P59	Change versioning from V1.3.XX.XXX to V3.21.X.X Remove Watermark Section Change GUI after removing Watermark tab in Printing Preferences	
08	29/Dec/21	P4	Add windows 11 (64 bit) as supported OS Change versioning from V3.21.X.X to V3.22.X.X	
11	20/Aug/22	P59-P60	Add QR Code in 2D Code Tab	
12	11/Aug/22	P4 P10	Add windows Server 2016 / 2019 as supported OS Added note for Windows Server 2016 / 2019 to use manual install	
13	23/Sep/22	P49-P52 P70	Added Print Option -> Shrink to Fit on Layout Tab Added Restrictions and Cautions	

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## 1. Overview

This document contains information about Windows Printer Driver installation, Printer Properties and Printing preferences provided for the following printers:

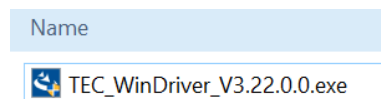
- TRST-P1X / HSP-150
- TRST-P2X / HSP-100

These instructions cover the driver version **V3.21** for **Windows 7 (32 bit & 64 bit), Windows 10 (32 bit & 64 bit), Windows 11 (64 bit) and Windows Server 2016 / 2019**

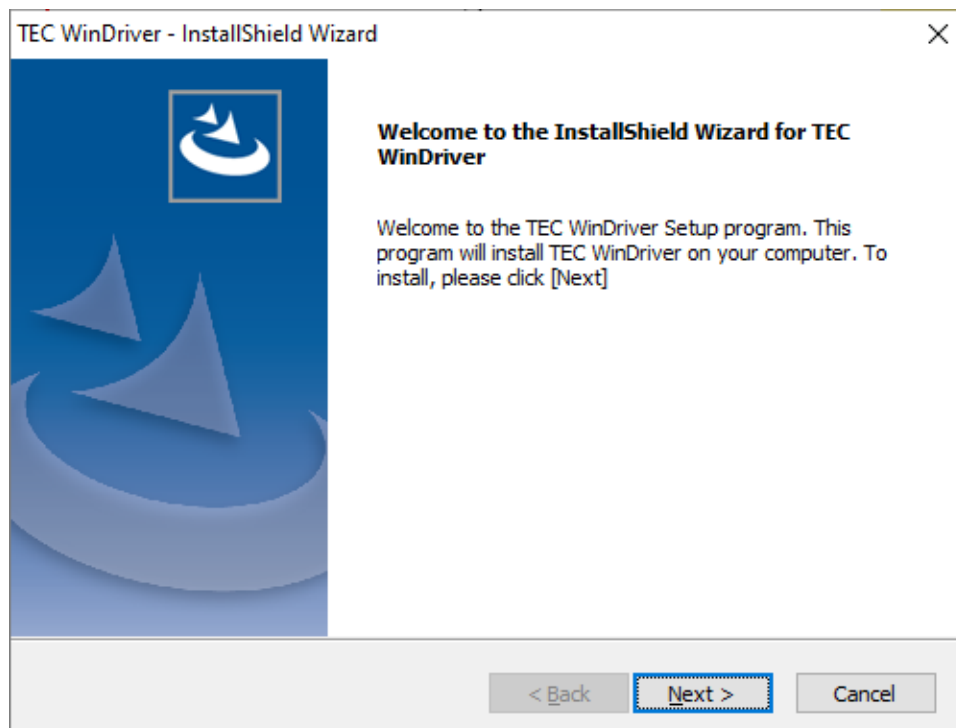
## 2. How to install the Printer Driver

### 2.1 Install by using installer application (USB connection)

To start the installation, please select and run the "TEC\_WinDriver\_V3.22.X.X"



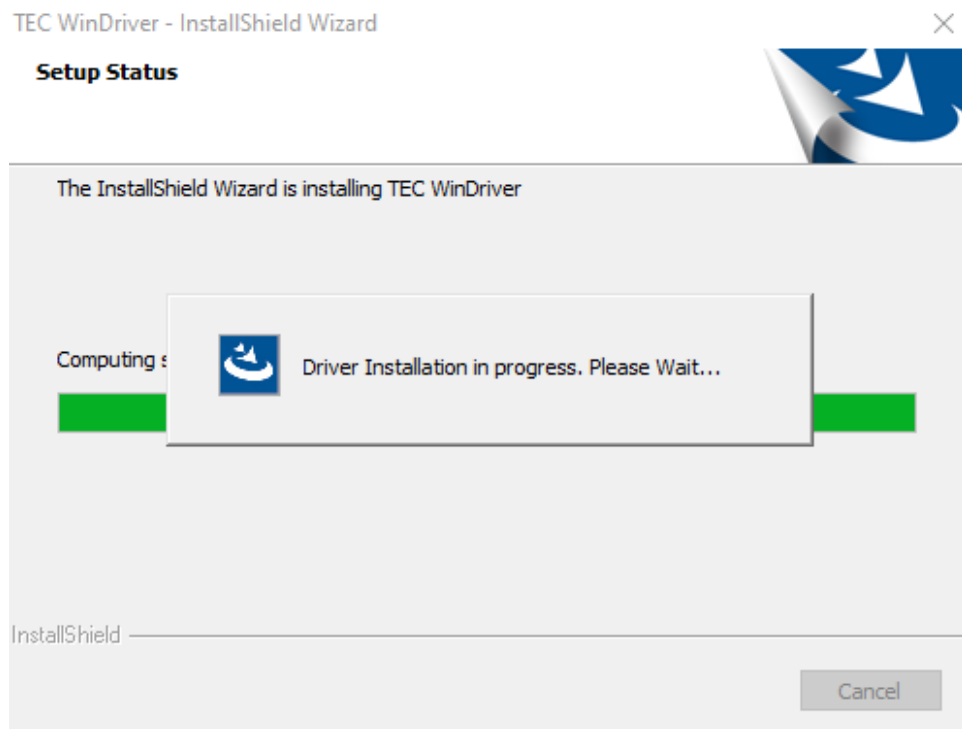
Below is Welcome Dialog after run the installer. Click "Next >".



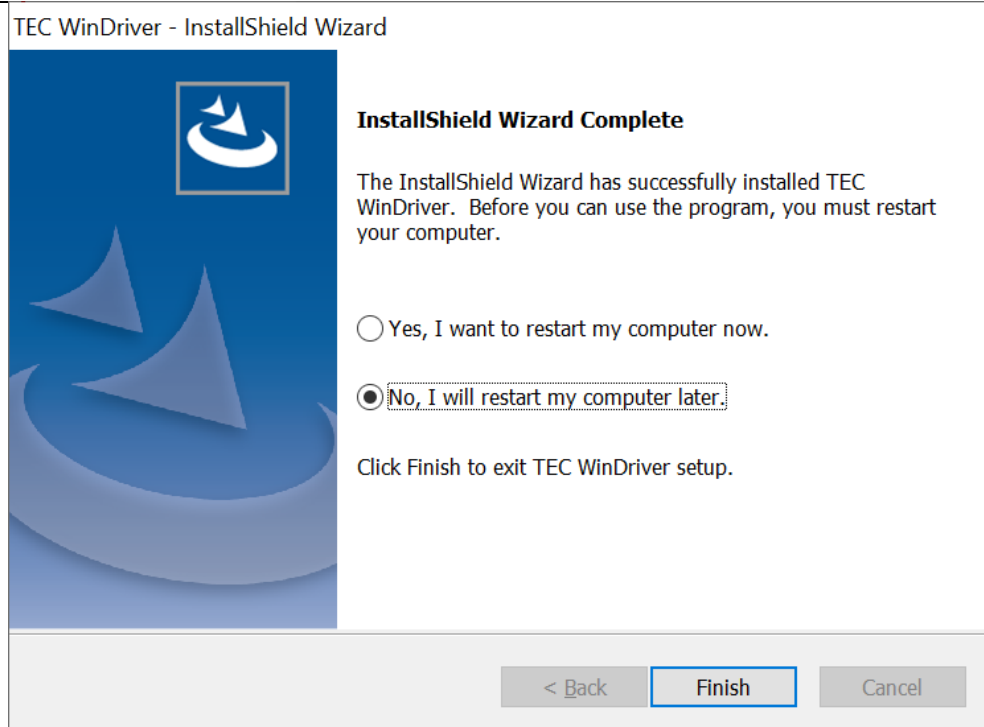
Select Accept the license agreement option. Click "Next >".



Driver Installation Process. Please wait until installation finish

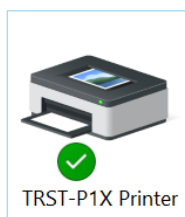


Installation complete. In some case during updating the driver, the printer properties and printer preferences version still refer to previous driver so it is recommended to restart the PC when you perform update driver.



Click "Finish" to complete the installation.

After installation finished, you will see the "TRST-P1X Printer" or "TRST-P2X Printer" icon in the "Devices and Printers" folder.

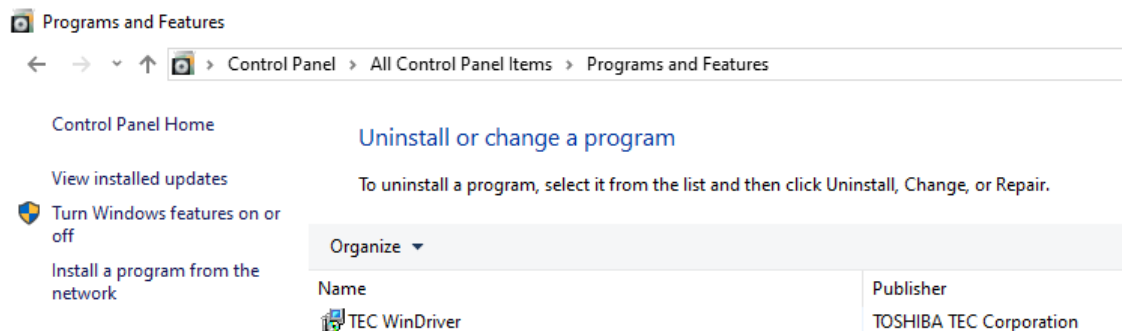


Driver Package Location → C:\Program Files (x86)\TOSHIBA\TECWinDriver

This PC > Local Disk (C:) > Program Files (x86) > TOSHIBA > TECWinDriver

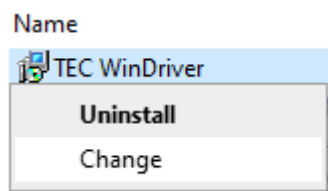
Name
license
Sample Application
TRSTP1X
TRSTP2X
copytemp.bat
DeleteRegistryP1Reg.ps1
DeleteRegistryP2Reg.ps1
deltemp.bat
deltemp.ps1
install.bat
P1Reg.ps1
P2Reg.ps1
Setupx64.exe
Setupx86.exe
uninstall.bat

The Installer program call “TEC WinDriver” will appear on “Programs and Features”

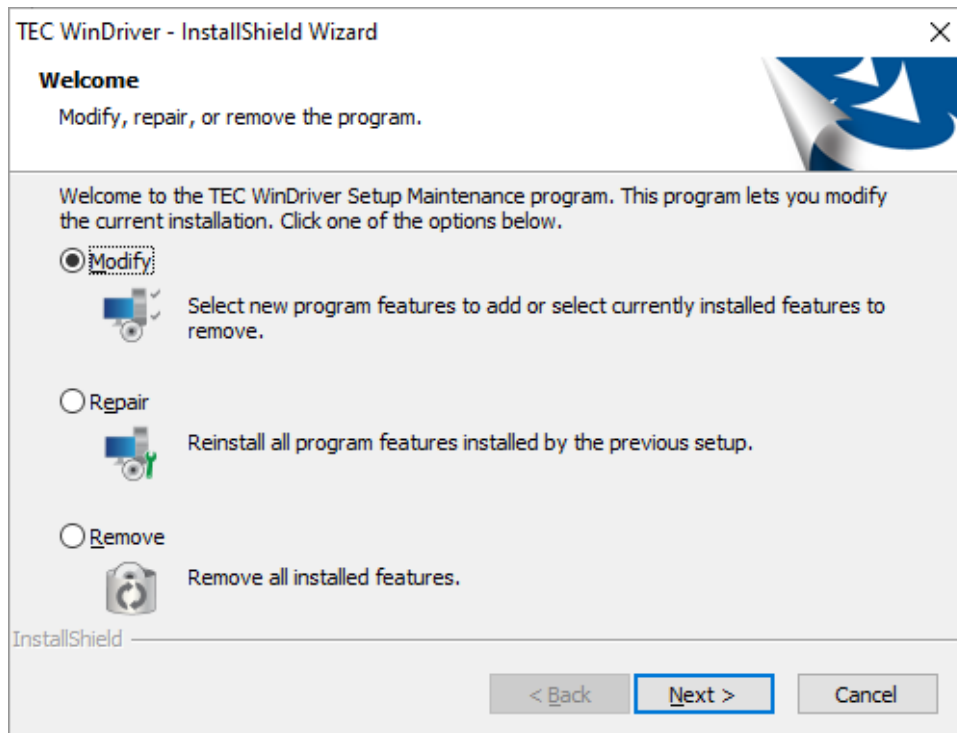


**NOTE:**

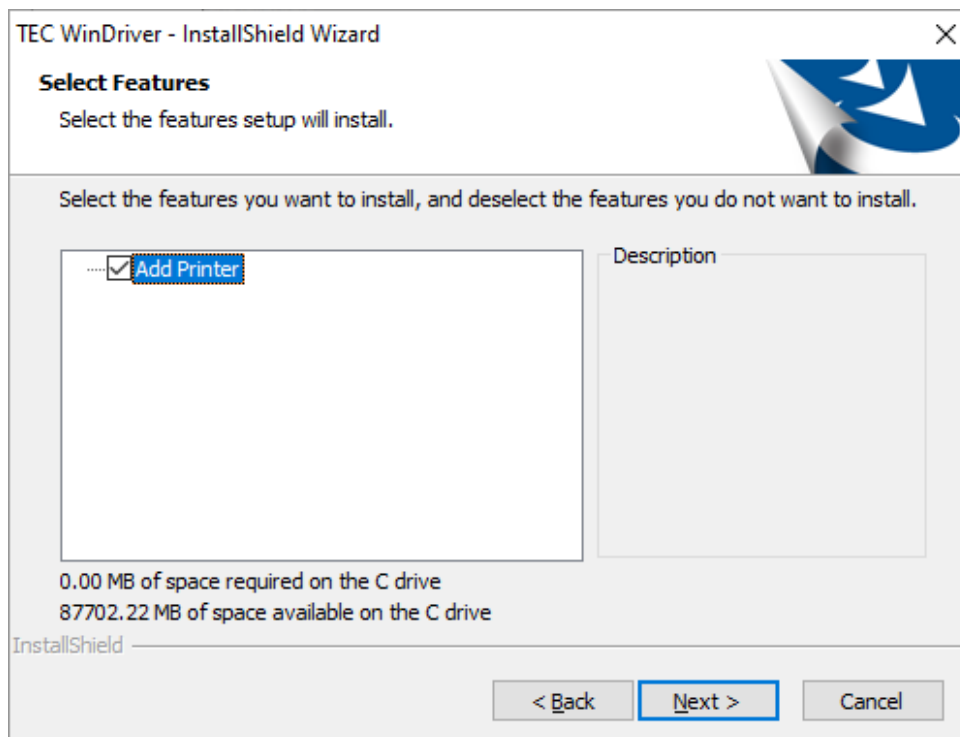
To add another printer model, please right click the “TEC WinDriver” program on “Program and Features” then select “Change”



Select Modify option then click "Next >".

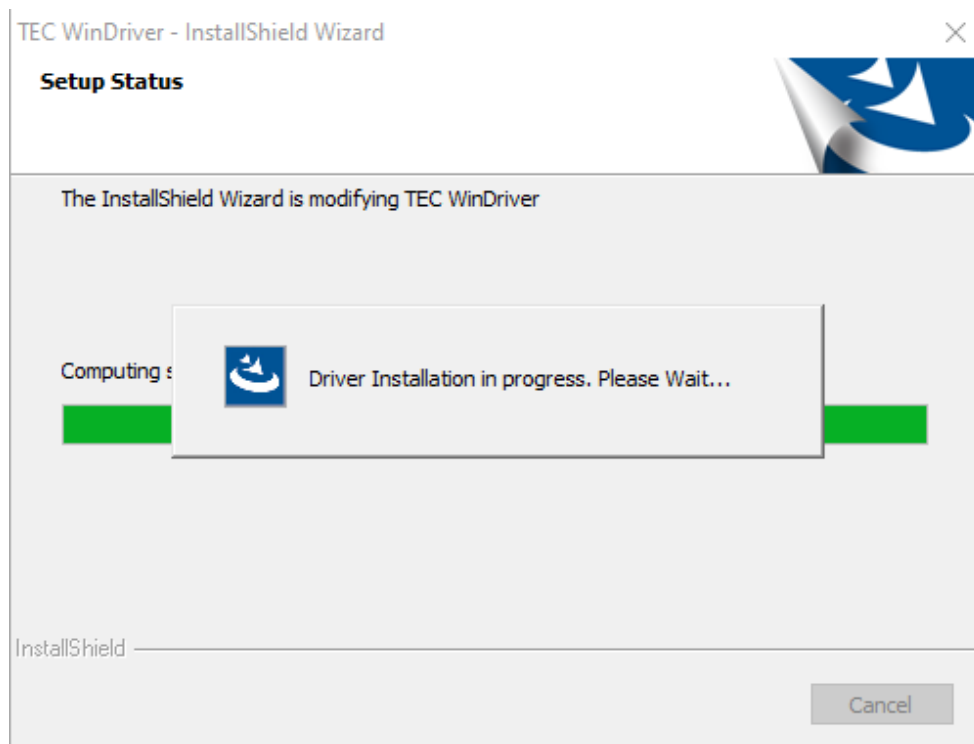


Select Add Printer then click "Next >".

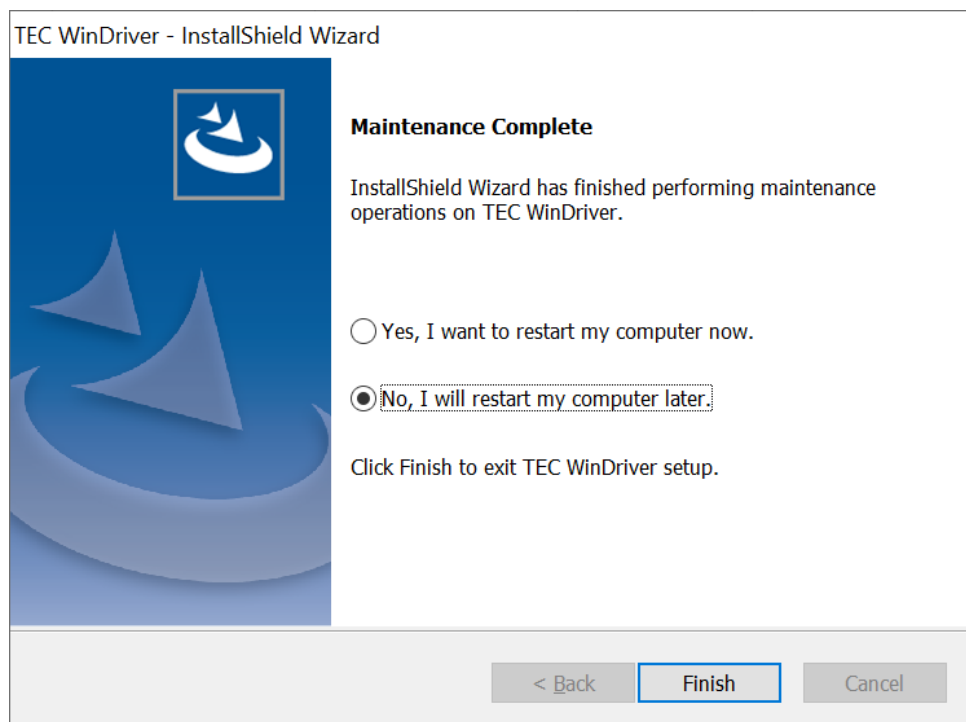




Driver Installation Process. Please wait until installation finish



Installation complete. In some case during updating the driver, the printer properties and printer preferences version still refer to previous driver so it is recommended to restart the PC when you perform update driver.



Click "Finish" to complete the installation.

## 2.2 Manual install by using “Add Printer” Wizard

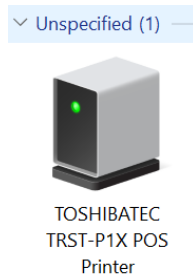
*Note: For Windows Server 2016 / 2019 is recommended use this method*

### 2.2.1 Add Printer with USB Interface

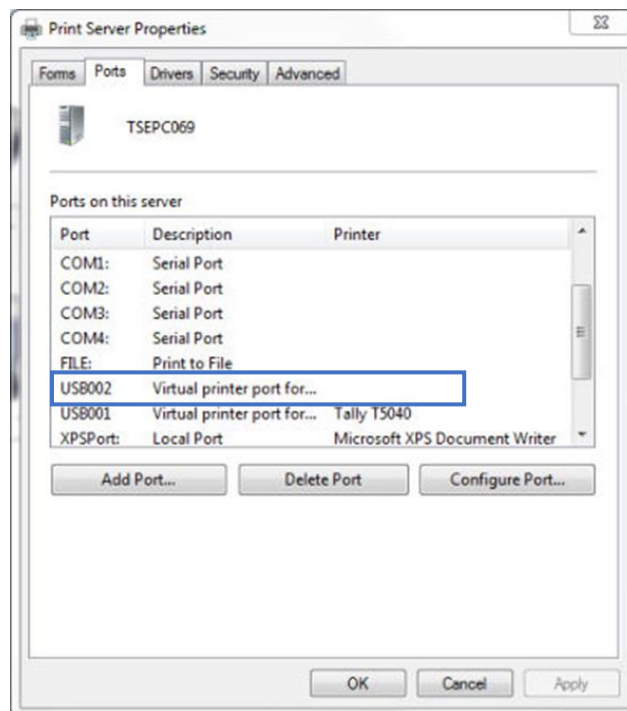
Below is step to install the driver by using USB interface

1) Connect printer to PC via USB cable.

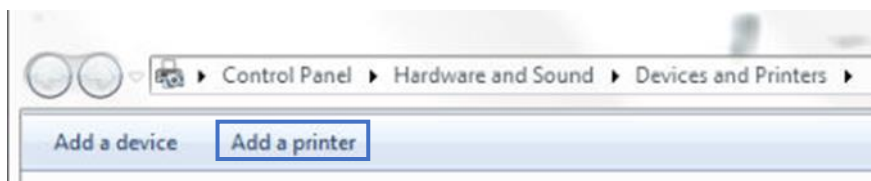
It will appear in “Devices and Printers” under Unspecified like below.



