

OPOS Driver for FEC VFD/LCM

FEC

February 24th, 2023

Document Revision History

Rev.	Date	Author	Draft/Changes
0.1	2015/10/23	James Wang	First Version
0.2	2018/3/5	Nelson Yang	Confirm Support AP-2029/FV-2029/ AP-2025G
0.3	2018/3/7	Nelson Yang	Add CCO Installer to FECSetup.exe for auto install CCO
0.4	2018/8/29	Elliot Ling	1. Support Win10 especially for 64bit OS 2. Support Multiple codepage for AP-2025 (192x32 LCM)
0.5	2019/3/25	Elliot Ling	1. Remove unnecessary models selection, keep 20x2 、 24x2 、 AP-2025(24x2), which AP-2025 support multiple codepage 2. Add CCO installation guide in this document 3. Support 57600 & 115200 baudrate
0.6	2020/9/15	Elliot Ling	Support Mutiple code pages for AP-2029 & AP-2029 CSI
0.7	2022/12/1	Elliot Ling	Support Blinking/Reverse/Reverse & Blinking
0.8	2023/2/8	Elliot Ling	Add the “Set file properties as Run as administrator”
0.9	2023/2/24	Elliot Ling	Support multiple code pages for XP-2025

1. Introduction

1.1. Overview

This document describes how to use the FEC OPOS driver for the FEC VFD/LCM. The FEC OPOS driver is a software program for controlling VFD/LCM from Windows applications to the VFD/LCM.

1.2. System Requirements

This VFD/LCM driver can be used with the following system configurations.

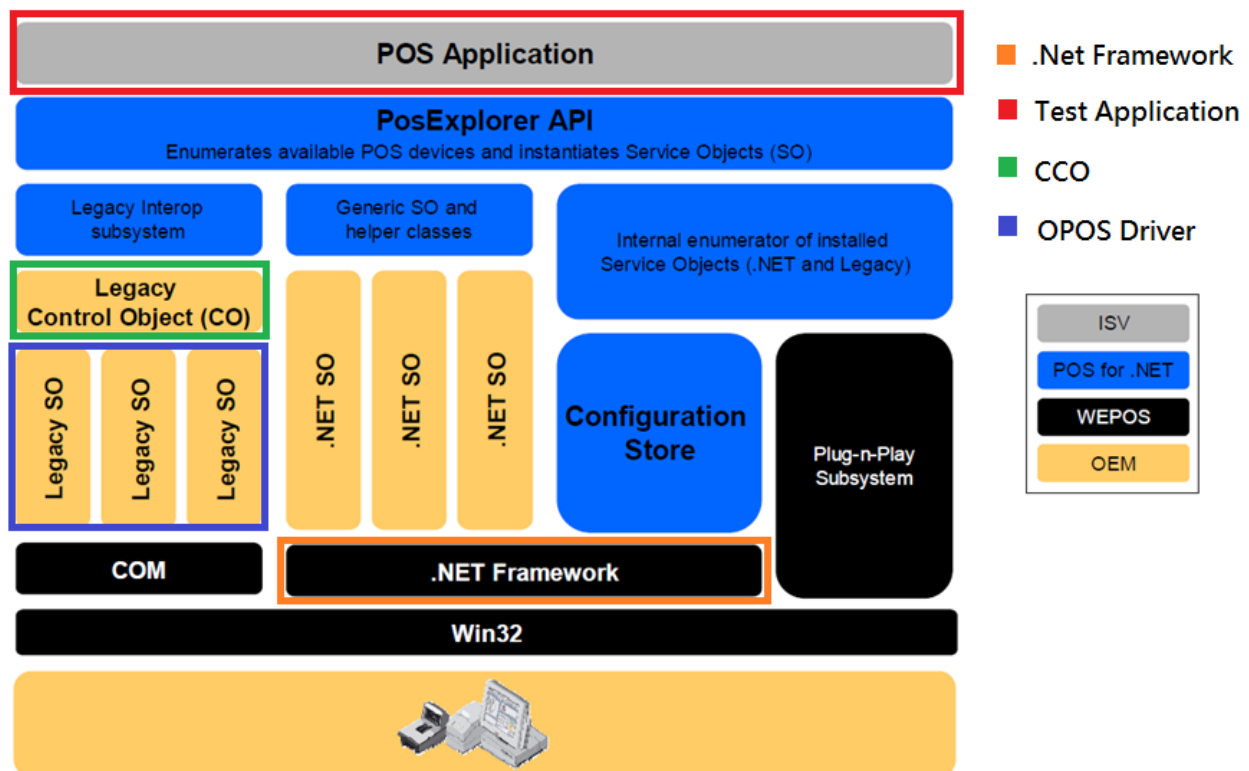
- **VFD**
 - 20x2 (Model AP-2029)
 - 20x2 (Model FV-2029)
- **LCM**
 - 24x2 (Model AP-2025G)
 - 192x32 (Model AP-2025)
 - 20x2 (Model XP-2025)
- **Hardware Platform**
 - COM port dependence (9600/19200/38400/57600/115200)
- **Supported Operating System (OS)**
 - Microsoft® Windows Embedded® POSReady 2009
 - Microsoft® Windows Embedded® POSReady 7
 - Microsoft® Windows 8/8.1/10