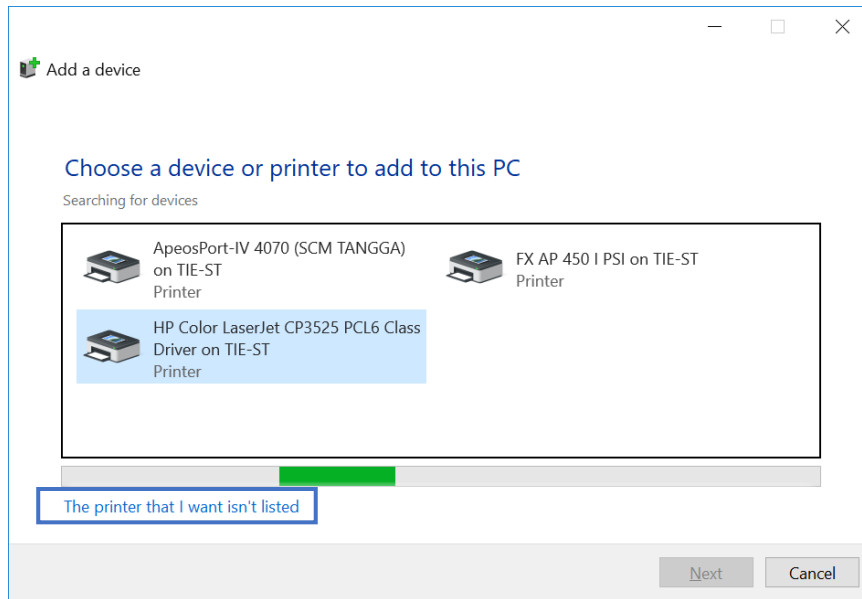
It will create new USB port like below



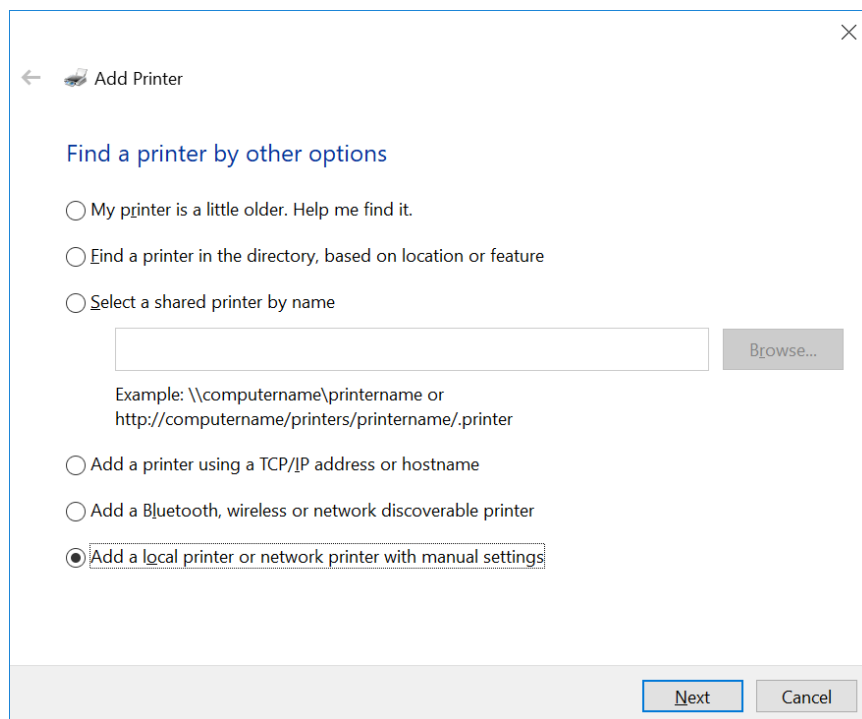
2) Click [Add a printer]



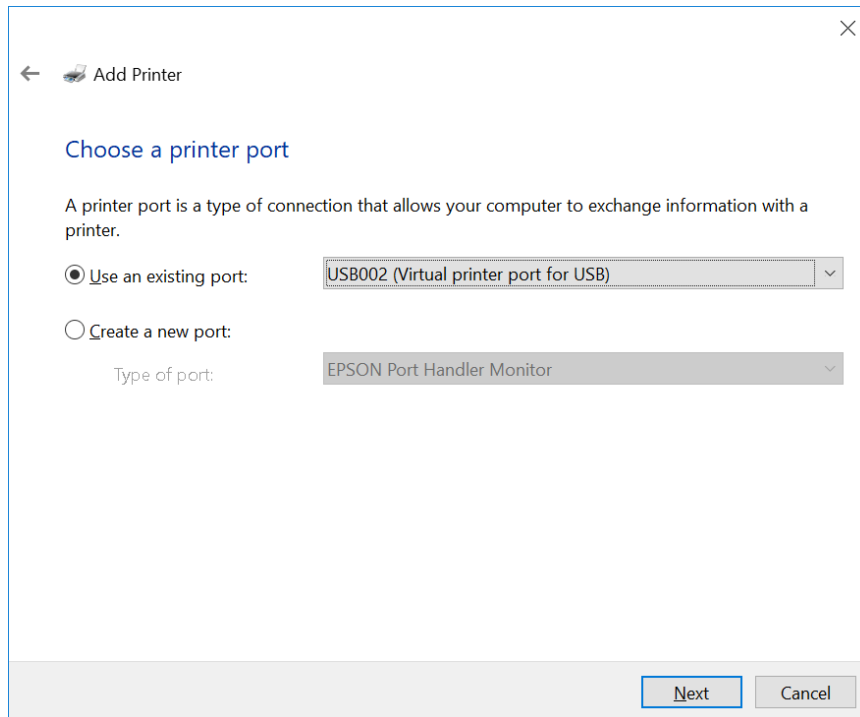
## 3) Click “The printer that I want isn’t listed”



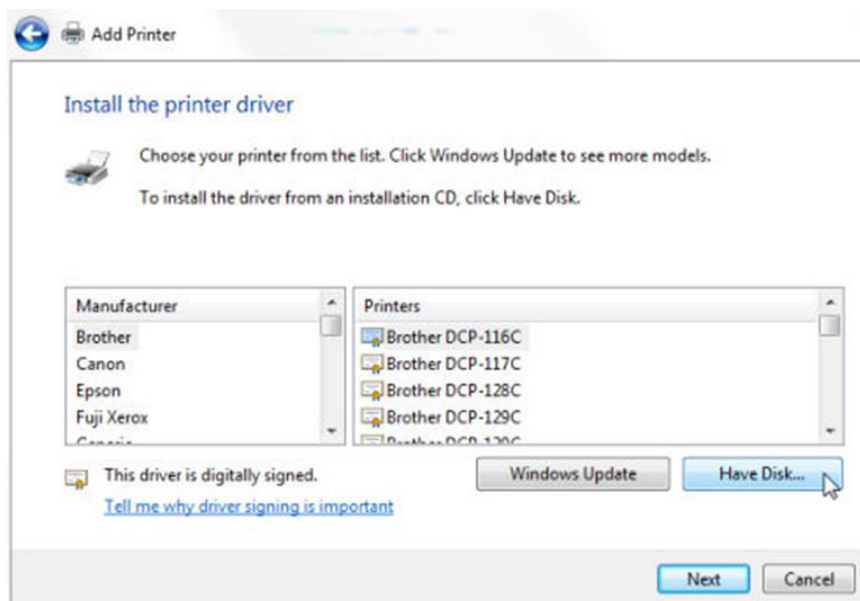
## 4) Choose “Add a local printer or network printer with manual settings” and click [Next].



5) Choose a printer port. Select the newly created USB port in Step #1 and click [Next].



6) Click [Have Disk...]

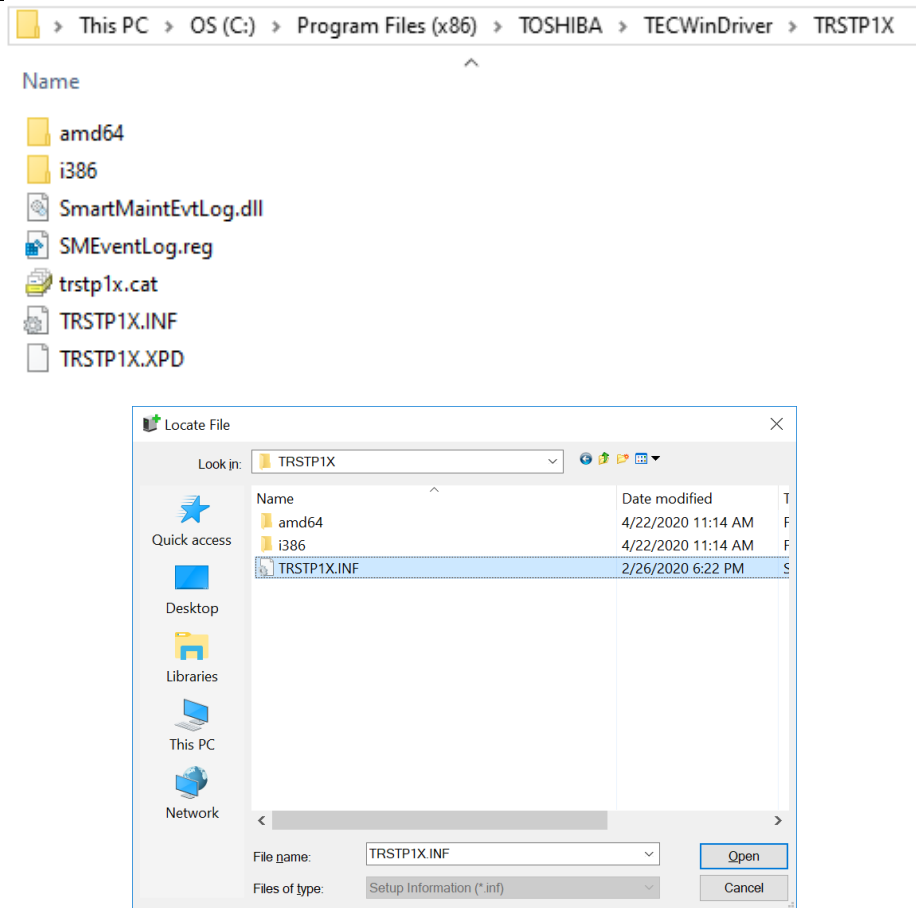


7) Click [Browse...] and find the location of the driver then click [OK].

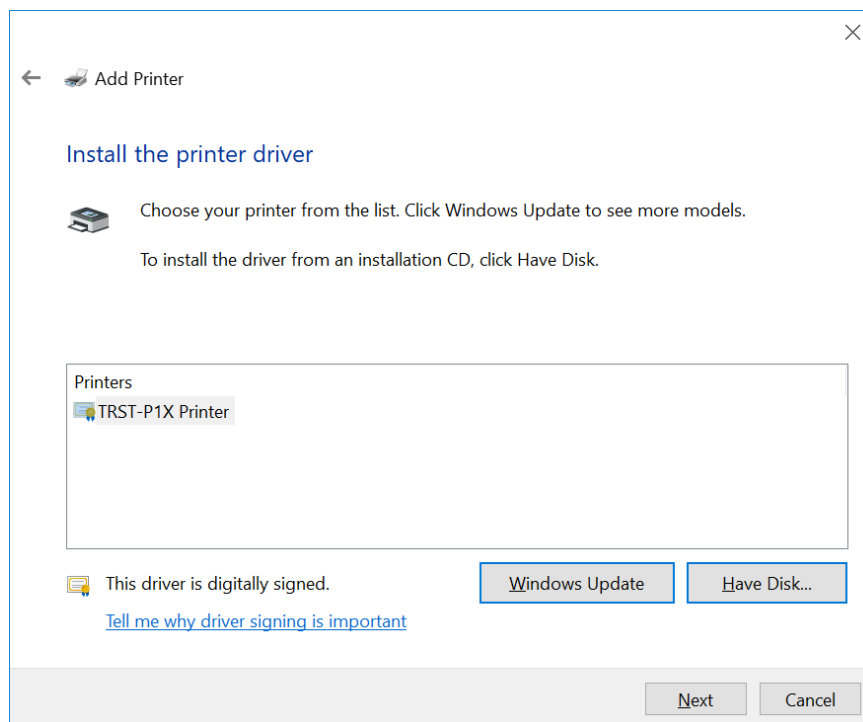
After install using installer the driver file is located on the following path

C:\Program Files (x86)\TOSHIBA\TECWinDriver


Below is folder location example for TRST-P1X printer



8) The driver name should appear as below. Click [Next] until install.



✕

←  Add Printer

Type a printer name


Printer name:

This printer will be installed with the TRST-P1X Printer driver.

Next

Cancel

✕

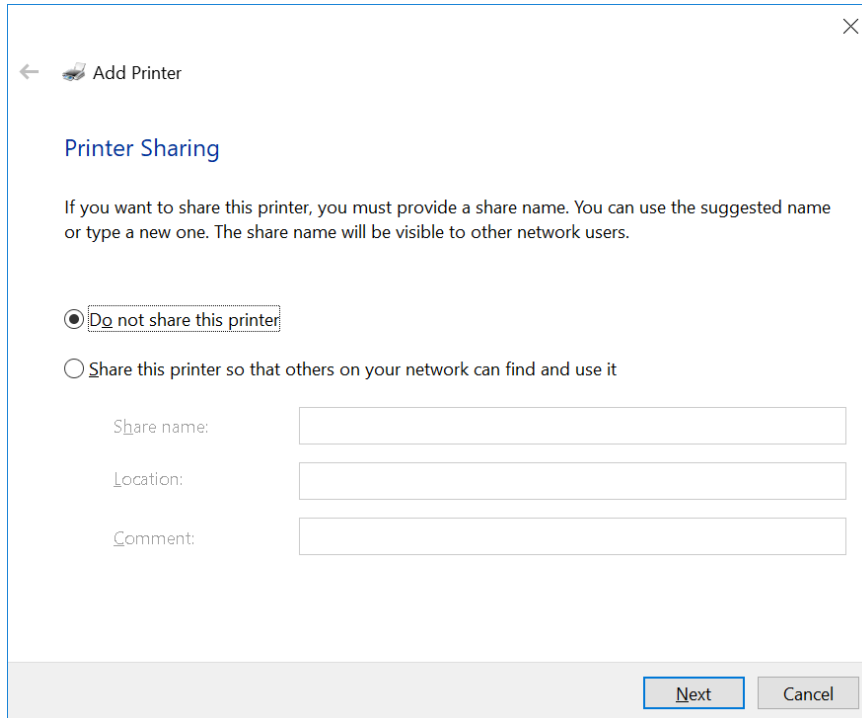
←  Add Printer

Installing printer...

Next

Cancel

9) Select desired option then Click [Next]



← Add Printer

**Printer Sharing**

If you want to share this printer, you must provide a share name. You can use the suggested name or type a new one. The share name will be visible to other network users.

☒ Do not share this printer

☐ Share this printer so that others on your network can find and use it

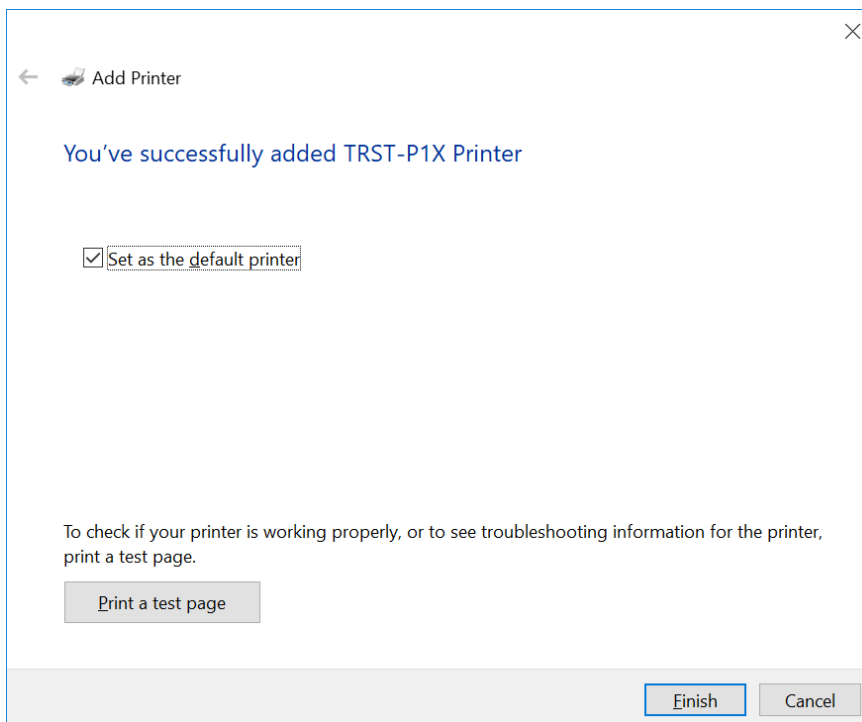
Share name:

Location:

Comment:

Next Cancel

10) Installation complete. Click [Finish]



← Add Printer

**You've successfully added TRST-P1X Printer**

☒ Set as the default printer

To check if your printer is working properly, or to see troubleshooting information for the printer, print a test page.

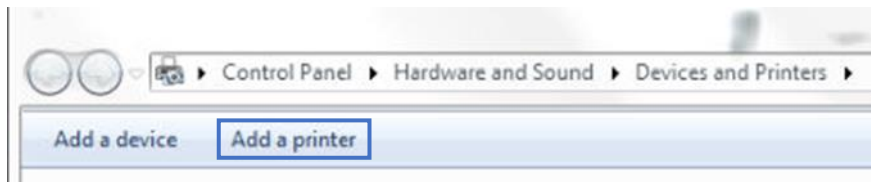
Print a test page

Finish Cancel

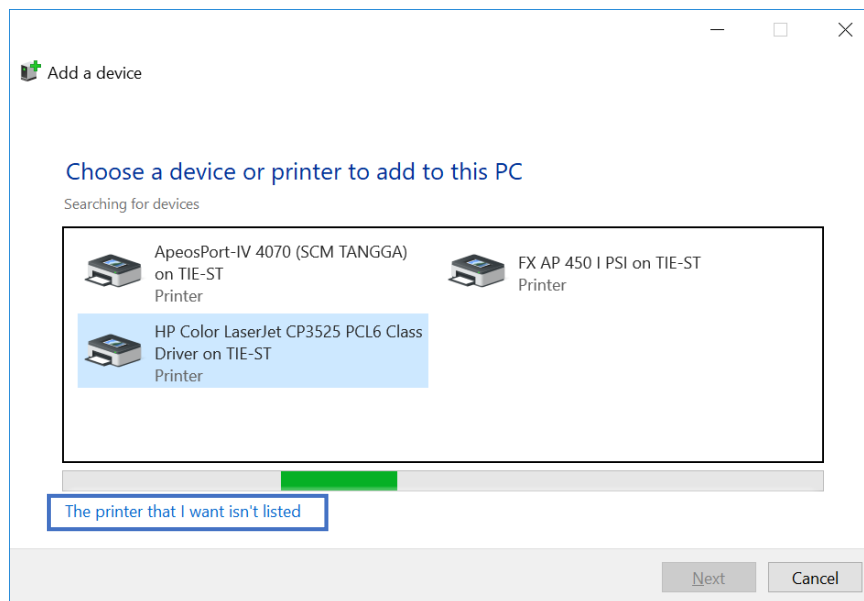
## 2.2.2 Add Printer with Serial Interface

Below is step to install the driver by using Serial interface

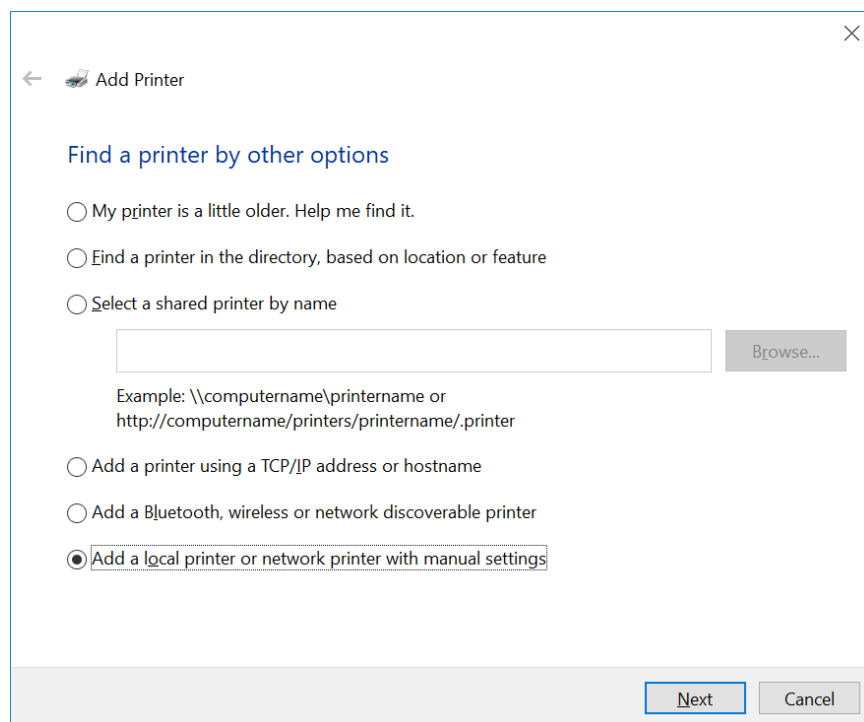
- 1) Connect printer to PC via RS232 cable
- 2) Click [Add a printer]



- 3) Click “The printer that I want isn’t listed”

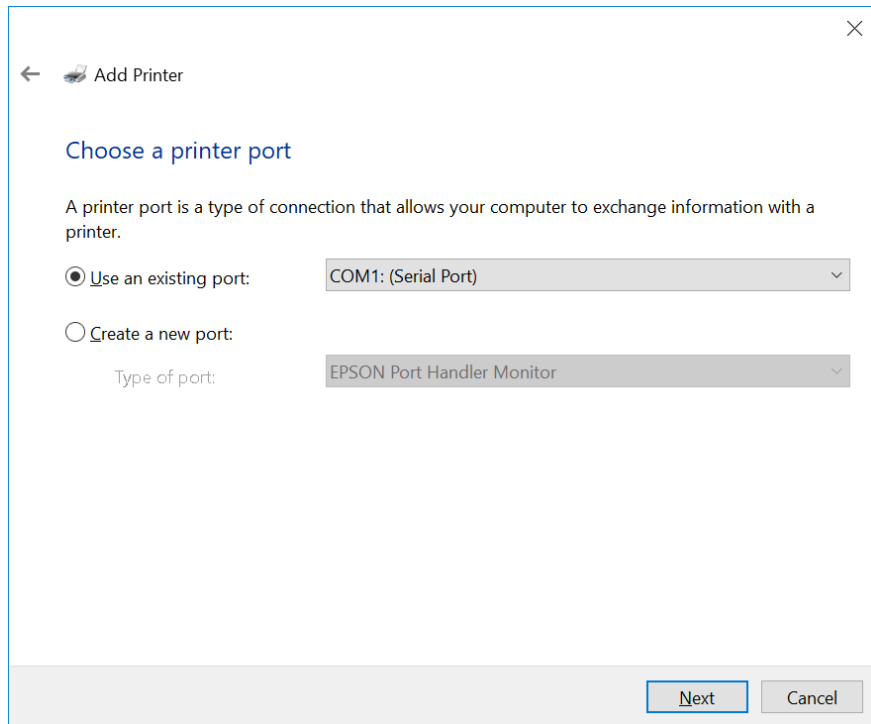


- 4) Choose “Add a local printer or network printer with manual settings” and click [Next].