The 32-bit/64-bit OS versions are also supported

- **Additional Requirements include:**
 - .NET 4.0 and above

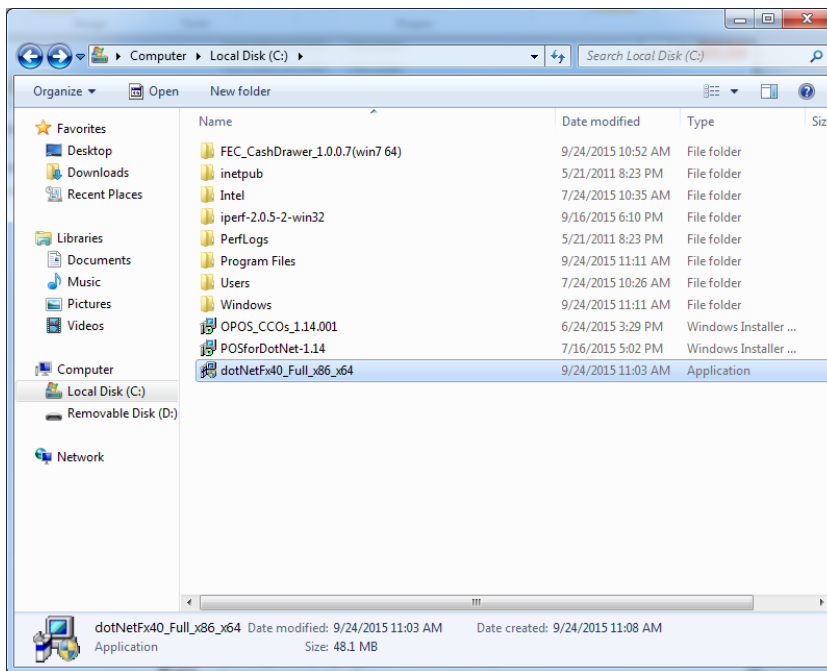
2. Installing for FEC OPOS Driver

This section describes the installation all software about FEC VFD/LCM OPOS driver, these software contain .Net Framework, Testing Application, Common Control Object (CCO) and FEC OPOS Driver.