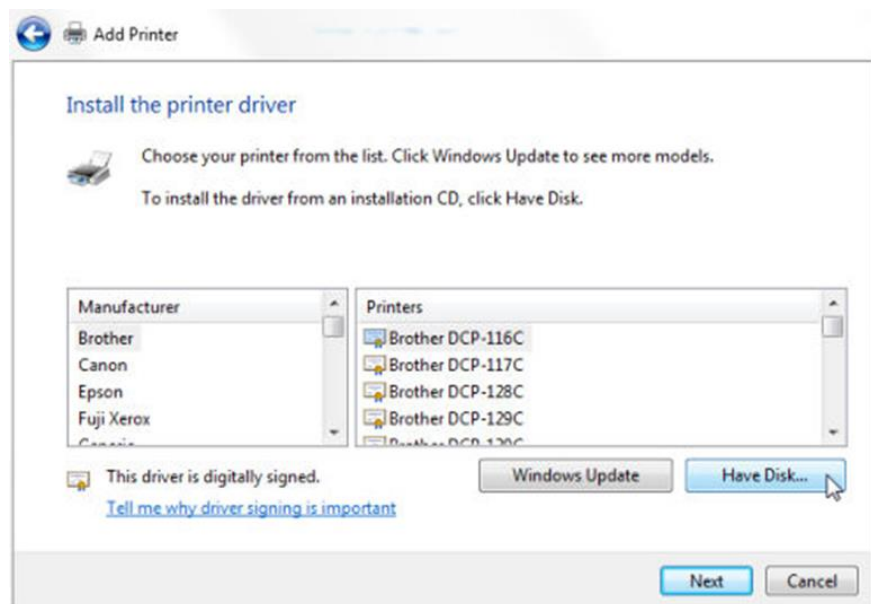




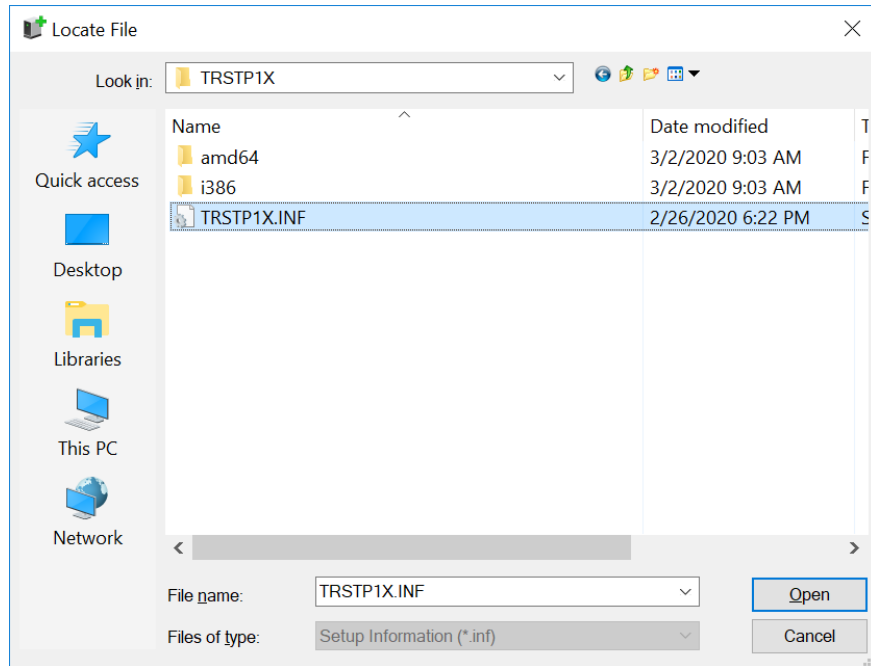
## 5) Choose a PC COM port that connected to the printer



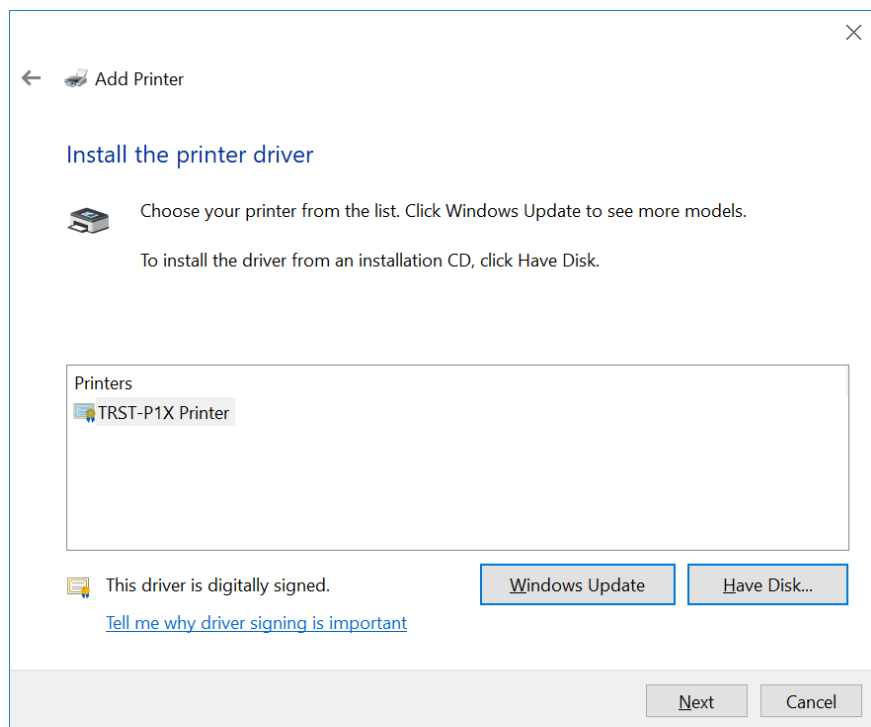
## 6) Click [Have Disk...]




7) Click [Browse...] and find the location of the driver then click [OK]



8) The driver name should appear as below. Click [Next] until install.



←  Add Printer


Type a printer name

Printer name:

This printer will be installed with the TRST-P1X Printer driver.

Next

Cancel

←  Add Printer

Installing printer...

Next

Cancel

9) Select desired option then Click [Next]

← Add Printer

**Printer Sharing**

If you want to share this printer, you must provide a share name. You can use the suggested name or type a new one. The share name will be visible to other network users.

☒ Do not share this printer

☐ Share this printer so that others on your network can find and use it

Share name:

Location:

Comment:

Next Cancel

10) Installation complete. Click [Finish]

← Add Printer

**You've successfully added TRST-P1X Printer**

☒ Set as the default printer

To check if your printer is working properly, or to see troubleshooting information for the printer, print a test page.

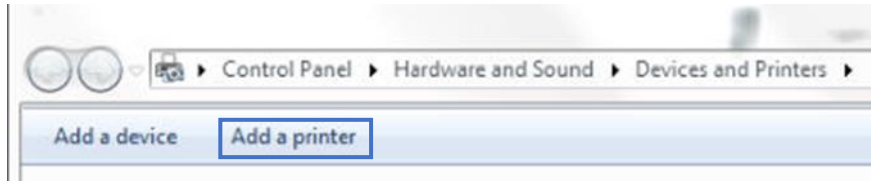
Print a test page

Finish Cancel

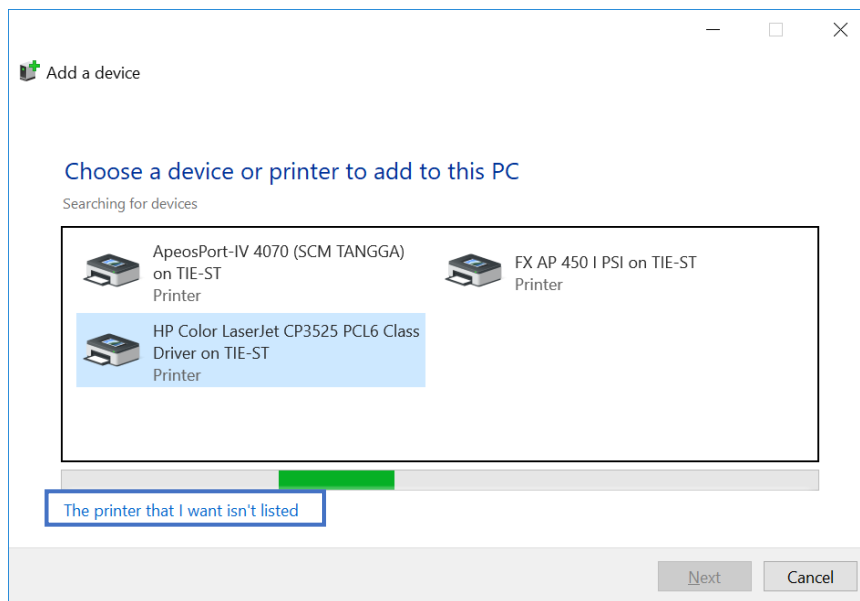
### 2.2.3 Add Printer with LAN Interface

Below is step to install the driver by using LAN interface

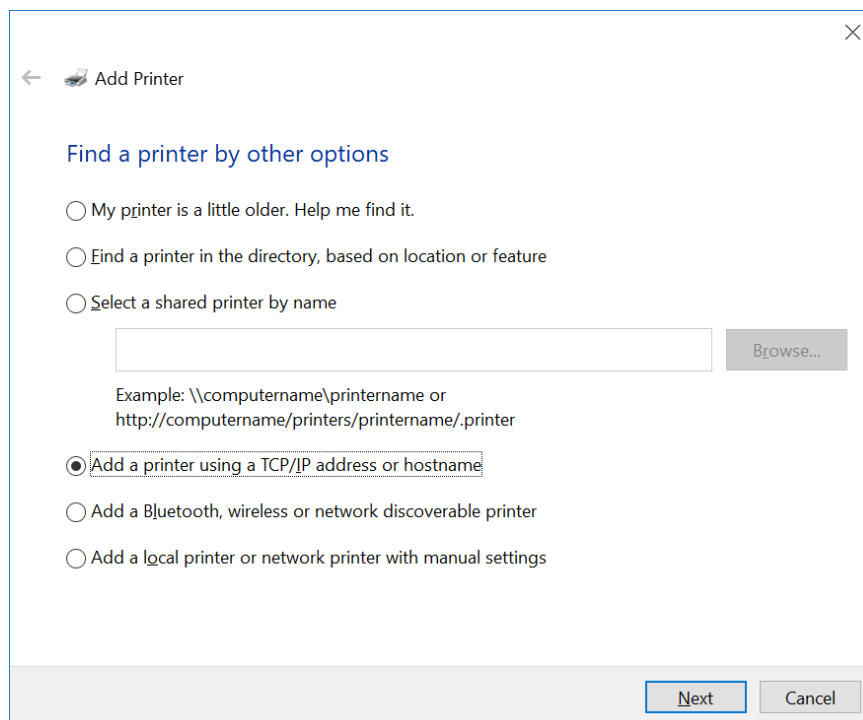
- 1) Connect printer to PC via LAN cable
- 2) Click [Add a printer]



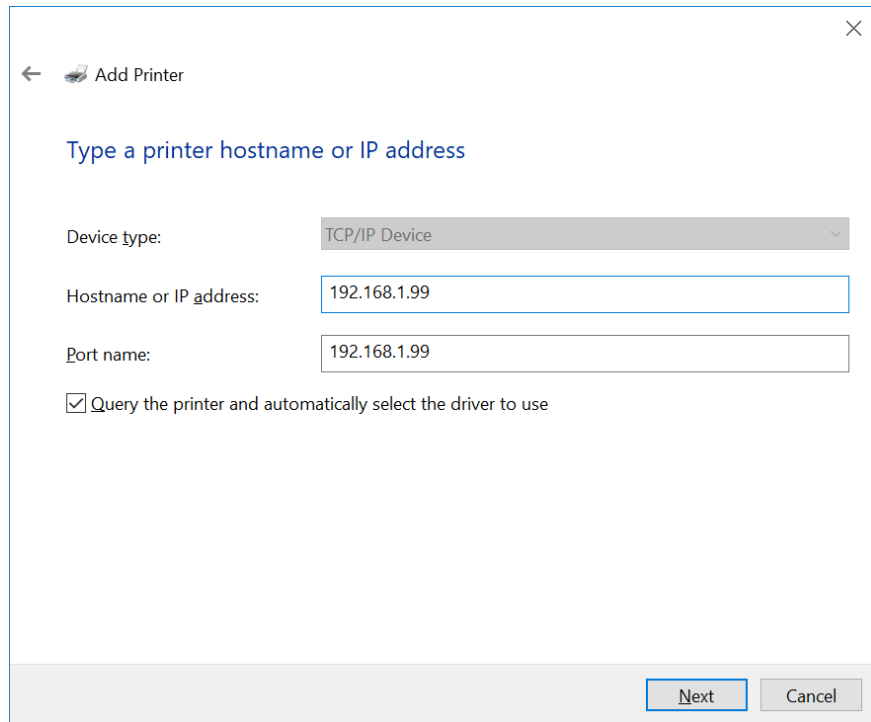
- 3) Click “The printer that I want isn’t listed”



- 4) Choose “Add a printer using a TCP/IP address or hostname” and click [Next].



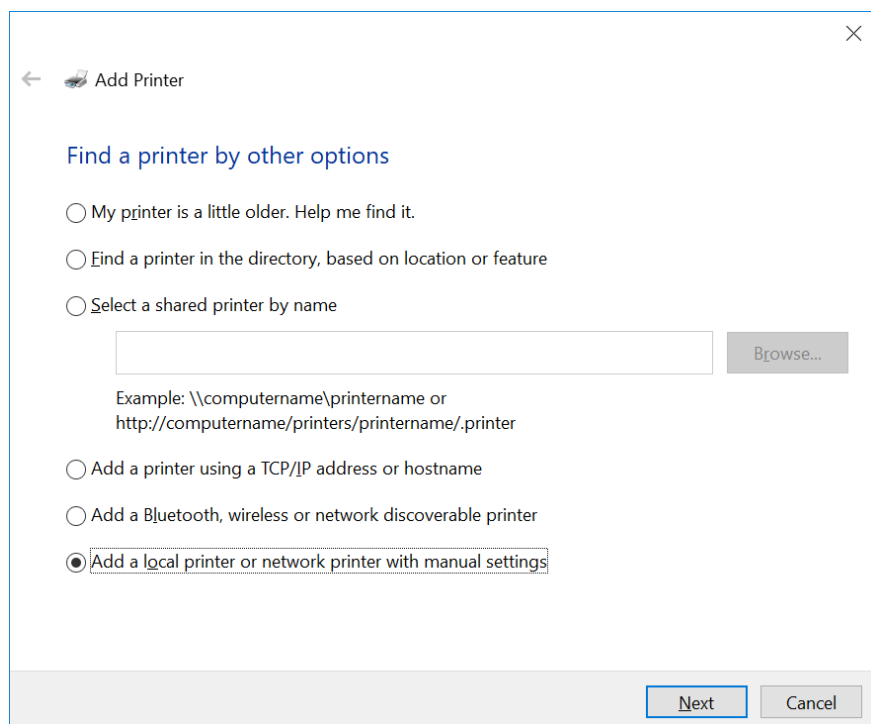
## 5) Type the Hostname or IP address and the Port name then click [Next]



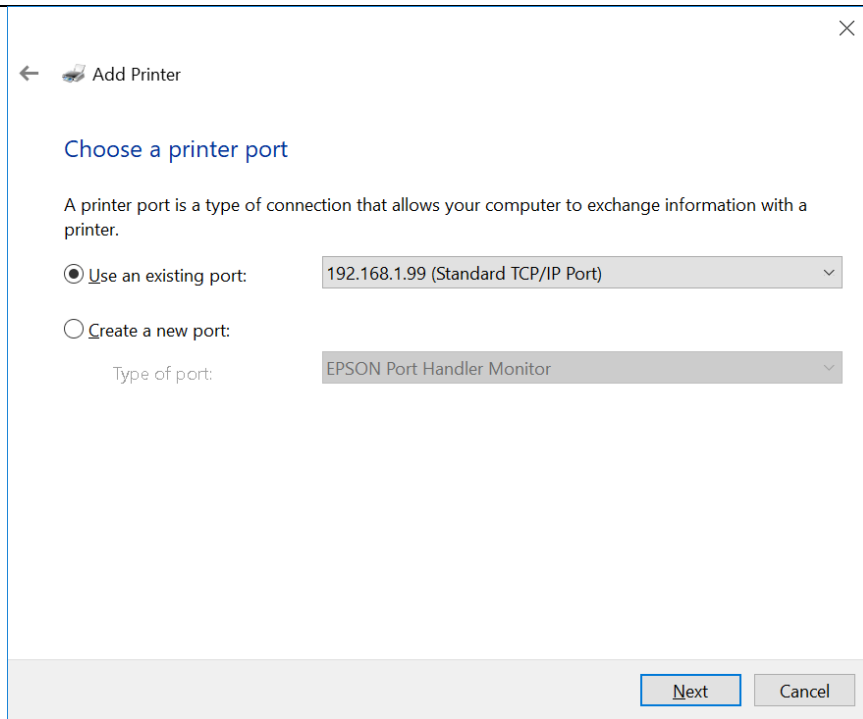
The screenshot shows the 'Add Printer' wizard window. At the top, there is a back arrow and the text 'Add Printer'. Below this, the title 'Type a printer hostname or IP address' is displayed. The 'Device type' dropdown menu is set to 'TCP/IP Device'. The 'Hostname or IP address' field contains '192.168.1.99'. The 'Port name' field also contains '192.168.1.99'. A checkbox labeled 'Query the printer and automatically select the driver to use' is checked. At the bottom right, there are 'Next' and 'Cancel' buttons.

**Note:**

If TCP/IP Port already added before, select the “Add a local printer or network printer with manual settings” option then select the “Use an existing port” to select the IP address directly



The screenshot shows the 'Add Printer' wizard window. At the top, there is a back arrow and the text 'Add Printer'. Below this, the title 'Find a printer by other options' is displayed. There are five radio button options: 'My printer is a little older. Help me find it.', 'Find a printer in the directory, based on location or feature', 'Select a shared printer by name', 'Add a printer using a TCP/IP address or hostname', and 'Add a Bluetooth, wireless or network discoverable printer'. The fifth option, 'Add a local printer or network printer with manual settings', is selected. Below the radio buttons, there is a text input field and a 'Browse...' button. Below the input field, there is an example text: 'Example: \\computername\printername or http://computername/printers/printername/.printer'. At the bottom right, there are 'Next' and 'Cancel' buttons.



← Add Printer

### Choose a printer port

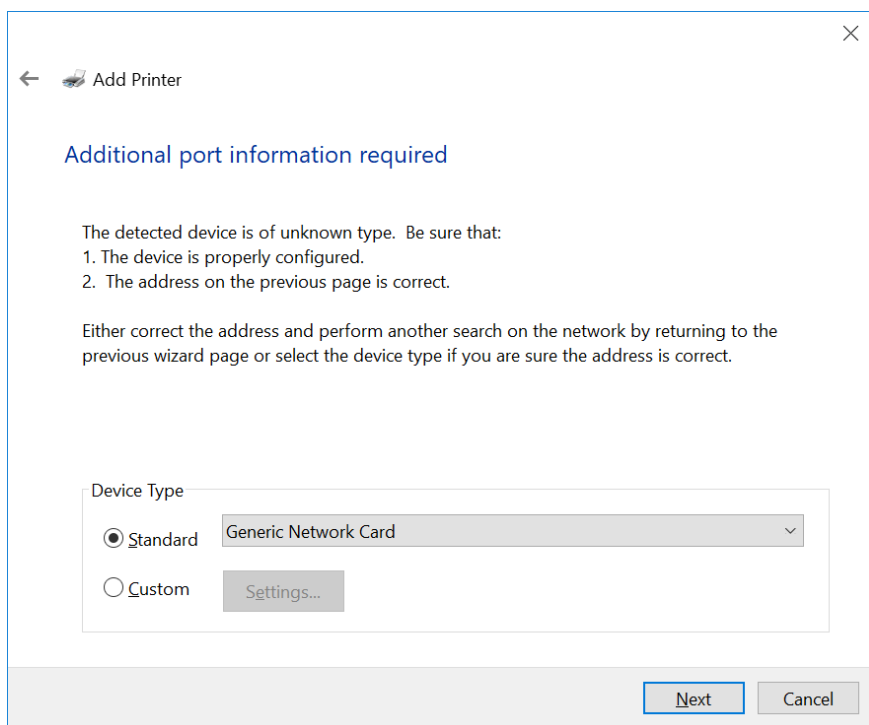
A printer port is a type of connection that allows your computer to exchange information with a printer.

☒ Use an existing port: 192.168.1.99 (Standard TCP/IP Port) ▼

☐ Create a new port: EPSON Port Handler Monitor ▼  
Type of port:

Next Cancel

#### 6) Select Device Type then Click [Next]



← Add Printer

### Additional port information required

The detected device is of unknown type. Be sure that:

1. The device is properly configured.
2. The address on the previous page is correct.

Either correct the address and perform another search on the network by returning to the previous wizard page or select the device type if you are sure the address is correct.

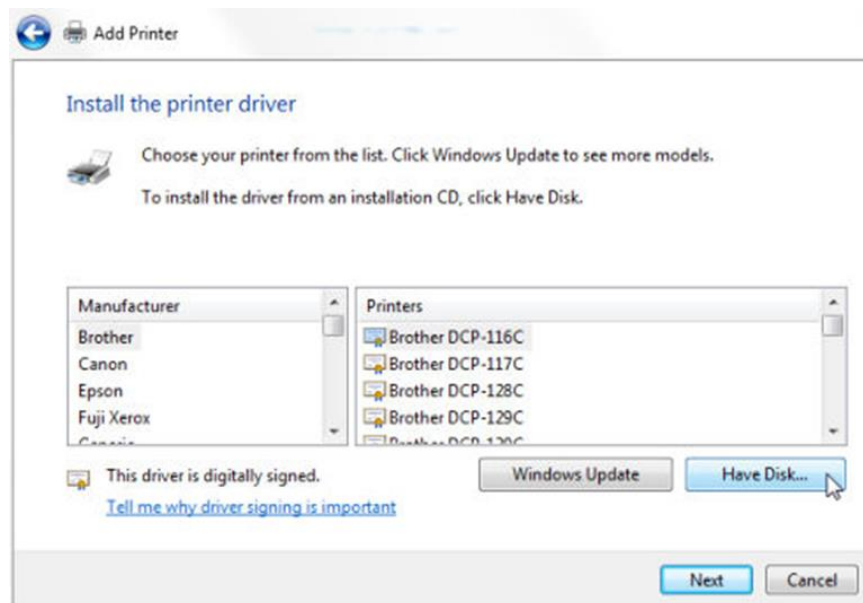
Device Type

☒ Standard Generic Network Card ▼

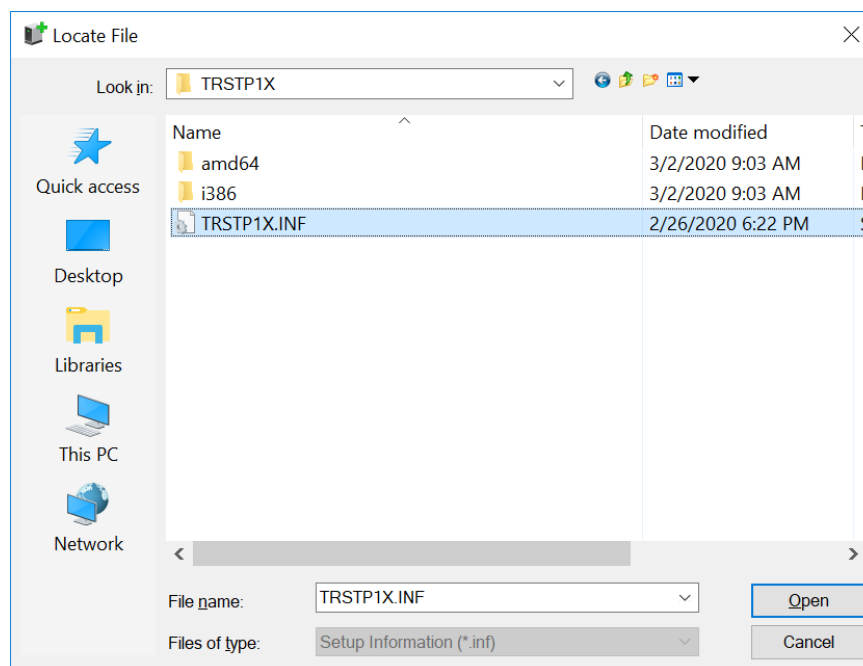
☐ Custom Settings...

Next Cancel

## 7) Click [Have Disk...]

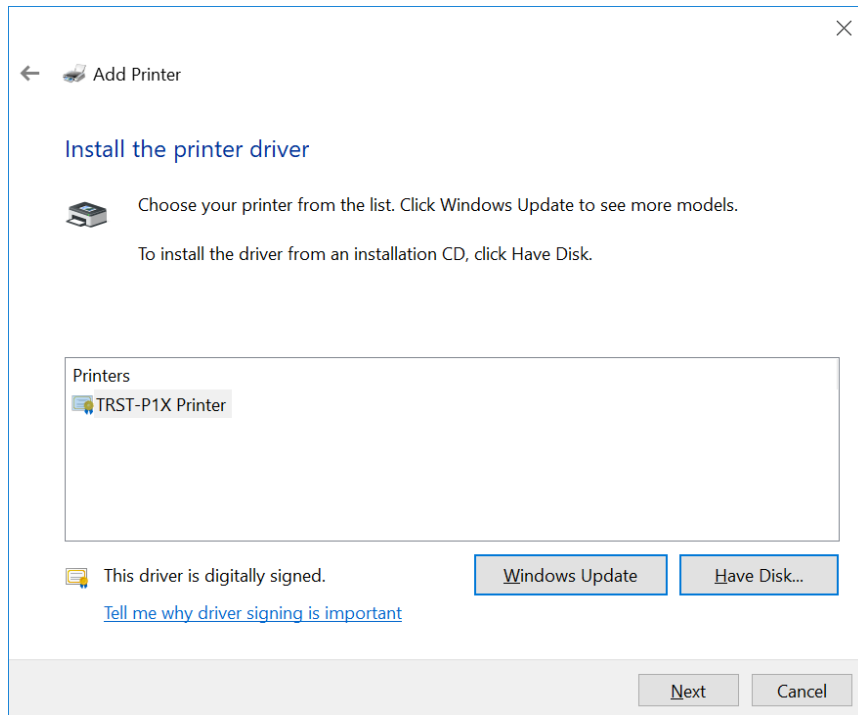


## 8) Click [Browse...] and find the location of the driver then click [OK]

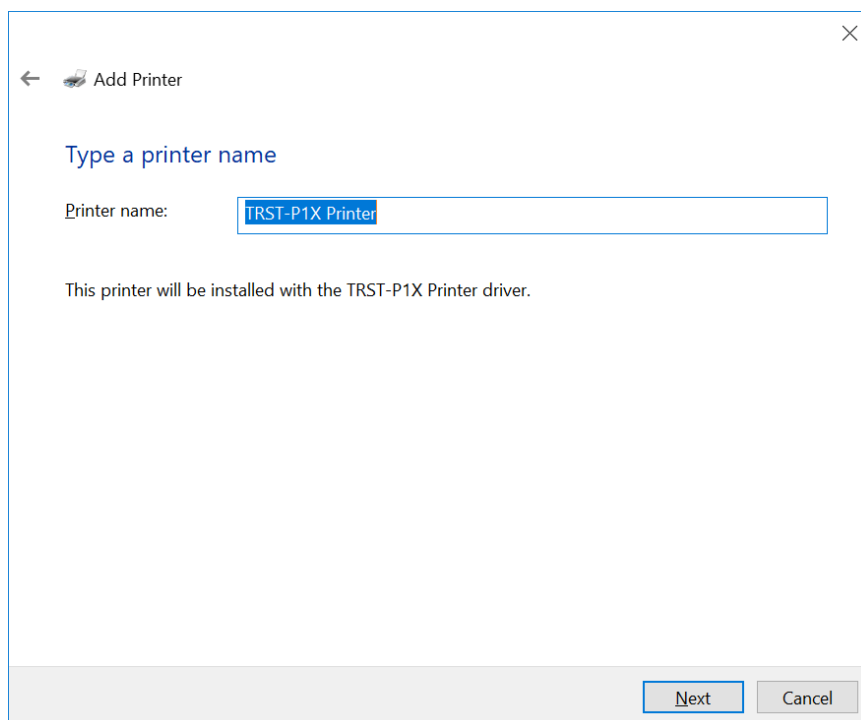


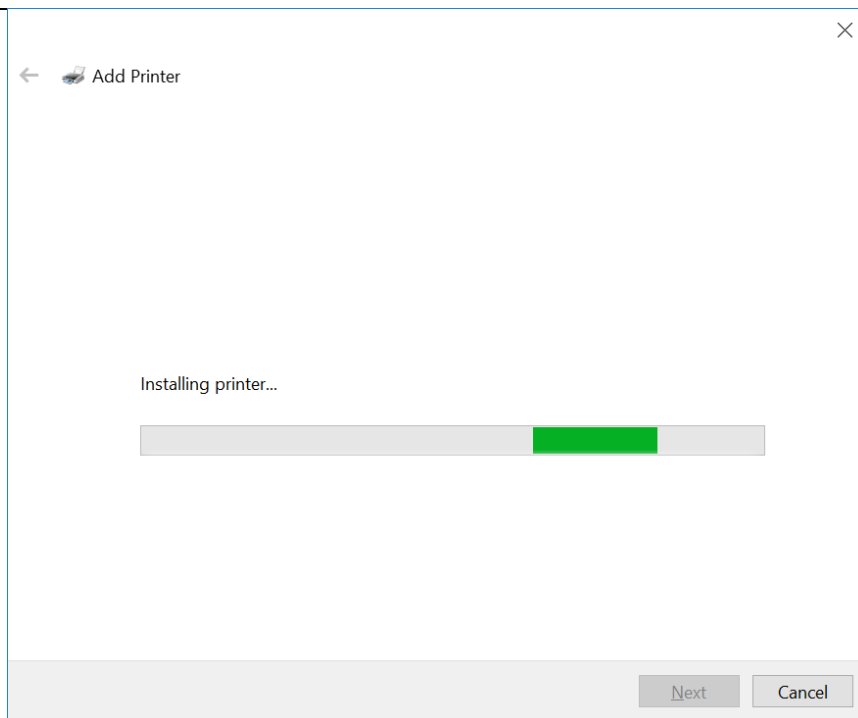


9) The driver name should appear as below. Click [Next] until install.

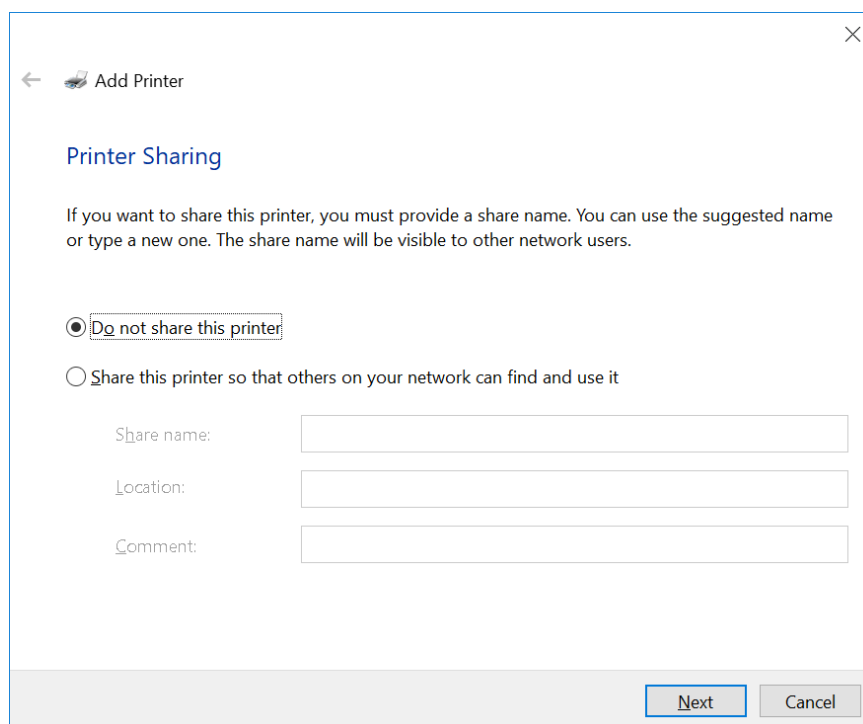


10) Printer name confirmation

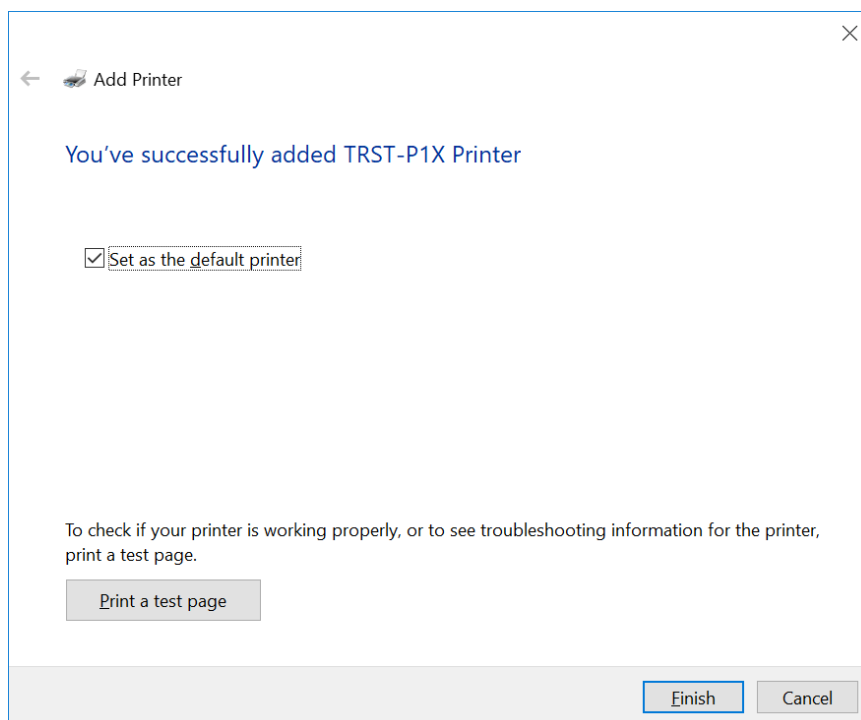




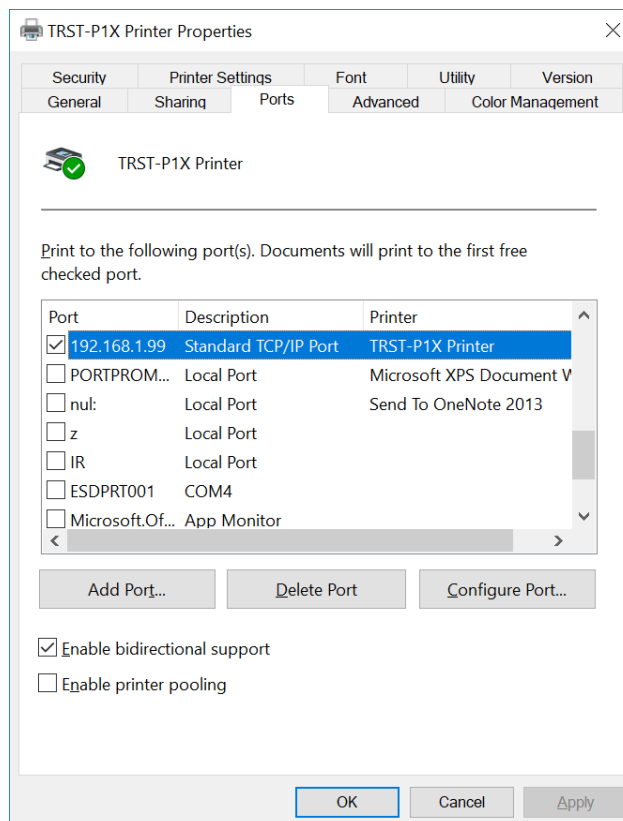
11) Select desired option then Click [Next]



## 12) Installation complete. Click [Finish]



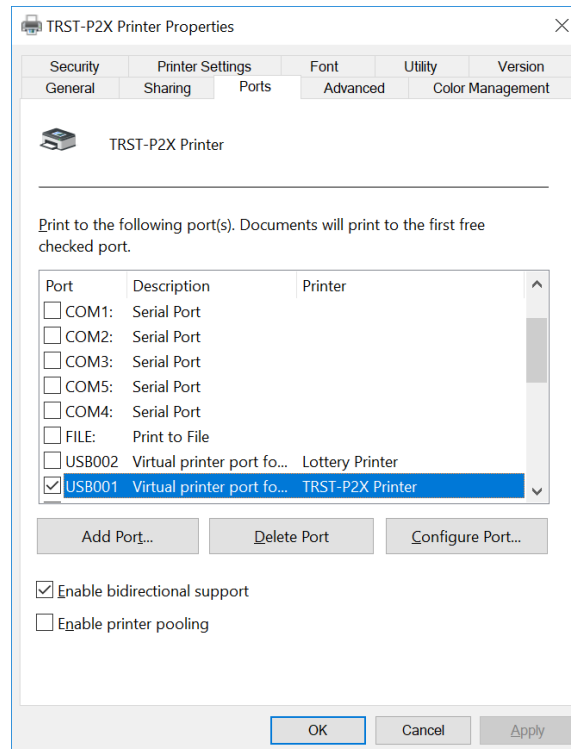
## 13) Below is TCP/IP Port creation



## 2.3 Change Printer interface from “Ports” Tab

After installation using installer application, you can change the printer interface from USB interface to RS232 / LAN interface

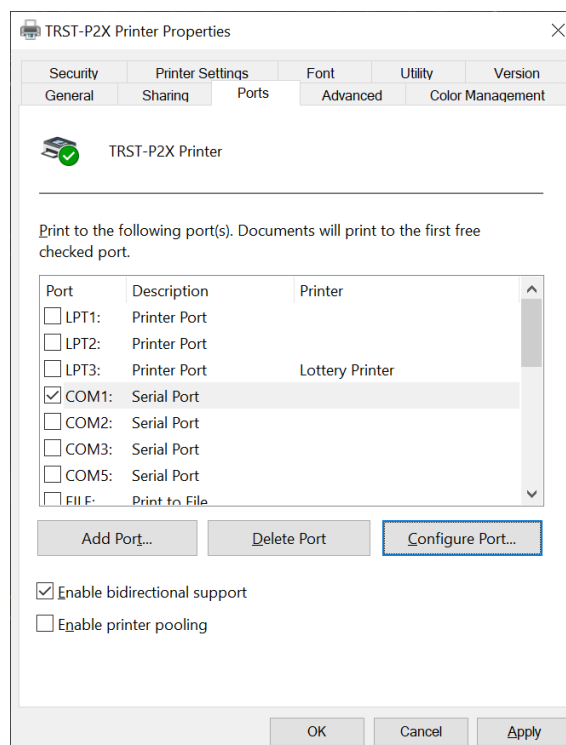
**Open Printer Properties then select “Ports” tab**



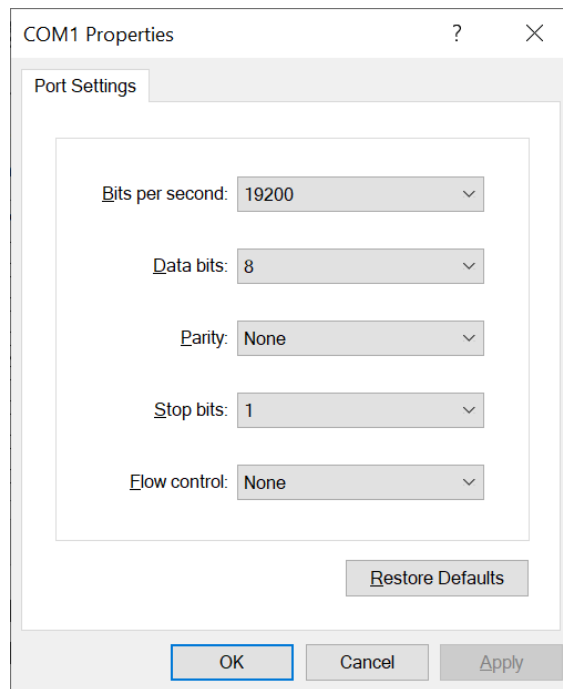
### USB to RS232 Interface

Change USB connection to RS232

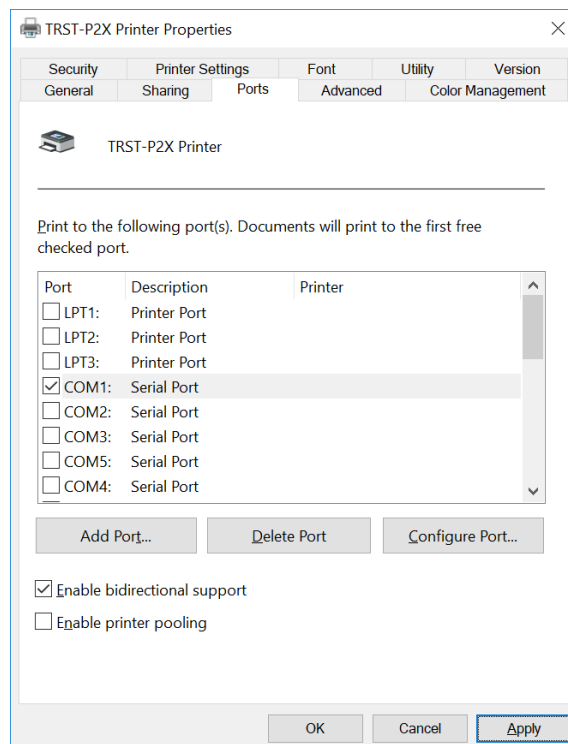
Select COM Port that connected with the printer. Then Click “Configure Port”



Please select the serial communication parameter based on Printer RS232 Interface Settings on printing configuration. Then click OK Button



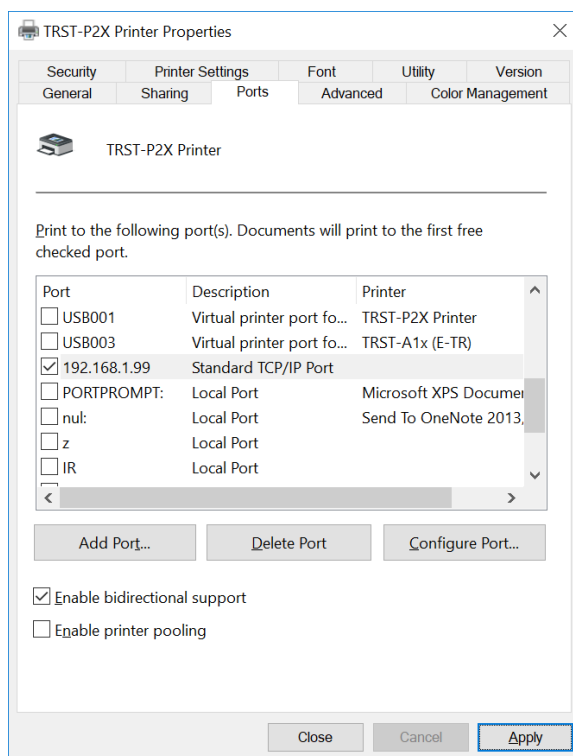
After Port is configured properly then click “Apply” Button



## USB to LAN Interface

Change USB connection to LAN

Select LAN Port that connected with the printer. Then Click Apply



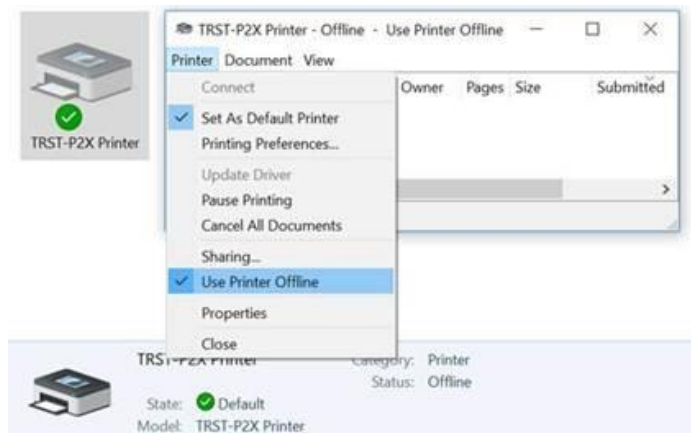
### Note:

**If printer is in the state "Use Printer Offline", attempting to change the port of the device will successfully change the port, but the printer will continue to be in the offline state.**

This case is happen on specific condition as below :

Change port from USB to another interface (RS232/LAN) when USB is disconnect (offline) before open printer properties

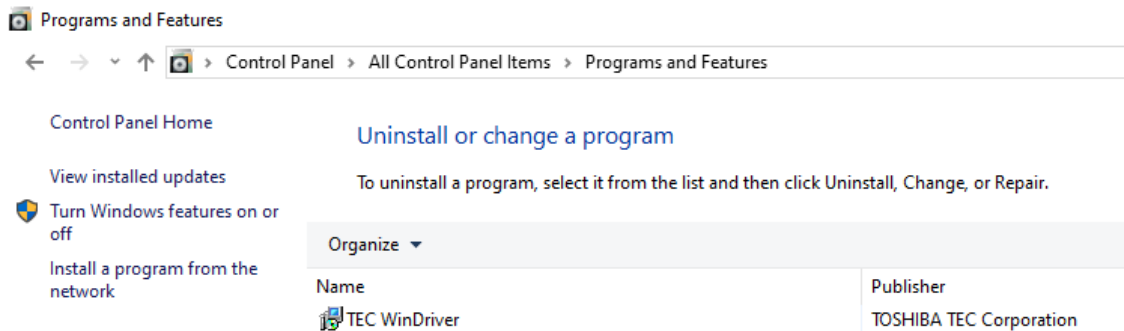
In this case need to manually disable the "Use Printer Offline" setting before open Printer properties or after change the port



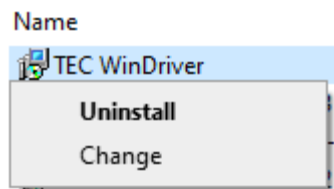
### 3. How to uninstall the Printer Driver

#### 3.1 Uninstall by using Programs and Features

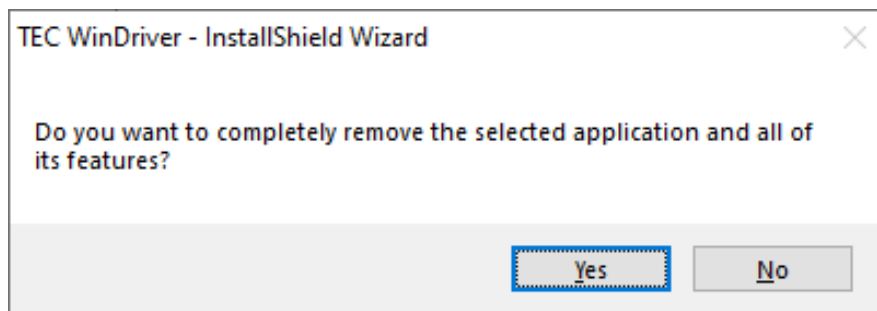
- 1) Open “Program and Features” window (Control Panel -> Programs -> Programs and Features)