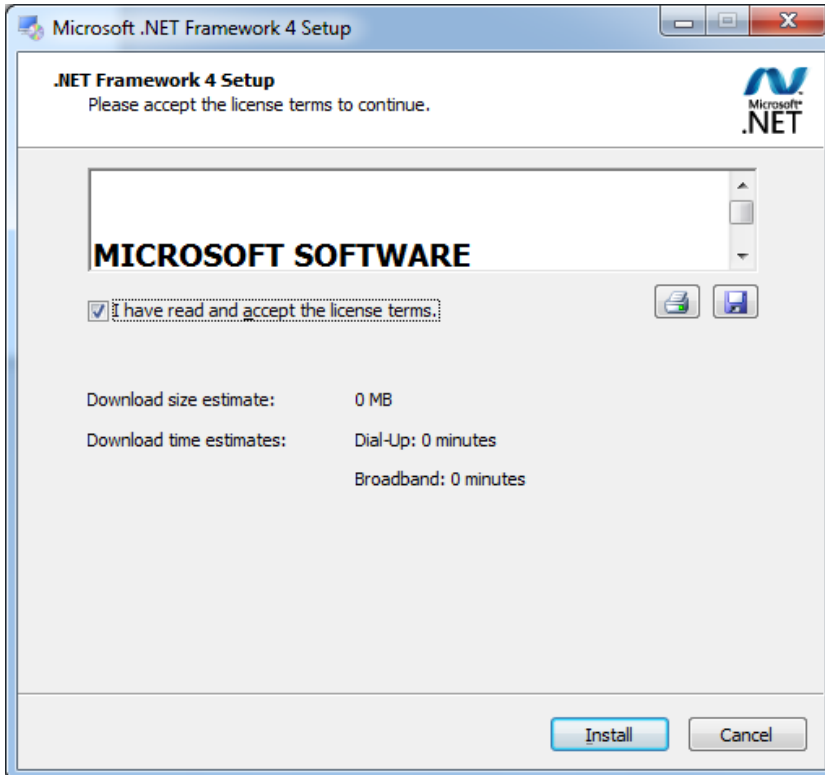


2.1. Microsoft .Net Framework 4.0 installation

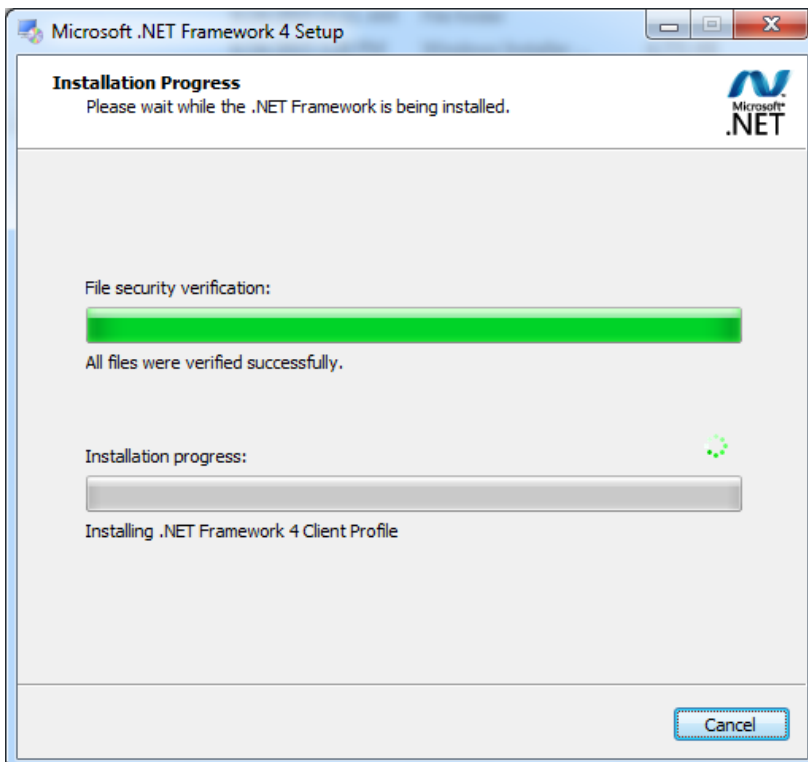
- Double-Click for doNetFx40_Full_x86_x64 to begin install.