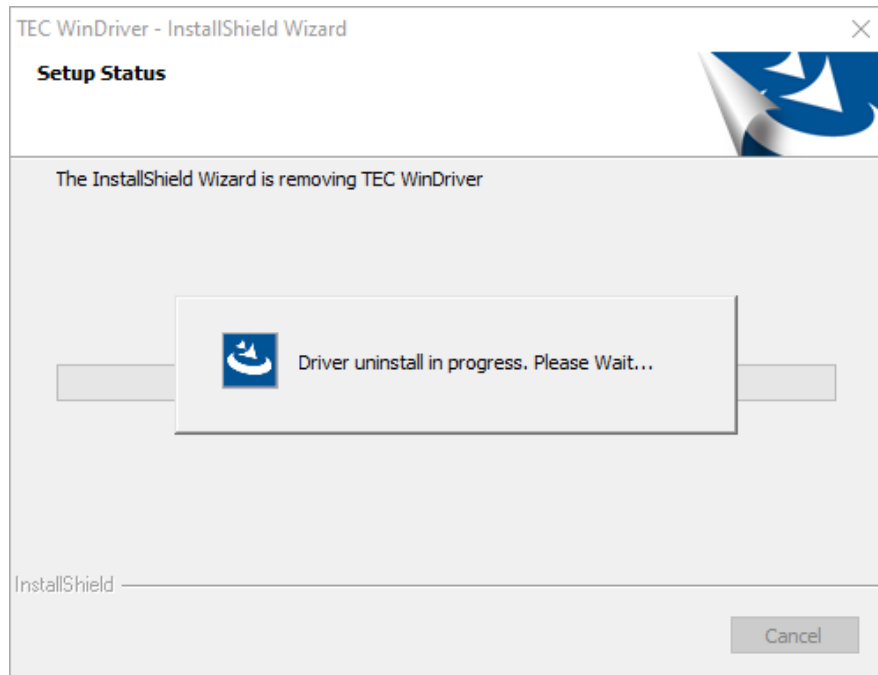
- 2) Right Click the TEC WinDriver program on “Program and Features” then select “Uninstall”



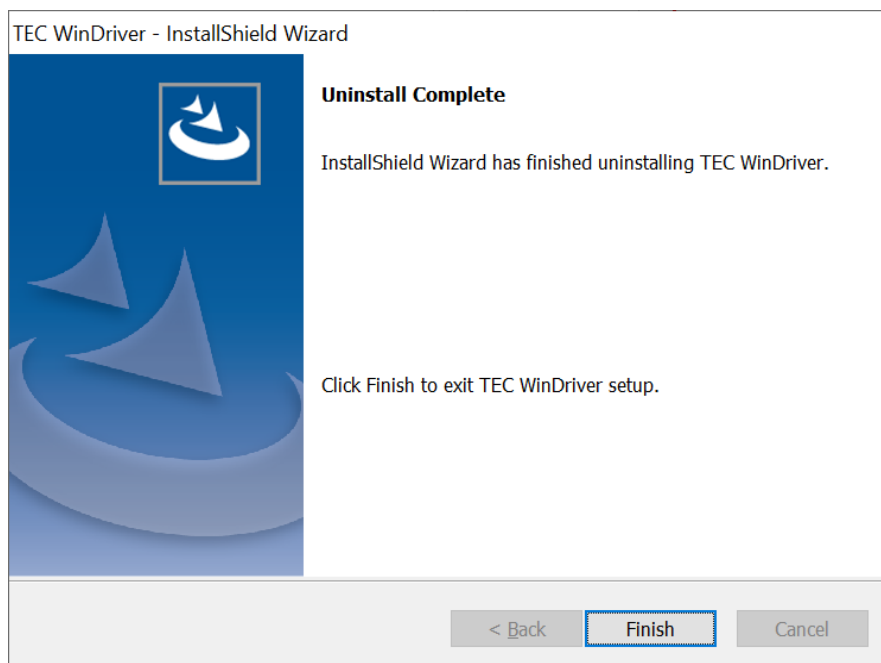
- 3) Remove application confirmation will appear then click [Yes]



4) Driver Uninstallation Process. Please wait until uninstall finish



5) Uninstall complete. Click "Finish"

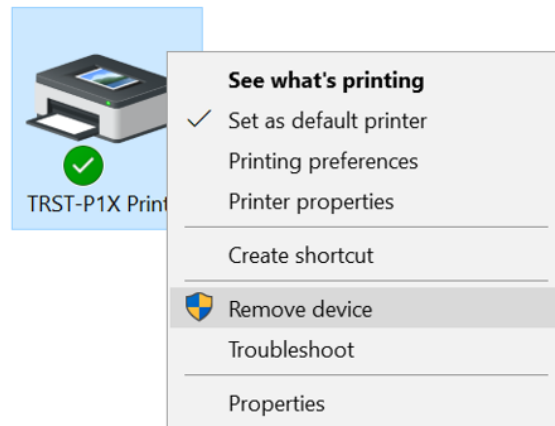




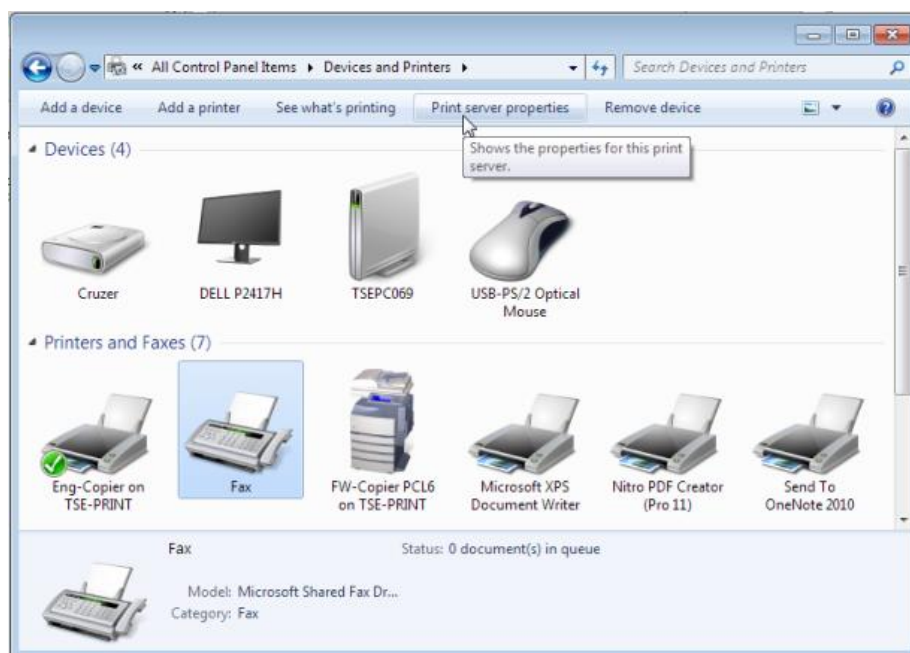
### 3.2 Manual uninstall by remove device and driver on Print Server Properties

**Note:** Ensure Administrator rights to properly uninstall printer driver.

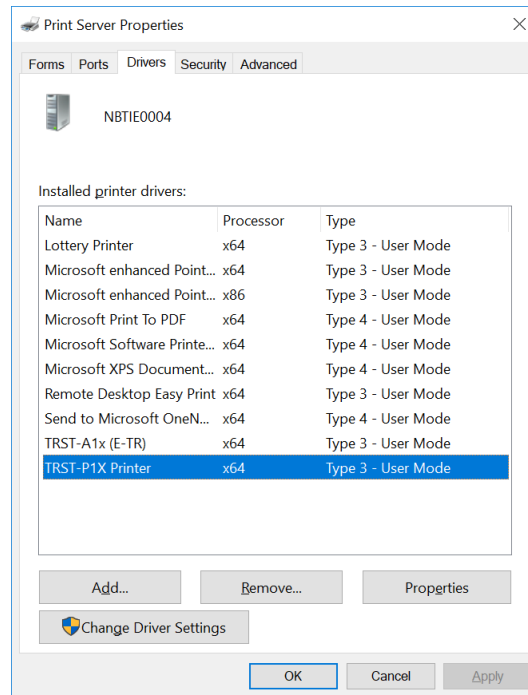
- 1) Remove device (make sure there are no ongoing print jobs).



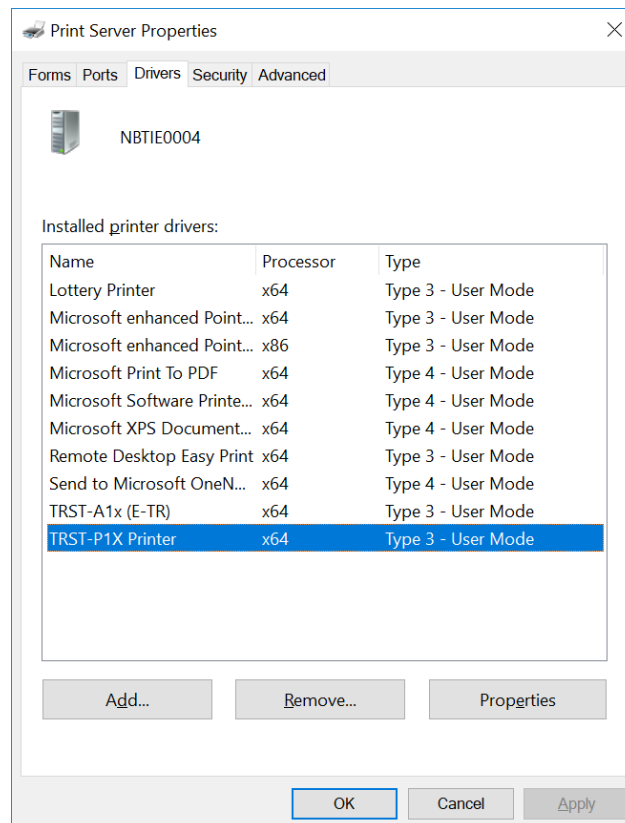
- 2) Click on any other printer, to see the "Printer server properties".



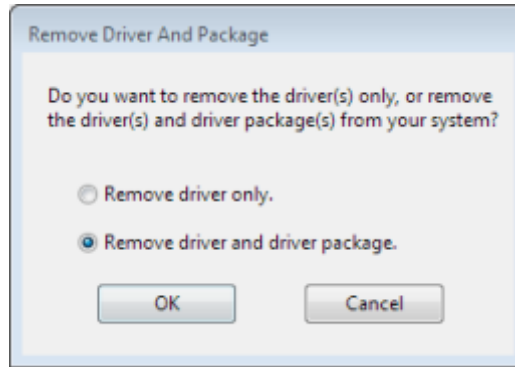
## 3) In Printer Server Properties, select “change driver settings”



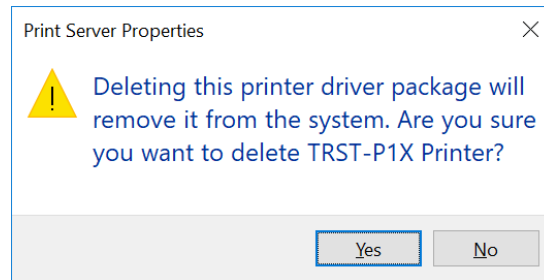
## 4) Select the driver to be uninstalled and click Remove



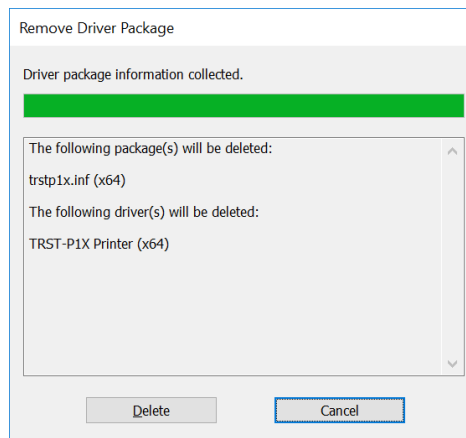
5) Select Remove driver and driver package. Click [OK]



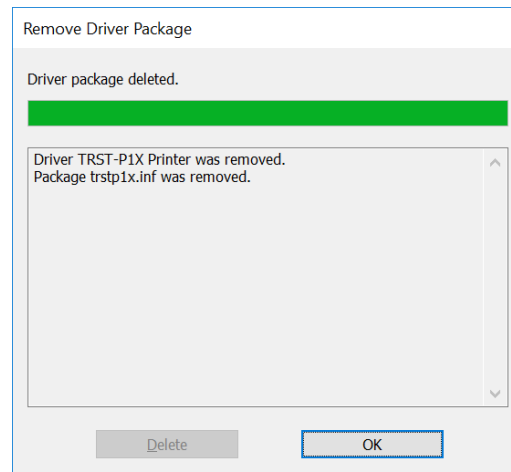
6) Click [Yes]



7) Click [Delete]

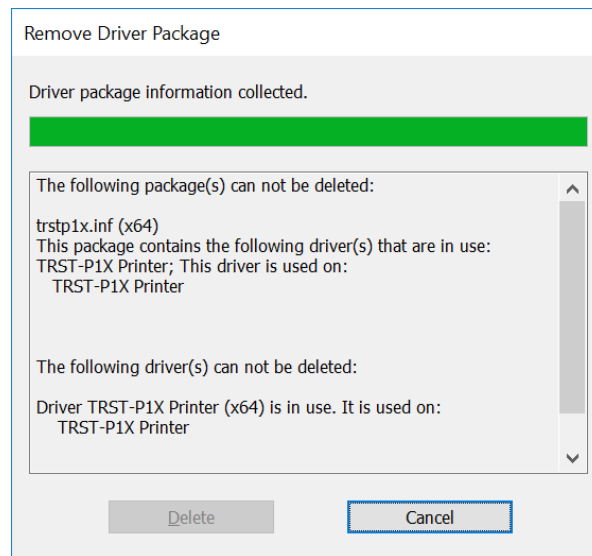


8) Click [Ok]



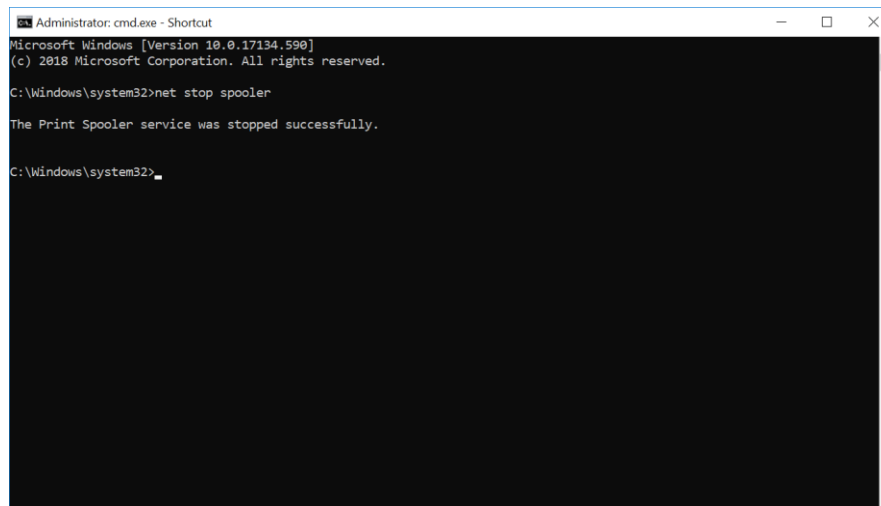
**Note:**

\*If in case the driver cannot be removed, you will see this message:

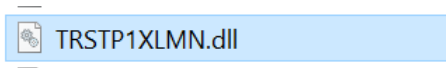


In this case you need to take the following additional steps:

- a. Open the Command Prompt and enter "net stop spooler".

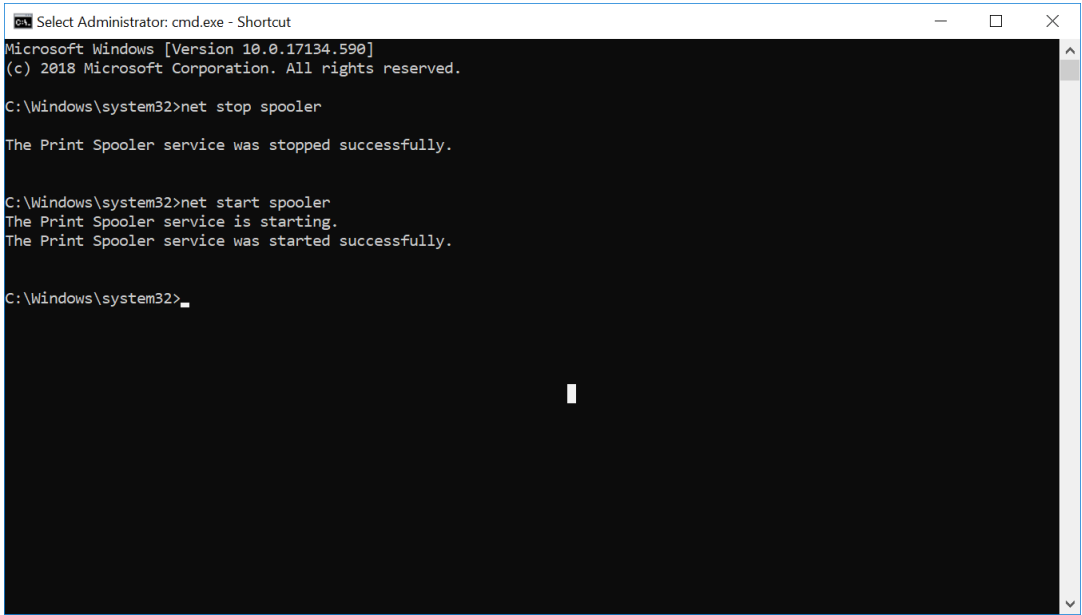


- b. Go to C:\Windows\System32 and look for TRSTP1XLMN.dll (in case of TRST-P1X / HSP-150) or TRSTP2XLMN (For TRST-P2X / HSP-100). This is the file you will need to delete.



Proceed to delete above file

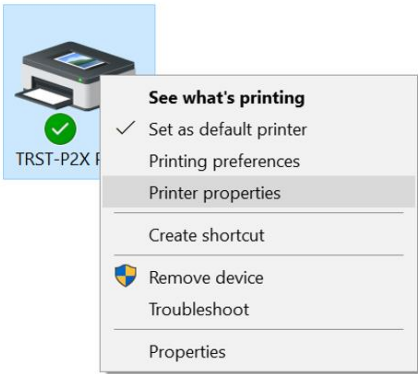
c. Then next enter “net start spooler”.



d. Then go back to Printer Server Properties (step 3) and try to remove again.

4. Printer Properties

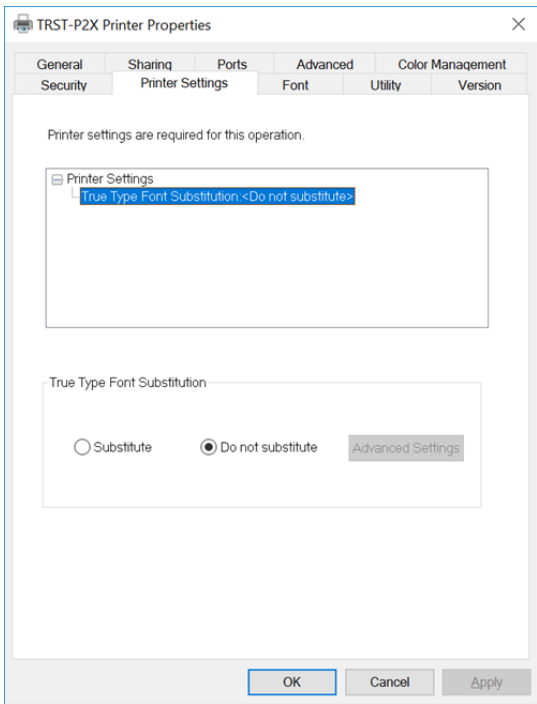
Printer Properties could be accessed from the "Devices and Printers".  
Right-Click the printer driver name and select Printer properties button



Below table show the property sheets.

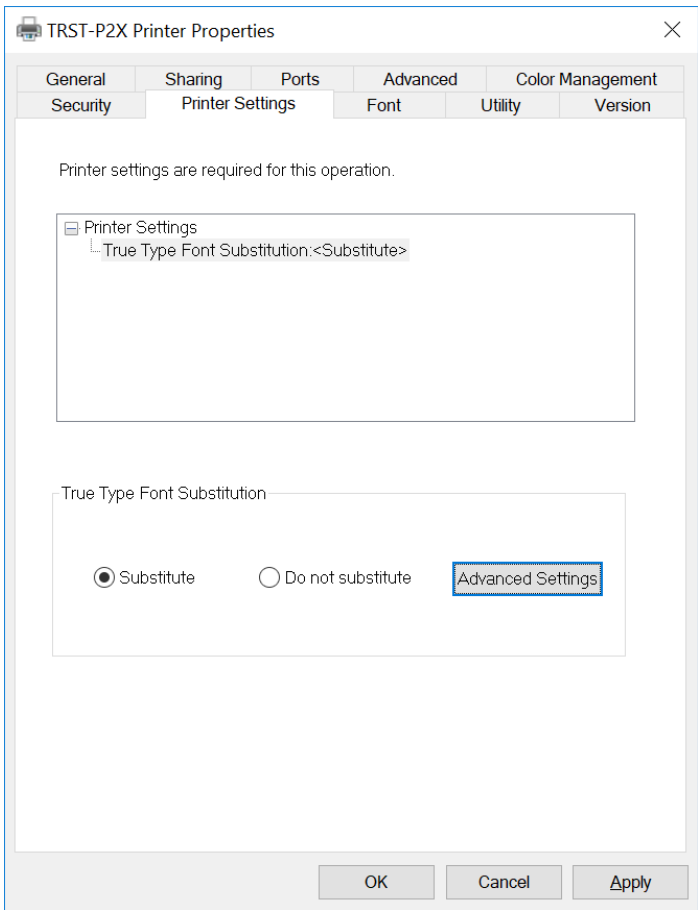
Sheet	Provider	Note
General	Windows	
Sharing		
Ports		
Advanced		
Color Management		
Security	Vendor	Created by Printer Driver's Vendor
Printer Settings		
Font		
Utility		
Version		

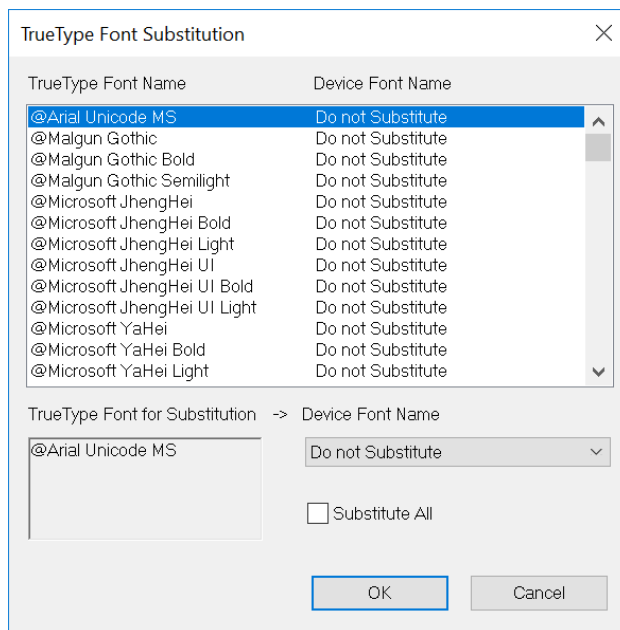
### 4.1 Printer Settings



#### True Type Font Substitution

Select **Substitute** option to enable the font substitution feature. Click Advanced Settings to select font type to substitute





Below is device Font Name list for substitution

- FontA
- FontB
- Control
- controlA
- Barcode(1-8)
- 2D-Code(1-8)

Click OK and the true type font name will substituted with selected device font name

#### Note:

In case "Substitute All" is checked, the selected "Device Font Name" should be applied to all the True Type Font listed on this dialog (=True Type Font Substitution) and then, all the True Type Font listed should be disabled(=cannot be modified)

#### FontA & FontB

In case FontA & FontB is selected

There are 2 command sent to printer:

##### 1. Character font

FontA & FontB is character font. Below command will sent when select FontA or FontB

##### 1.7.9

##### Select character font

**ASCII:** ESC M n  
**Hexadecimal:** 1B 4D n  
**Decimal:** 27 77 n  
**Value of n:** 0, 48: Font A (Standard pitch font)  
                   1, 49: Font B (Compress pitch font)

## 2. Character Size

### 1.7.14 Select character size

**ASCII:** GS 1 n  
**Hexadecimal:** 1D 21 n  
**Decimal:** 29 33 n  
**Value of n:** Bit 0 to 3 = Height magnification (0 – 7)  
 Bit 4 to 7 = Width magnification (0 – 7)  
**Range of n:**  $0 \leq n \leq 7$ ,  $16 \leq n \leq 23$ ,  $32 \leq n \leq 39$ ,  $48 \leq n \leq 55$ ,  $64 \leq n \leq 71$ ,  $80 \leq n \leq 87$ ,  $96 \leq n \leq 103$ ,  
 $112 \leq n \leq 119$   
**Default:** 0

The character size that sent to printer is automatically assign based on below criteria:

1.  $\text{FontBaseHeight} \leq \text{FontHeight} < (\text{FontBaseHeight} * 2)$  → Font substitute is FontA11 / FontB11
2.  $(\text{FontBaseHeight} * 2) \leq (\text{FontHeight} < \text{FontBaseHeight} * 4)$  → Font substitute is FontA22 / FontB22
3.  $(\text{FontBaseHeight} * 4) \leq (\text{FontHeight} < \text{FontBaseHeight} * 8)$  → Font substitute is FontA44 / FontB44
4.  $(\text{FontBaseHeight} * 8) \leq \text{FontHeight}$  → Font substitute is FontA88 / FontB88

#### Note:

1. **FontBaseHeight** : The value is based on Font Size selection on “Font Tab” section (in dots)  
 Font Size1 → FontBaseHeight = 27  
 Font Size2 → FontBaseHeight = 34
2. **FontHeight** : True Type Font Height (in dots)



<b>Resolution</b>	180dpi model: 180.0 dpi x 180.0 dpi (7 dots/mm) 203dpi model: 203.2 dpi x 203.2 dpi (8 dots/mm)
-------------------	--

### 3. Font substitute is depend on character font selection (FontA / FontB)

#### Example:

1. Using AMY Printer, sent document with Arial Font & Size is 11 Points  
 Font Size is Font Size1 and Font Substitute setting is FontA  
**FontBaseHeight** = 27 (Font Size1 Parameter)  
**FontHeight** =  $\pm 4.4\text{mm} = 4.4 * 8 = 35$  dots (**Note** : 203dpi model -> 8dots/mm)  
**Check Criteria :**

1.  $\text{FontBaseHeight} \leq \text{FontHeight} < (\text{FontBaseHeight} * 2)$  → Font substitute is FontA11 / FontB11
2.  $(\text{FontBaseHeight} * 2) \leq (\text{FontHeight} < \text{FontBaseHeight} * 4)$  → Font substitute is FontA22 / FontB22
3.  $(\text{FontBaseHeight} * 4) \leq (\text{FontHeight} < \text{FontBaseHeight} * 8)$  → Font substitute is FontA44 / FontB44
4.  $(\text{FontBaseHeight} * 8) \leq \text{FontHeight}$  → Font substitute is FontA88 / FontB88



Criteria to use is **No 1**

**FontBaseHeight** <= **FontHeight** < (**FontBaseHeight**\*2)

27            <=    35            <            54

Font Substitute setting is FontA so the **Character size** is use **FontA11**

2. Using CLARA Printer, sent document with Calibri Font & Size is 20 Points

Font Size is Font Size1 and Font Substitute setting is FontB

**FontBaseHeight** = 27 (Font Size1 Parameter)

**FontHeight** =  $\pm 8.7\text{mm} = 8.7 * 7 = 61 \text{ dots}$  (**Note** : 180dpi model -> 7dots/mm)

**Check Criteria :**

- |   |  |
|---|--|
| 1. <u>FontBaseHeight</u> <= <u>FontHeight</u> < ( <u>FontBaseHeight</u> *2)       | → Font substitute is FontA11 / FontB11 |
| 2. ( <u>FontBaseHeight</u> *2) <= ( <u>FontHeight</u> < <u>FontBaseHeight</u> *4) | → Font substitute is FontA22 / FontB22 |
| 3. ( <u>FontBaseHeight</u> *4) <= ( <u>FontHeight</u> < <u>FontBaseHeight</u> *8) | → Font substitute is FontA44 / FontB44 |
| 4. ( <u>FontBaseHeight</u> *8) <= <u>FontHeight</u>                               | → Font substitute is FontA88 / FontB88 |

Criteria to use is **No 2**

**(FontBaseHeight\*2)** <= **FontHeight** < (**FontBaseHeight**\*4)

54            <=    61            <            108

Font Substitute setting is FontB so the **Character size** is use **FontB22**

**NOTE:**

**FontA11 / FontB11** = Character width & height size is 1 Time (normal) -> Command to sent : 1D 21 00

**FontA22 / FontB22** = Character width & height size is 2 Times -> Command to sent : 1D 21 11

**FontA44 / FontB44** = Character width & height size is 4 Times -> Command to sent : 1D 21 33

**FontA88 / FontB88** = Character width & height size is 8 Times -> Command to sent : 1D 21 77

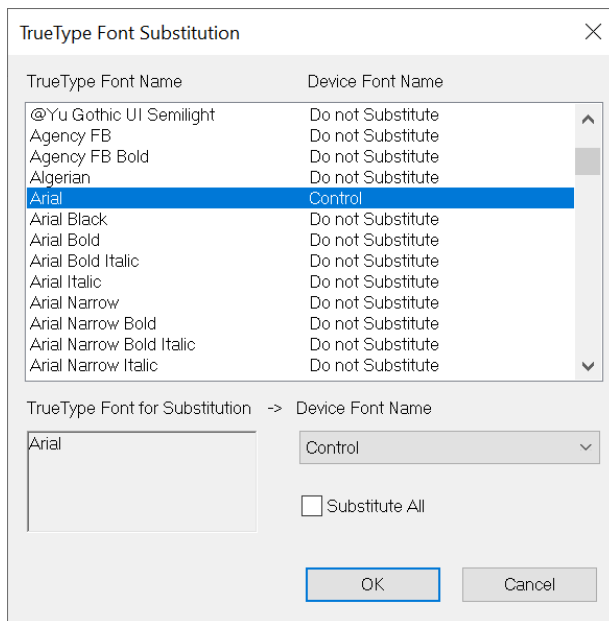
## Control Font

Driver convert character data to control code based on table below

Character code	Explanation	Sending command (Hex decimal)
5	Send HT	09
6	Send LF	0A
7	Send CR	0D
a	Drawer open 50ms	1B 70 00 19 FF
b	Drawer open 100ms	1B 70 00 32 FF
c	Drawer open 150ms	1B 70 00 4B FF
d	Drawer open 200ms	1B 70 00 64 FF
e	Drawer open 250ms	1B 70 00 7D FF
g	Non feed paper + Partial cut	1D 56 01
w	Positioning adjustment Left	1B 61 00
x	Positioning adjustment Center	1B 61 01
y	Positioning adjustment Right	1B 61 02
A	Drawer open 50ms	1B 70 00 19 FF
B	Drawer open 100ms	1B 70 00 32 FF
C	Drawer open 150ms	1B 70 00 4B FF
D	Drawer open 200ms	1B 70 00 64 FF
E	Drawer open 250ms	1B 70 00 7D FF
P	Paper feeding + Partial cut	1D 56 42 00

### Example:

#### 1. Set Font Substitution setting for Arial to Control font



- Open Microsoft Word document then set the font to Arial
- Connect cash drawer to the printer
- Type “g” then perform printing

**Result :** Cash Drawer will open with pulse on time 50ms

## ControlA Font

Driver convert character data to control code based on “Edit ControlA Font” Setting on “Utility” Tab then send command to the printer. (Please see [Edit ControlA](#) Section for the example to use ControlA Font)

## 4.2 Font

Select the printer font and send the character data to the printer. Below are printer fonts that can be selected by an application. The sizes of those fonts are fixed.

Font1				Font2			
Font Name	Point	Font Name	Point	Font Name	Point	Font Name	Point
FontA11	8.5	FontB11	8.5	FontA11	9.9	FontB11	9.9
FontA12	17.0	FontB12	17.0	FontA12	19.9	FontB12	19.9
FontA21	8.5	FontB21	8.5	FontA21	9.9	FontB21	9.9
FontA22	17.0	FontB22	17.0	FontA22	19.9	FontB22	19.9
FontA24	34.0	FontB24	34.0	FontA24	39.7	FontB24	39.7
FontA42	17.0	FontB42	17.0	FontA42	19.9	FontB42	19.9
FontA44	34.0	FontB44	34.0	FontA44	39.7	FontB44	39.7
FontA48	68.1	FontB48	68.1	FontA48	79.4	FontB48	79.4
FontA84	34.0	FontB84	34.0	FontA84	39.7	FontB84	39.7
FontA88	68.1	FontB88	68.1	FontA88	79.4	FontB88	79.4

TRST-P2X Printer Properties

General Sharing Ports Advanced Color Management  
Security Printer Settings Font Utility Version

Support Printer Fonts and Fonts Sizes

Font Name	Points
FontA11	8.5
FontA12	17.0
FontA21	8.5
FontA22	17.0
FontA24	34.0
FontA42	17.0
FontA44	34.0
FontA48	68.1
FontA84	34.0
FontA88	68.1
FontB11	8.5
FontB12	17.0
FontB21	8.5

Select this font size in the application. For more information about programming, see the sample programs or the manual.

Test Printing

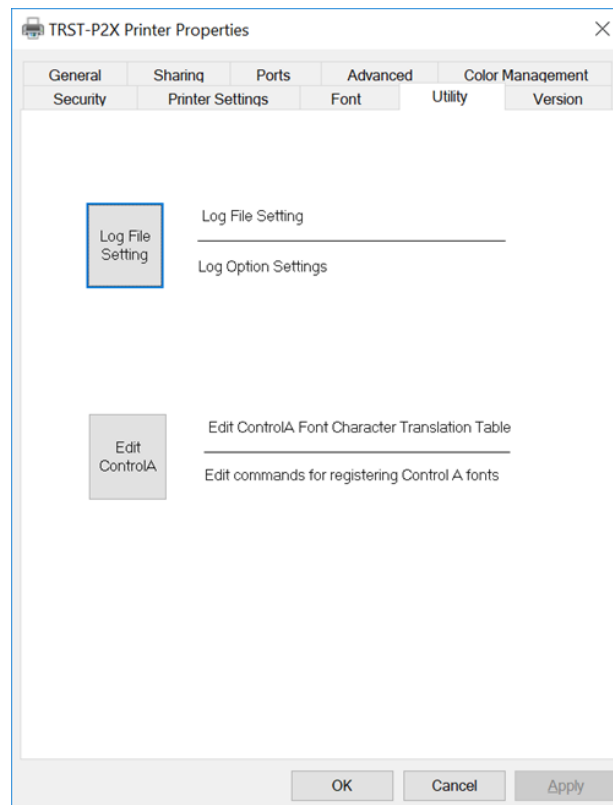
Test Data

Select Font Size

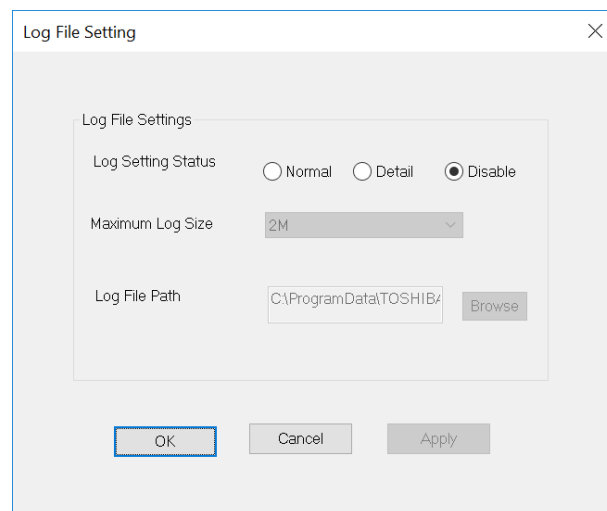
☒ Font Size1 ☐ Font Size2

1. **Test Data** : Any string can be input in this EditBox. (Example: ABCD1234)
2. **Run** : On clicking this button, string in "Test Data" is sent to the printer by generating printing job
3. **Select Font Size** : Select Font Size1 / Font Size2 used on printer

## 4.3 Utility



### 4.3.1 Log File Setting



This dialog is to configure Log File Setting

#### 1. Log Setting Status

Default value is Disable. To enable the log please select Normal / Detail.

If selected setting is Normal / Detail printer driver will save log into file.

## 2. Maximum Log Size

Below are default value

Normal : 2M

Detail : 10M

Each file size of on the log is 1M Bytes and the file count is based on Maximum Log Size Setting.

## 3. Log File Path

Default location for the log file

TRST-P1X / HSP-150 = "C:\ProgramData\TOSHIBA\TRSTP1X\logs"

TRST-P2X / HSP-100 = "C:\ProgramData\TOSHIBA\TRSTP2X\logs"

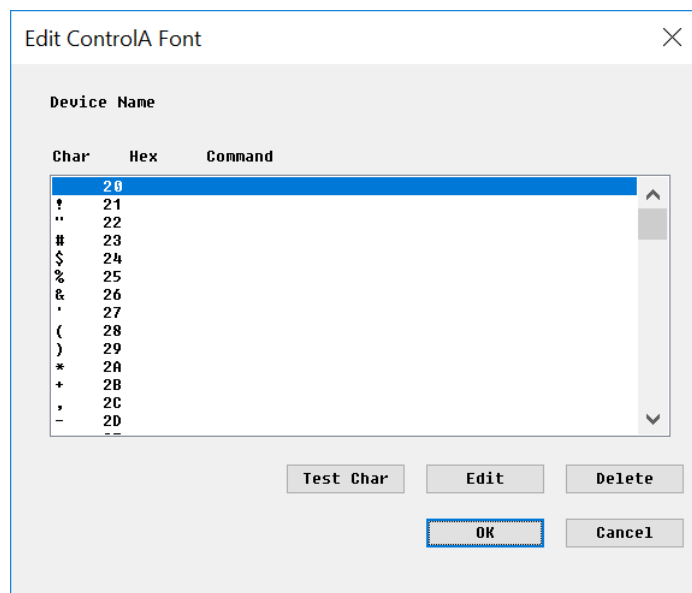
Click **Browse** then will show dialog to select the directory where log file is saved.

Log Setting Status	Data to be logged
Normal / Detail	Entry and Return, Receiving data and Error information when error happen
Normal	Sending data except printing data to printer
Detail	Sending data with Printing data

### 4.3.2 Edit ControlA

ControlA font is a font where specific command is set to control characters selected by the user. When the control character of the controlA font is specified in the print data and printed, the specific command is executed.

Driver convert character data to control code based on "Edit ControlA Font" Table then send command to printer.



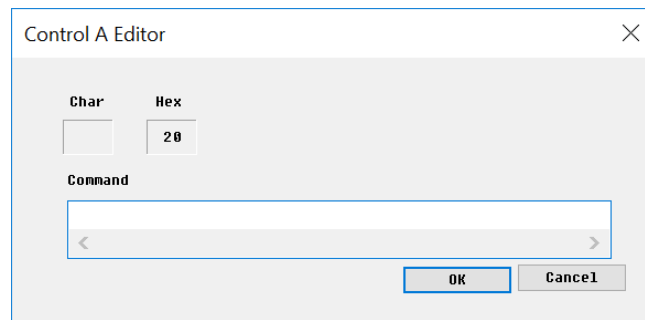
#### Test Char Button

To test the Command input for selected character

(Please see the example to use on Edit button section below)

## Edit Button

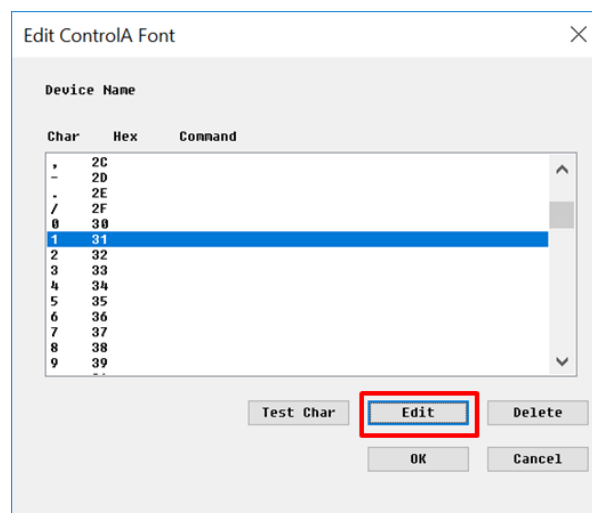
Show the dialog to edit Control A Font.



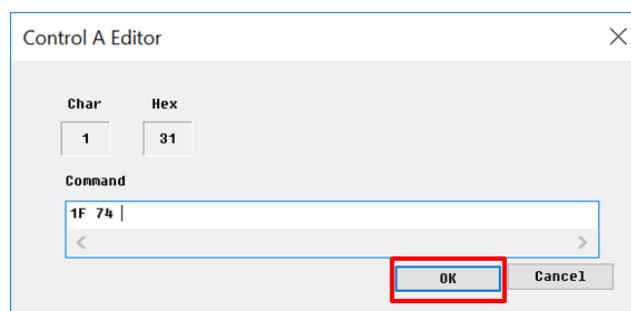
The command input will replace the selected character that is shown on "Char" section

Example:

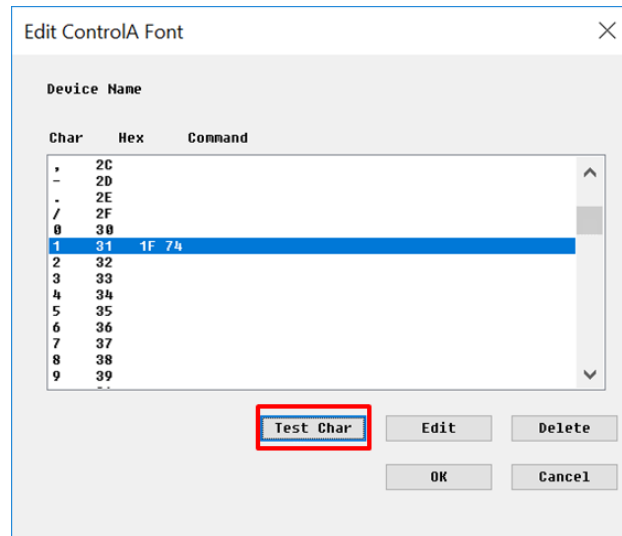
1. Select cursor to 1 Click Edit Button



2. Input Command then Click OK Button (Example : 1F 74)



### 3. Click Test Char Button



Result: Print Configuration Printing

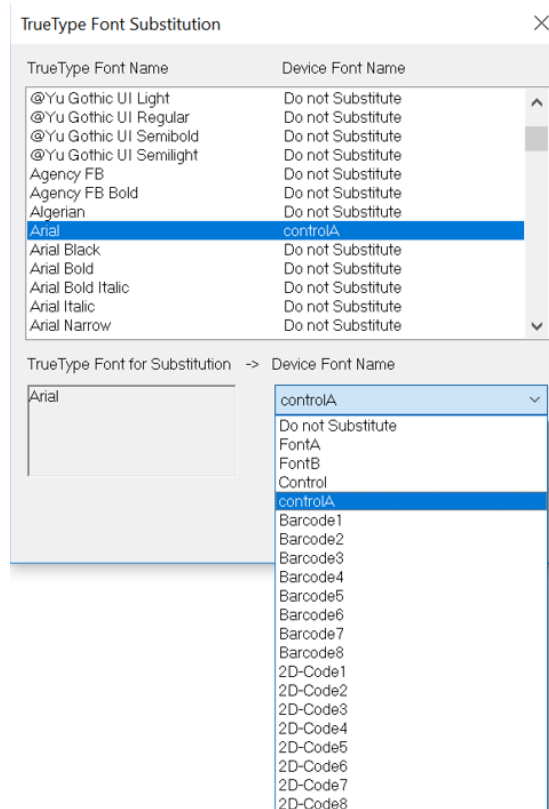
#### Delete Button

Delete the command which will replace the selected character

#### Note:

*How to use the Edit ControlA in the document printing*

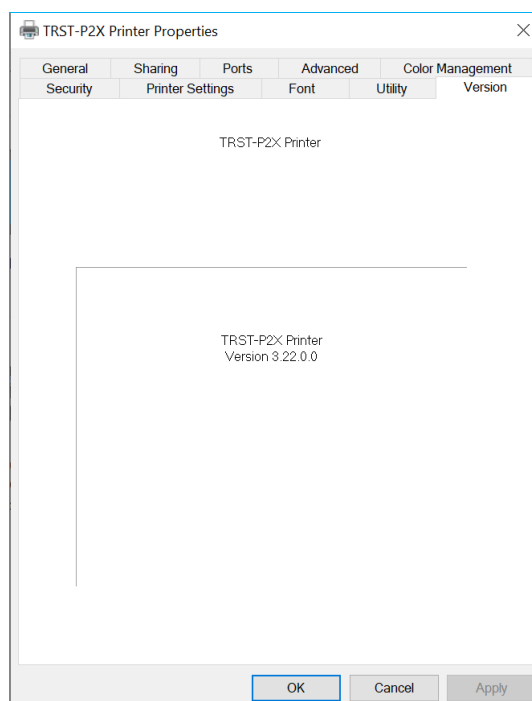
1. Set command "1F 74" in Char "1" on Edit ControlA Font Setting
2. Open Printer properties → Printer Settings
3. Select True Type Font Substitution
4. Select Substitute option and click Advanced Settings
5. Select True Type Font name and select Device Font Name to controlA

**Example : Select Arial font**

6. Click Apply & OK button
7. Open Microsoft Word document
8. Set font type to “Arial”
9. Type “1” then print document
10. Result is printing configuration page