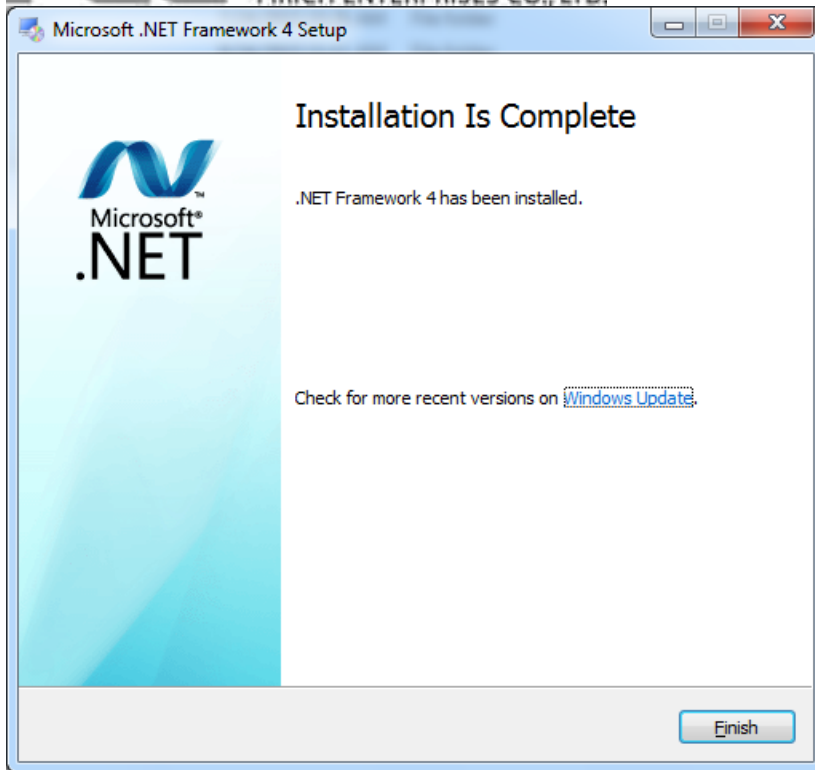
- To accept the license agreement



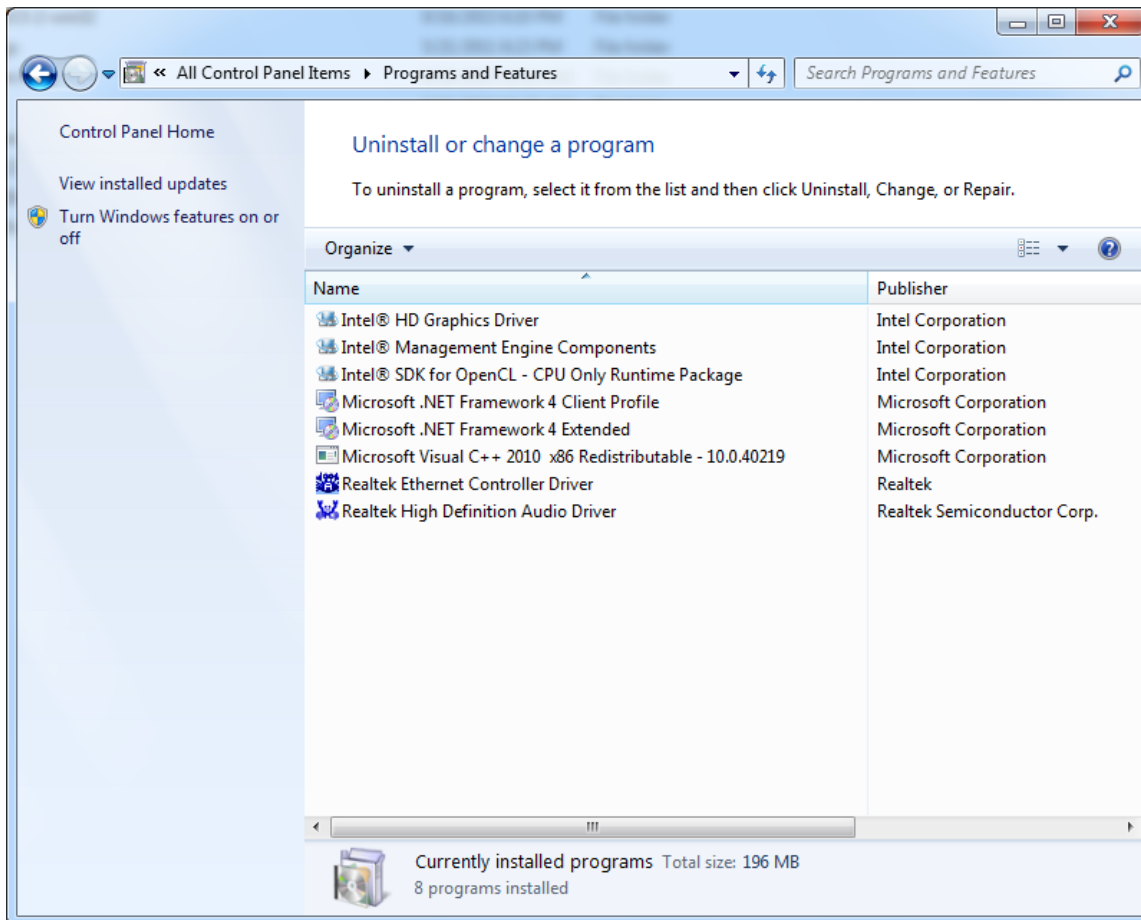
- Begin install process



- Finish installation