**4.4 Version**

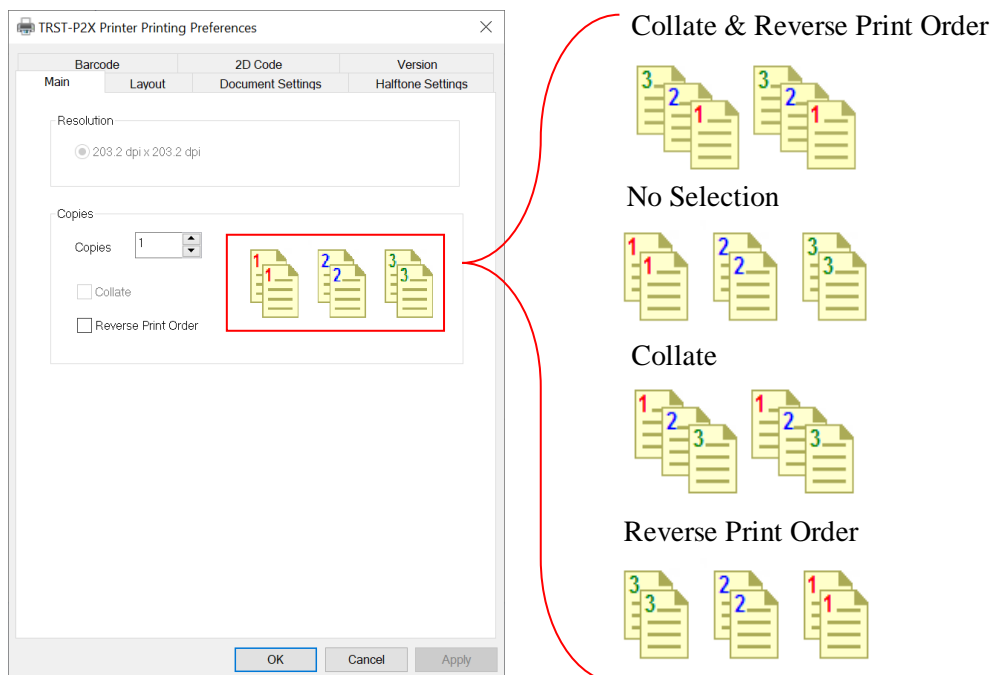
Show the version of printer driver





## 5. Printing Preferences

### 5.1 Main



#### Copies

Input how many copy of every page will printed

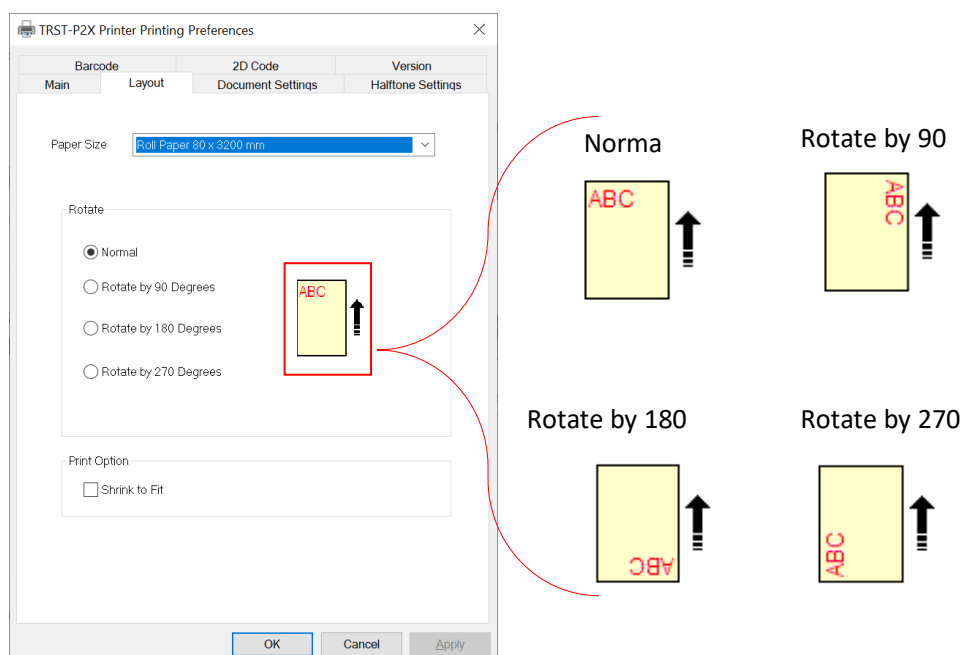
#### Collate

When printing more than one copy of a multi-page document, the copies will print all pages of each copy before printing the second copy

#### Reverse Print Order

Print order will start from last page

### 5.2 Layout



## Paper Size

Select the specified paper size ([58mm x 297mm] or [80mm x 297mm]) based on paper width Selection:

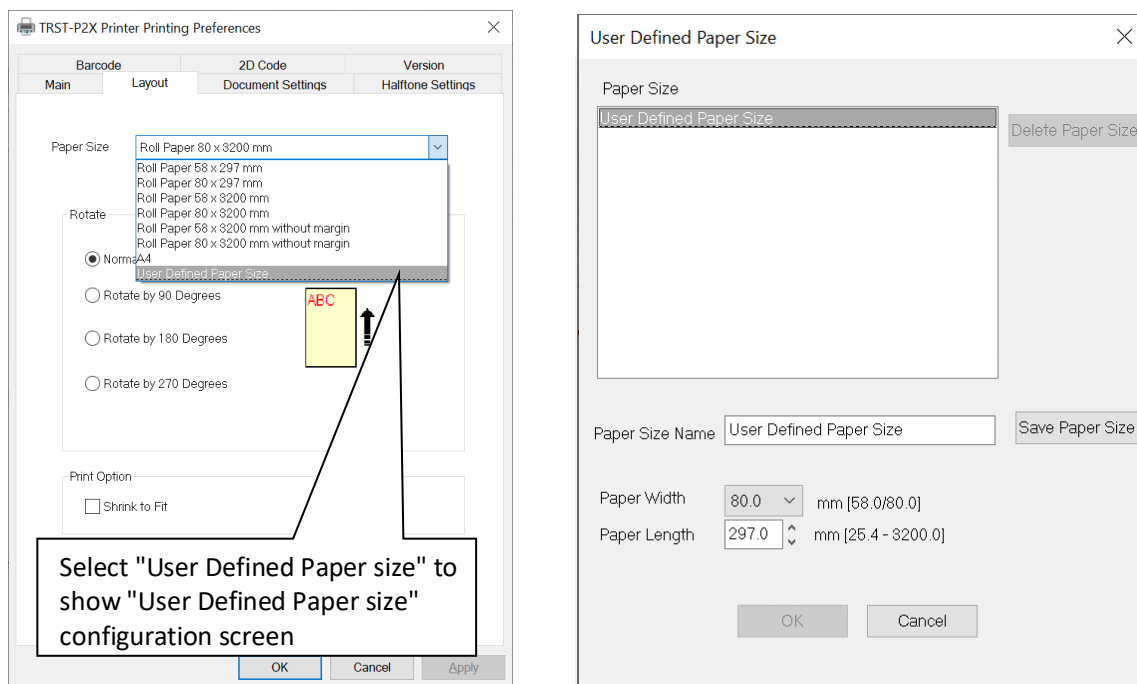
- Roll Paper 58 x 297 mm
- Roll Paper 80 x 297 mm
- User Defined Paper Size

## User Defined Paper Size

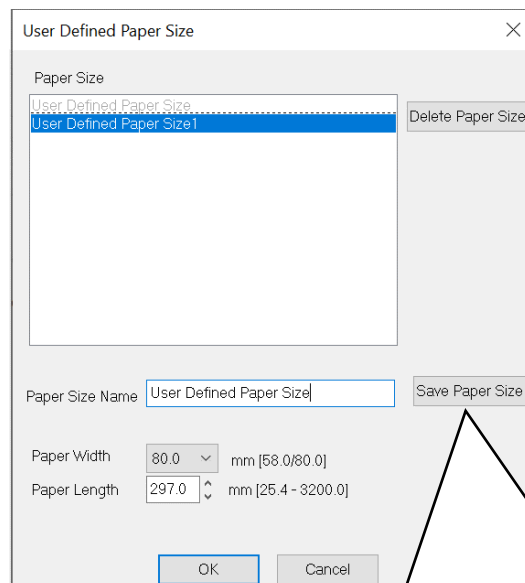
Custom the paper size by user

Example:

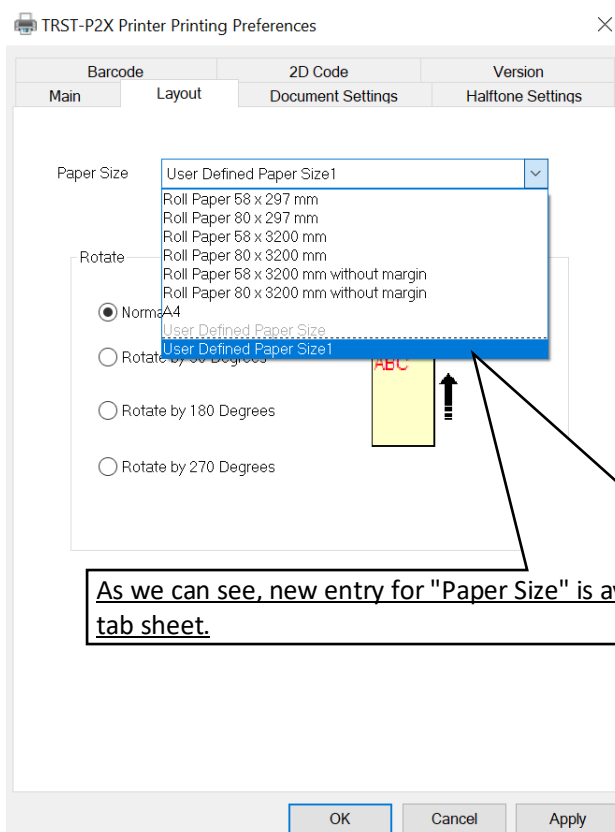
### 1. Call User Defined Paper size



## 2. Create new entry for "User defined Paper size"



Enter new "Paper Size Name" and click [Save Paper Size] button. And then, new entry for "User defined Paper size" is created and shown with the specified name.



As we can see, new entry for "Paper Size" is available on "Layout" tab sheet.

## 3. Delete Paper Size

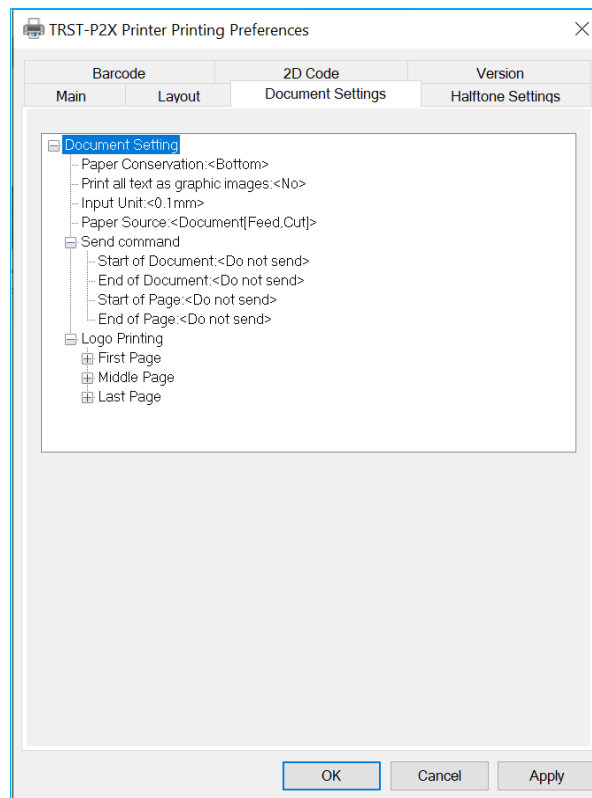
To delete the selected "User Defined Paper Size"

**Print Option****“Shrink to Fit” is Disable / Unselected (Default)**

Printing result will cut off when paper width source is more than paper size setting

**“Shrink to Fit” is Enable / Selected**

Printing result will scaled down when paper width source is more than paper size setting

**5.3 Document Settings****Paper Conservation**

Reduce paper usage by remove the empty area (Top / Bottom / Both area)

**Print all text as graphic images**

The printing data is printed as an image when “Yes” is selected

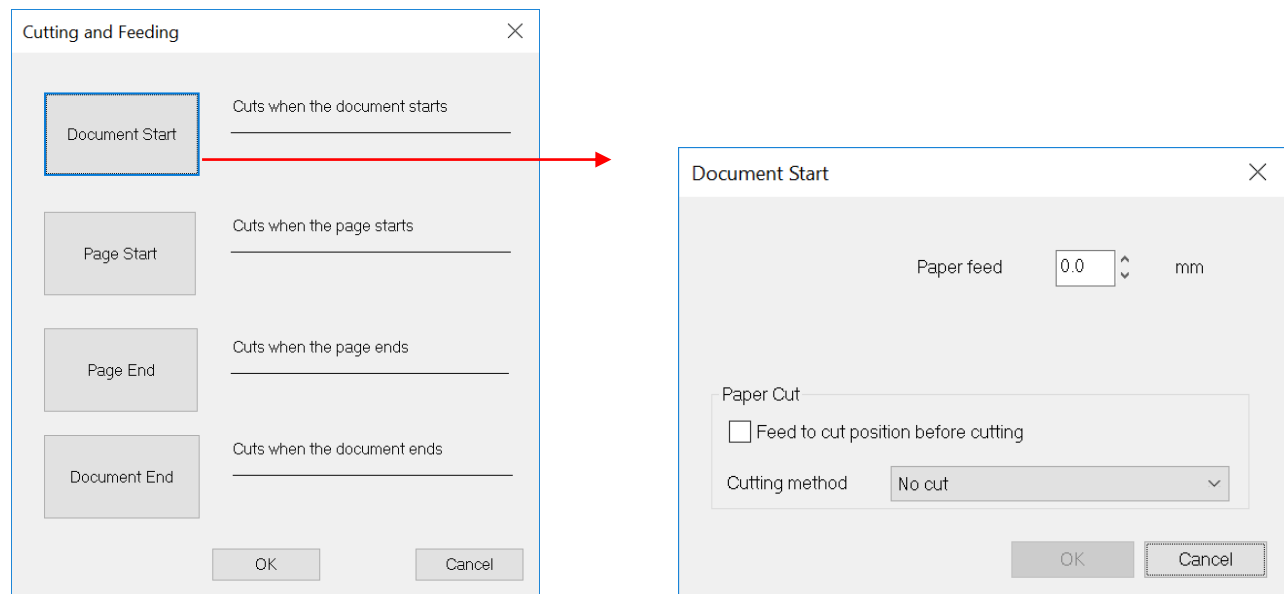
**Input Unit**

Set the input unit measurement parameter

**Paper Source**

Document[Feed, Cut]	Feed and cut on last page of a job
Document[Feed, No Cut]	Feed on last page of a job
Document[No Feed, Cut]	Cut on last page of a job
Document[No Feed, No Cut]	Neither Cut nor Feed are executed
Page[Feed, Cut]	Feed and cut between pages
Page[Feed, No Cut]	Feed between pages
Page[No Feed, Cut]	Cut between pages

When Custom is selected then will show dialog as below



**Paper Feed** : amount of Feed can be set between from 0mm to 100mm

**Feed to cut position before cutting** : If checked, feed with "Paper Feed" setting

**Cutting method** : Cut / No Cut

### Send Command

Send Command of Start of Document, End of Document, Start of Page, and each End of Page

Example:

1. Input Start of Document : 1B 07 then click OK

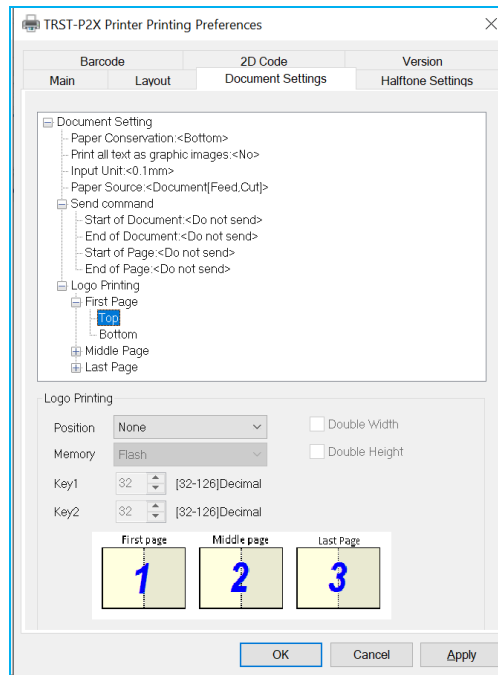


2. Do Print Test Page
3. Result is Beep Sound before print the test page

### Logo Printing

The Logo print setting can be set to Top/Bottom of Last Page, Top/Bottom of First Page and Top/Bottom of Middle Page. Logo Position also can be set on Left, Center or Right.

The logo has to be downloaded before using this setting.



**Position** : Logo image is printed on Specified page/position (Left, Center or Right)

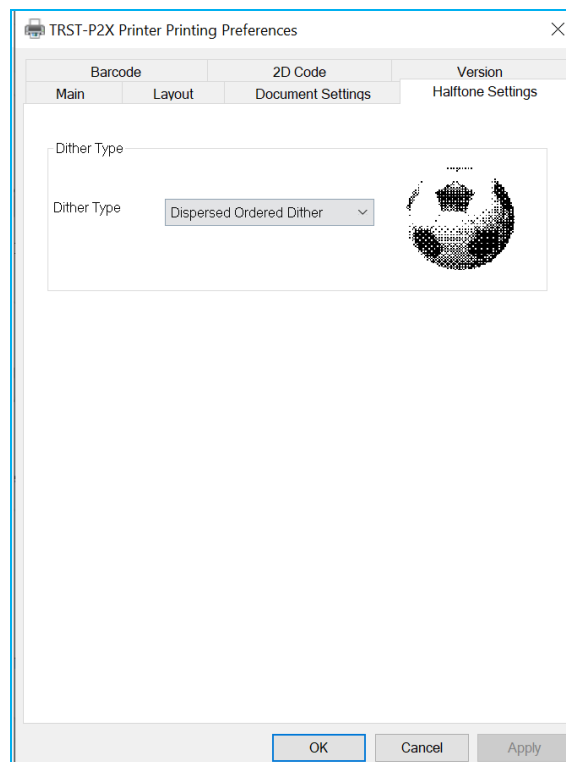
**Key1 & Key 2** : It prints the user-defined logo by the key codes (kc1 and kc2) in flash memory

**Double Width** : Enlarge the logo image horizontally





**Double Height** : Enlarge the logo image vertically

## 5.4 Halftone Settings

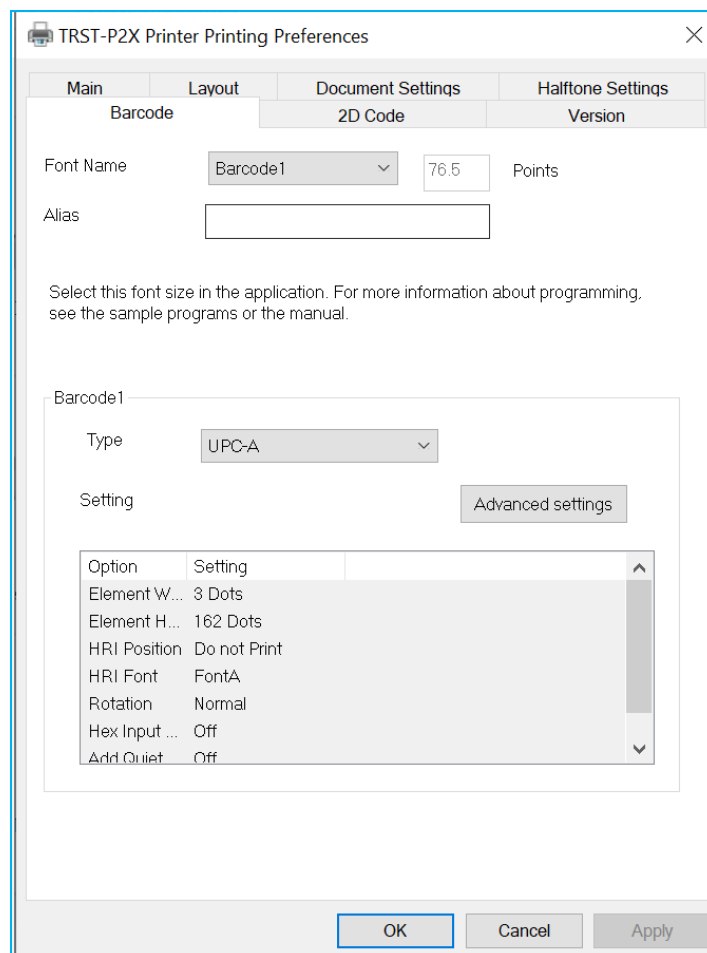
Halftone is an image comprised of discrete dots rather than continuous tones.



Dither Type setting to rendering the image:

Dither Type	Sample Image
Dispersed Ordered Dither	
Clustered Ordered Dither	
Error Diffusion	
Threshold	

## 5.5 Barcode



**Font Name :** There is 8 Barcode Font Name selection available

**Type:**

Barcode1: UPC-A

Barcode2: UPC-E

Barcode3: JAN13

Barcode4: Code39

Barcode5: ITF

Barcode6: Codabar

Barcode7: Code93

Barcode8: Code128

**Advanced Settings**

The image shows a 'Barcode Edit' dialog box with a close button (X) in the top right corner. The dialog is divided into three main sections. The first section is titled 'UPC-A' and contains four settings: 'Element Width' with a value of 3 and a range of [2-6]Dots; 'Element Height' with a value of 162 and a range of [1-255]Dots, and a text input field for '27.0 mm'; 'HRI Position' with a dropdown menu set to 'Do not Print'; and 'HRI Font' with a dropdown menu set to 'fontA'. The second section is titled 'Option' and contains a 'Rotation' dropdown menu set to 'Normal', and two unchecked checkboxes: 'Hex Input Mode' and 'Add Quiet Zone'. The third section is titled 'Test Printing' and contains a 'Test Data' text input field with the value '012345678905' and a 'Run' button. At the bottom of the dialog are 'OK' and 'Cancel' buttons.

**Element Width :** Barcode Width size in dots

**Element Height :** Barcode Height size in dots

**HRI Position :**

Human Readable Interpretation refers to the characters printed below, above or both side of Barcode Print

**Rotation:** Barcode rotation printing option



**Hex input Mode :**

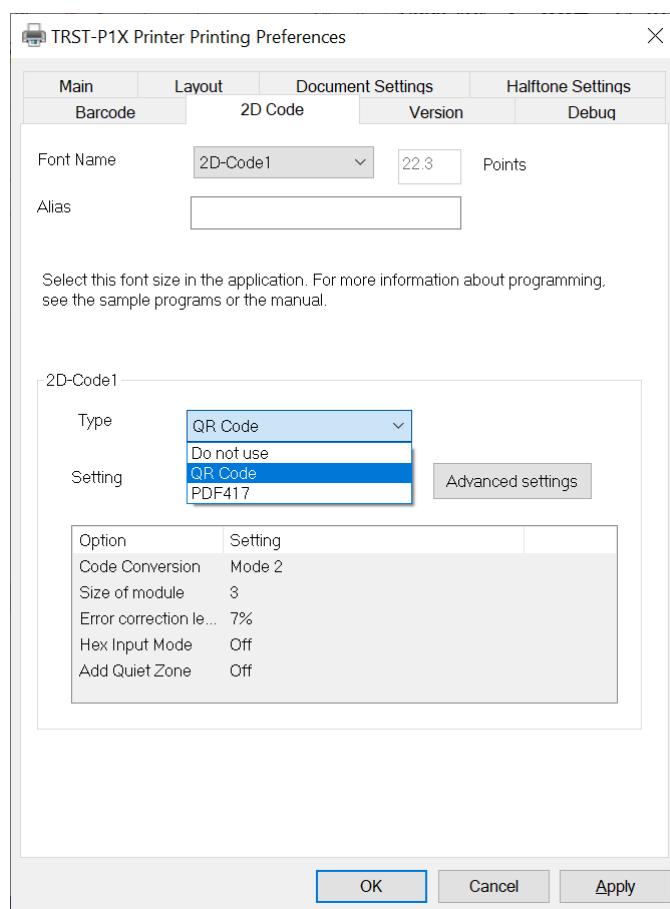
This is the mode which accepts HEX data input from an application or Test Printing.

Example: In case to input "ABCJ" in Code-39 please type "4142434A" (Both 'A' and 'a' is acceptable)

Add Quiet Zone :

Add the blank margin on either side of a bar code that's used to tell the barcode reader where a barcode's symbology starts and stops. The purpose of a quiet zone is to prevent the reader from picking up information that does not pertain to the bar code that is being scanned

**Test Data :** Input the value to test the Barcode Print

**5.6 2D Code**

There are 8 predefined 2-D barcode fonts. To select/customize this, the user may select one of the font in "Font Name" drop box. "Alias" can be used to denote another name for each barcode font. The user is able to view/modify the type of barcode by selecting one of the option in "Type" drop down box. To view/modify more options, the user can click "Advanced Settings".

**\*\*NOTE:** To enable this feature, font substitution must be made from one of the TrueType font to one of the 2-D barcode font. The substituted TrueType font must be used when wanting to use this feature

### 5.6.1 PDF 417

#### Advanced Settings

The image shows a '2D Code Edit' dialog box with a close button (X) in the top right corner. It contains three main sections: 'PDF417', 'Option', and 'Test Printing'. The 'PDF417' section has a 'Module Width' spinner set to 3, with a range of [2-6]Dots. The 'Option' section has a 'Rotation' dropdown set to 'Normal', and two unchecked checkboxes: 'Hex Input Mode' and 'Add Quiet Zone'. The 'Test Printing' section has a 'Test Data' text box containing '0123456789' and a 'Run' button. At the bottom are 'OK' and 'Cancel' buttons.

Section	Parameter	Value / Option
PDF417	Module Width	3 [2-6]Dots
	Rotation	Normal
Option	Hex Input Mode	<input type="checkbox"/>
	Add Quiet Zone	<input type="checkbox"/>
Test Printing	Test Data	0123456789
	Run	Run

**Module Width :** Set the PDF417 Barcode Width size (in dots)

**Rotation:** PDF417 Barcode rotation printing option

**Hex input Mode :**

This is the mode which accepts HEX data input from an application or Test Printing.

Example: In case to input " 0123456789" please type "30313233343536373839"

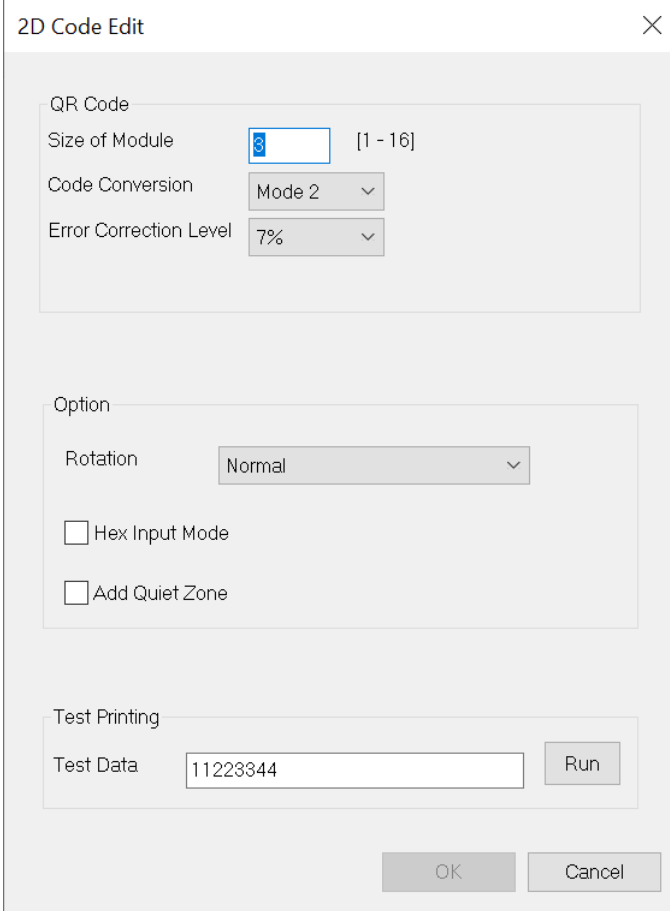
**Add Quiet Zone :**

Add the blank margin on either side of a bar code that's used to tell the barcode reader where a barcode's symbology starts and stops. The purpose of a quiet zone is to prevent the reader from picking up information that does not pertain to the bar code that is being scanned

**Test Data :** Input the value to test the PDF417 Barcode Print

## 5.6.2 QR Code

### Advanced Settings



The image shows a '2D Code Edit' dialog box with a close button (X) in the top right corner. It is divided into three main sections: 'QR Code', 'Option', and 'Test Printing'. The 'QR Code' section contains 'Size of Module' (a numeric input field with '3' and a range '[1 - 16]'), 'Code Conversion' (a dropdown menu showing 'Mode 2'), and 'Error Correction Level' (a dropdown menu showing '7%'). The 'Option' section contains 'Rotation' (a dropdown menu showing 'Normal'), 'Hex Input Mode' (an unchecked checkbox), and 'Add Quiet Zone' (an unchecked checkbox). The 'Test Printing' section contains 'Test Data' (a text input field with '11223344') and a 'Run' button. At the bottom of the dialog are 'OK' and 'Cancel' buttons.

Section	Parameter	Value
QR Code	Size of Module	3 [1 - 16]
	Code Conversion	Mode 2
	Error Correction Level	7%
Option	Rotation	Normal
	Hex Input Mode	<input type="checkbox"/>
	Add Quiet Zone	<input type="checkbox"/>
Test Printing	Test Data	11223344
	Run	[Button]

#### Size Module

User can set the QR code size in dots.

#### Code Conversion

User can select the model for QR code. The model are Model 1, Model 2 and Micro QR

#### Error Correction Level

User can select the Error Correction Level for QR code.

#### Rotation

QR Code rotation printing option

#### Hex Input Mode

Option for the QR Code data to be given as HEX data

#### Add Quiet Zone

Option to add blank margins on either side of the QR Code to ensure the barcode reader is able to know where the barcode starts and stops. This is to ensure unintended data is not read by the reader

### Test Data

“Test Data” text box can be filled with a sample data and pressing “Run” button will print out the QR Code with all the settings set by the user.

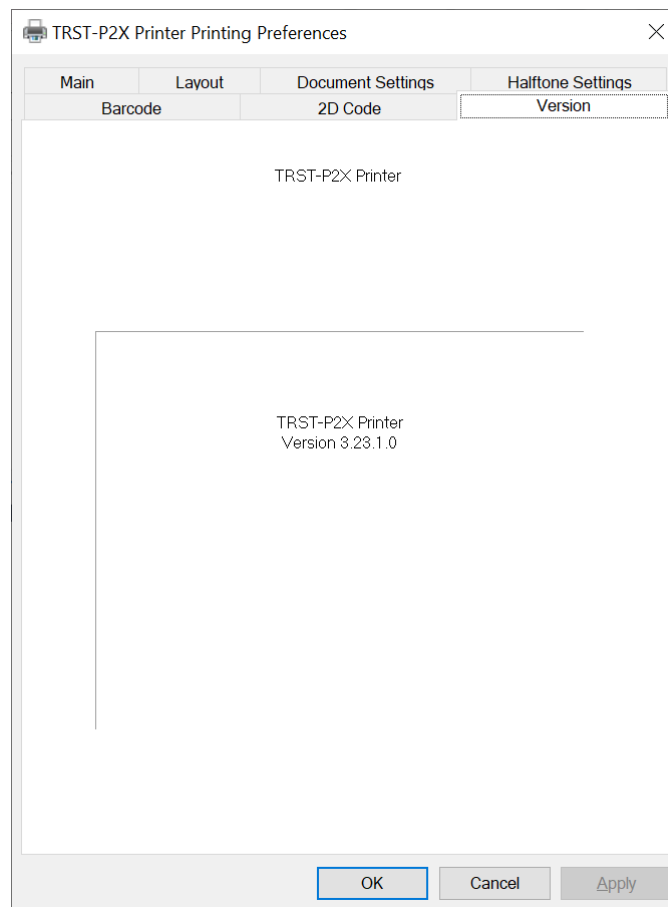
Pressing the “OK” button will apply all settings to QR Code.

### Limitation

Test Data maximum input is 128 character

## 5.7 Version

Show the version of printer driver



## 6. Printer Device Font

### 6.1 Introduction

This document contains sample snippets to explain on how to print device font on TRST-P1X and TRST-P2X Thermal Receipt printers with Windows Printer Driver

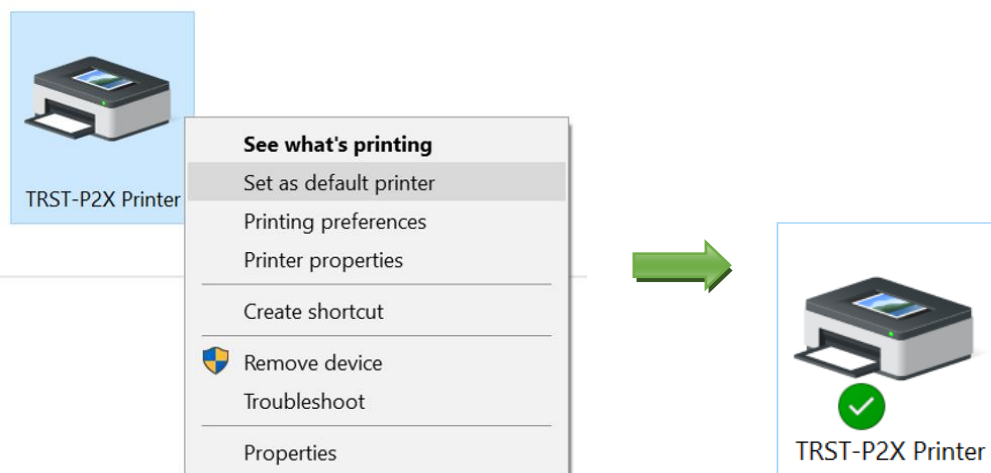
### 6.2 Setup Printer as Default Printer

1. Choose Start → Devices and Printers.

The Devices and Printers window appears. The current default printer is indicated by a check mark.

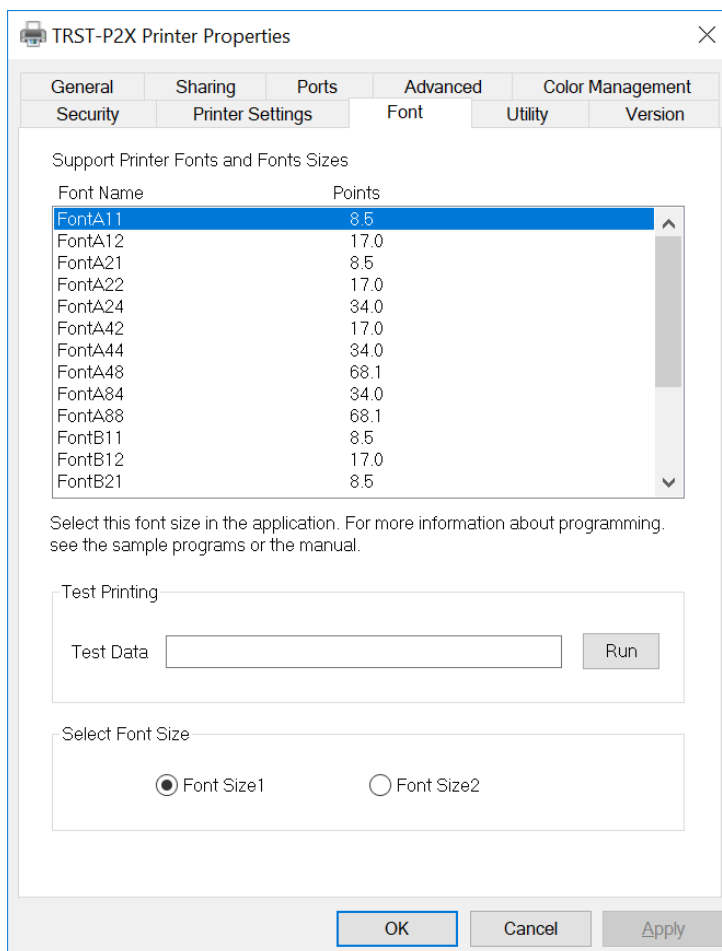
2. Right-click any printer that isn't set as the default and choose "Set as Default Printer" from the shortcut menu.

If you right-click the printer that is already set as the default, the Set as Default Printer command won't be available on the shortcut menu.



## 6.3 Supported Fonts

The following font names are supported by the Windows printer driver for TRST-P1X and TRST-P2X printer models



## 6.4 Sample Code

**Note:** Before you run the code, please install the Windows Printer Driver and make sure the printer is set as default printer.

### 6.4.1 Visual Basic 6.0

#### Printer Object

Visual Basic contains a global printer object, which refers to the default printer for the current system. Because this object is global to all parts of the VB project, you don't need to create an object variable, you can simply use the Printer object directly. Please refer *properties* and *methods* of the Printer Object in the following link.

Reference: please visit [https://docs.microsoft.com/en-us/previous-versions/bb882722\(v%3Dvs.140\)](https://docs.microsoft.com/en-us/previous-versions/bb882722(v%3Dvs.140))

#### How To:

1. Create a New Standard EXE Project in Visual Basic 6.0.
2. Copy the following sample snippet.
3. Call the Function with an event (Ex. Button OnClick() ).
4. The Printer will print the text.

```
Public Sub Print_FontA11()  
    Printer.Font.Size = 11  
    Printer.Font.Name = "FontA11"  
    Printer.Print "FontA11"  
    Printer.EndDoc  
End Sub  
  
Public Sub Print_FontA12()  
    Printer.Font.Size = 19.9  
    Printer.Font.Name = "FontA12"  
    Printer.Print "FontA12"  
    Printer.EndDoc  
End Sub  
  
Public Sub Print_FontA21()  
    Printer.Font.Size = 9.9  
    Printer.Font.Name = "FontA21"  
    Printer.Print "FontA21"  
    Printer.EndDoc  
End Sub
```

## 6.4.2 Visual C++ (MFC)

### 6.4.2.1 Using Print Dialog

The following snippet prints a text with device font.

1. Create a variable with CPrintDialog with FALSE constructor.

```
CPrintDialog( BOOL bPrintSetupOnly, DWORD dwFlags = PD_ALLPAGES |
PD_USEDEVMODECOPIES | PD_NOPAGENUMS | PD_HIDEPRINTTOFILE |
PD_NOSELECTION, CWnd* pParentWnd = NULL);
```

**bPrintSetupOnly**

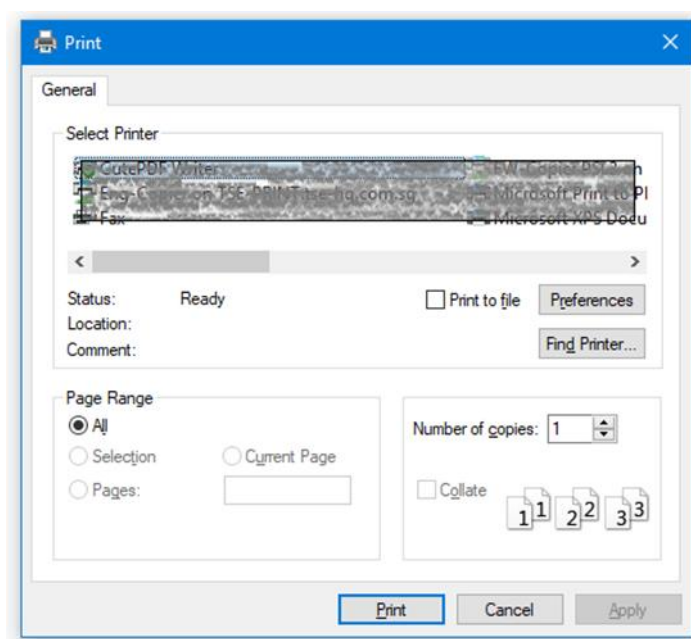
Specifies whether the standard Windows Print dialog box or Print Setup dialog box is displayed. Set this parameter to TRUE to display the standard Windows Print Setup dialog box. Set it to FALSE to display the Windows Print dialog box. If bPrintSetupOnly is FALSE, a Print Setup option button is still displayed in the Print dialog box.

2. Get Printer device defaults without displaying a dialog box.

```
dlg.GetDefaults();
```

**NOTE:** If you want show the print dialog, call the DoModal() and get the settings.

```
CPrintDialog dlg(FALSE);
if (dlg.DoModal() == IDOK)
{
}
}
```





3. Get a handle to the printer device context (DC).

```
HDC hdcPrinter = dlg.GetPrinterDC();
```

4. Create the print document using DOCINFO structure.

5. Attach the handle Device Context “hdcPrinter” to “CDC dcPrinter”.

6. Create the device font using CreateFontIndirect() and select the font for the device context.

```
LOGFONTA lf;  
strcpy (lf.lfFaceName, "FontA42"); // Device Font Name  
HFONT hfont = CreateFontIndirect(&lf);  
HFONT holdfont = (HFONT)SelectObject(dcPrinter, hfont);
```

7. Draw the Text or any shapes to the CDC.

```
dcPrinter.TextOut(10, 10, _T("FontA42 Regular"));
```

Reference: <https://docs.microsoft.com/en-us/cpp/mfc/reference/cdc-class?view=vs-2019>

8. End the document page.

```
dcPrinter.EndPage();  
dcPrinter.EndDoc();
```

9. Cleanup the font objects to release the memory.

Create a VC++ (MFC) Project and call the following function.

```

void PrintSampleFonts()
{
    // Declaration
    CPrintDialog dlg(FALSE);
    HDC hdcPrinter;
    CDC dcPrinter;
    DOCINFO docinfo;
    LOGFONTA lf;
    HFONT hfont;
    HFONT holdfont;
    int _XPOS;
    // Initialization
    dlg.GetDefaults();
    hdcPrinter = dlg.GetPrinterDC();
    memset(&lf, 0x00, sizeof(LOGFONTA));
    memset(&docinfo, 0, sizeof(docinfo));
    _XPOS = 10;

    if(hdcPrinter == NULL)
    {
        MessageBox("Printer Not Initialized ");
    }
    else
    {
        dcPrinter.Attach(hdcPrinter);
        docinfo.cbSize = sizeof(docinfo);
        docinfo.lpszDocName = _T("DeviceFontSample");
        if(dcPrinter.StartDoc(&docinfo) < 0)
        {
            MessageBox("StartDoc failed.");
        }
        else
        {
            // Start a page
            if(dcPrinter.StartPage() < 0 )
            {
                MessageBox("Could not start page");
                dcPrinter.AbortDoc();
            }
            else
            {
                // Font A42 Regular
                strcpy (lf.lfFaceName, "FontA42");
                hfont = CreateFontIndirect(&lf);
                holdfont = (HFONT)SelectObject(dcPrinter, hfont);
                dcPrinter.TextOut(_XPOS, 10, _T("FontA42 Regular"));

                // Font A21 Regular
                memset(&lf, 0x00, sizeof(LOGFONTA));
                strcpy (lf.lfFaceName, "FontA21");
                hfont = CreateFontIndirect(&lf);
                holdfont = (HFONT)SelectObject(dcPrinter, hfont);
                dcPrinter.TextOut(_XPOS, 40, _T("FontA21 Regular"));

                // Font A22 Regular
                memset(&lf, 0x00, sizeof(LOGFONTA));
                strcpy (lf.lfFaceName, "FontA22");
                hfont = CreateFontIndirect(&lf);
                holdfont = (HFONT)SelectObject(dcPrinter, hfont);
                dcPrinter.TextOut(_XPOS, 80, _T("FontA22 Regular"));
                dcPrinter.EndPage();
                dcPrinter.EndDoc();
                // Clean up.
                SelectObject(dcPrinter, holdfont);
                DeleteObject(hfont);
            }
        }
    }
}

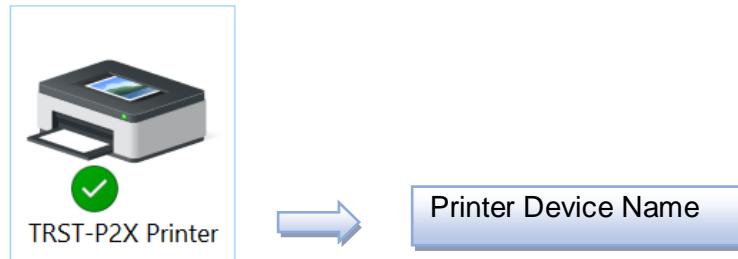
```

This is the device font Name provided by driver.

### 6.4.2.2 Direct Call using Printer Name

1. Create a variable for HDC and Create Device Context using CreateDC().constructor.  
Enter the printer name as highlighted below

```
HDC hdc = NULL;  
hdc = CreateDC(TEXT("WINSPOOL"), TEXT("TRST-P2X Printer"), NULL, NULL);
```



The following sample has only difference from above code is calling the printer without print dialog.

Create a VC++ (MFC) Project and call the following function.

```

void PrintSampleFonts()
{
    // Declaration
    HDC hdc = NULL;
    hdc = CreateDC(TEXT("WINSPOOL"), TEXT("TRST-P2X Printer"), NULL, NULL);
    HDC hdcPrinter;
    CDC dcPrinter;
    DOCINFO docinfo;
    LOGFONTA lf;
    HFONT hfont;
    HFONT holdfont;
    int _XPOS;
    // Initialization
    dlg.GetDefaults();
    hdcPrinter = dlg.GetPrinterDC();
    memset(&lf, 0x00, sizeof(LOGFONTA));
    memset(&docinfo, 0, sizeof(docinfo));
    _XPOS = 10;
    if(hdcPrinter == NULL)
    {
        MessageBox("Printer Not Initialized ");
    }
    else
    {
        dcPrinter.Attach(hdcPrinter);
        docinfo.cbSize = sizeof(docinfo);
        docinfo.lpszDocName = _T("DeviceFontSample");
        if(dcPrinter.StartDoc(&docinfo) < 0)
        {
            MessageBox("StartDoc failed.");
        }
        else
        {
            // Start a page
            if(dcPrinter.StartPage() < 0 )
            {
                MessageBox("Could not start page");
                dcPrinter.AbortDoc();
            }
            else
            {
                // Font A42 Regular
                strcpy (lf.lfFaceName, "FontA42");
                hfont = CreateFontIndirect(&lf);
                holdfont = (HFONT)SelectObject(dcPrinter, hfont);
                dcPrinter.TextOut(_XPOS, 10, _T("FontA42 Regular"));

                // Font A21 Regular
                memset(&lf, 0x00, sizeof(LOGFONTA));
                strcpy (lf.lfFaceName, "FontA21");
                hfont = CreateFontIndirect(&lf);
                holdfont = (HFONT)SelectObject(dcPrinter, hfont);
                dcPrinter.TextOut(_XPOS, 40, _T("FontA21 Regular"));

                // Font A22 Bold Regular
                memset(&lf, 0x00, sizeof(LOGFONTA));
                strcpy (lf.lfFaceName, "FontA22");
                hfont = CreateFontIndirect(&lf);
                holdfont = (HFONT)SelectObject(dcPrinter, hfont);
                dcPrinter.TextOut(_XPOS, 80, _T("FontA22 Regular"));

                dcPrinter.EndPage();
                dcPrinter.EndDoc();
                // Clean up.
                SelectObject(dcPrinter, holdfont);
                DeleteObject(hfont);
            }
        }
    }
}

```

## 6.5 References

1. MSDN - <https://support.microsoft.com/en-us/help/201978/how-to-use-printer-device-fonts>
2. [https://www.oreilly.com/library/view/vb-vba/1565923588/1565923588\\_ch07-1723-fm2xml.html](https://www.oreilly.com/library/view/vb-vba/1565923588/1565923588_ch07-1723-fm2xml.html)
3. CPrintDialog - <https://docs.microsoft.com/en-us/cpp/mfc/reference/cprintdialog-class?view=vs-2019>
4. CreateFontIndirectA - <https://docs.microsoft.com/en-us/windows/win32/api/wingdi/nf-wingdi-createfontindirecta>
5. LOGFONTA structure - [https://msdn.microsoft.com/en-us/ie/aa741230\(v=vs.94\)](https://msdn.microsoft.com/en-us/ie/aa741230(v=vs.94))

## 7. Restrictions and Cautions

### 7.1 Not to unplug connection before printing job done

If user unplug connection before printing job done, the printing job might be stuck in job que list. This can stop next printing job execution. User need to delete it manually

### 7.2 Page setup setting in the printing document application is affect print result

#### - Font Substitution Edit ControlA

Printer is still print blank page when top margin is set up and print page numbers setting is enabled. Also need to make sure the control characters in the printing application is located in the printable area of the printer (default margin for left and right side is 4mm)

#### - Document Printing

Make sure the page margin setting in the print application is cover the image area to prevent any unexpected printing result (default margin setting for left and right side is 4mm)