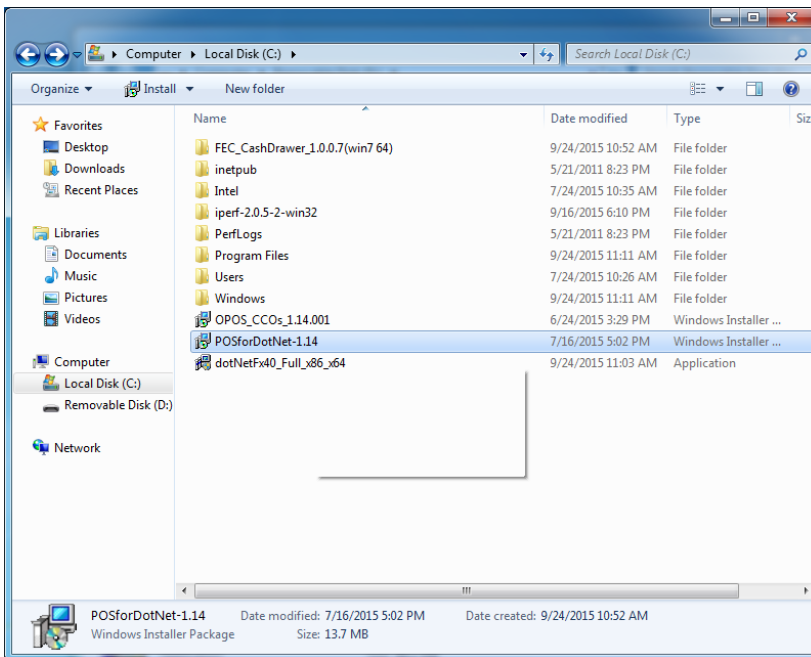


- Check .Net Framework has been installed

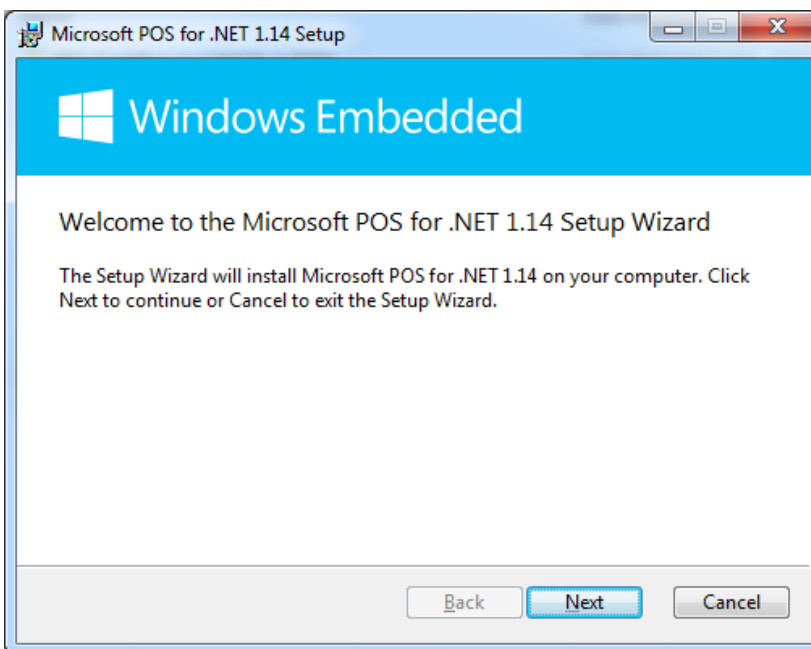


2.2. Testing Application of POS for .Net

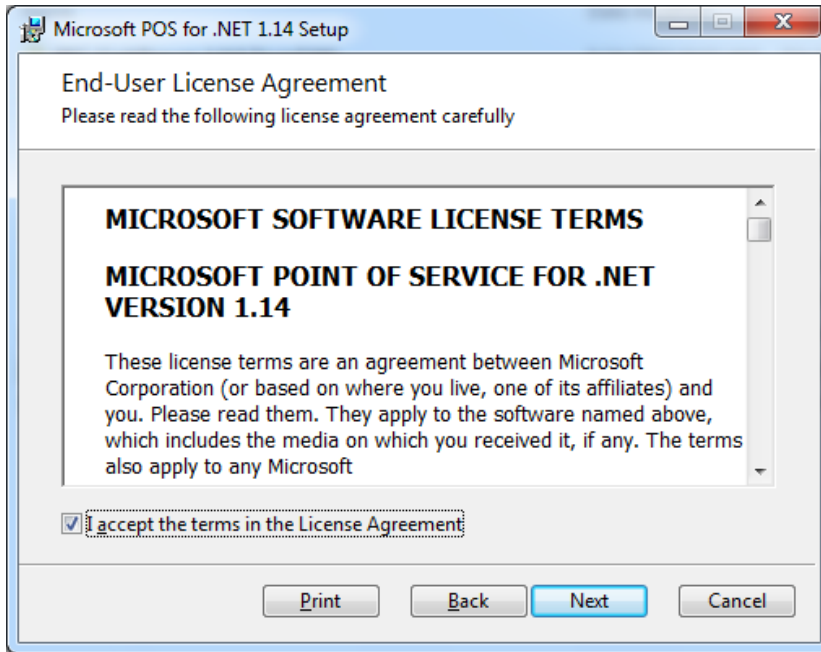
- Double-Click for POSforDoNet-1.14 to begin install



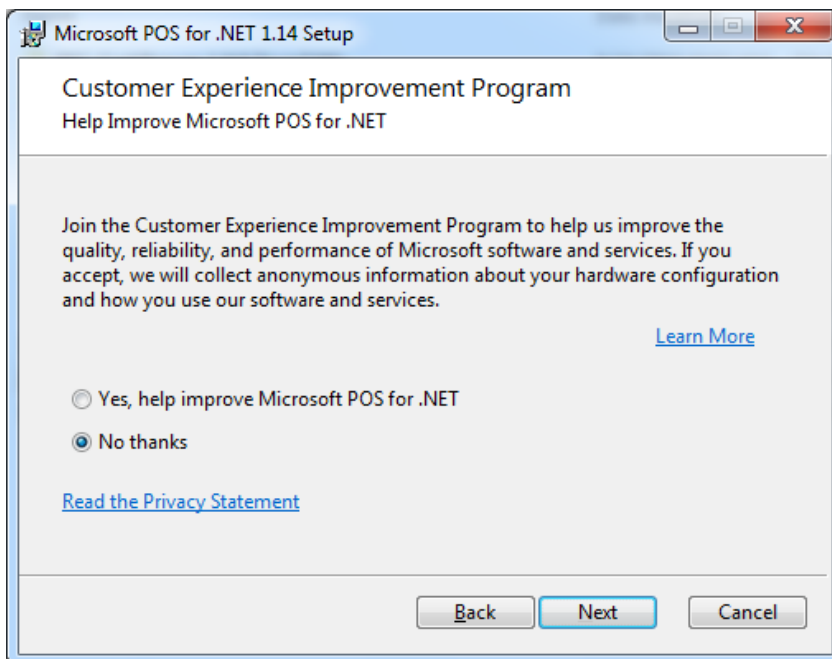
- First Screen for installation



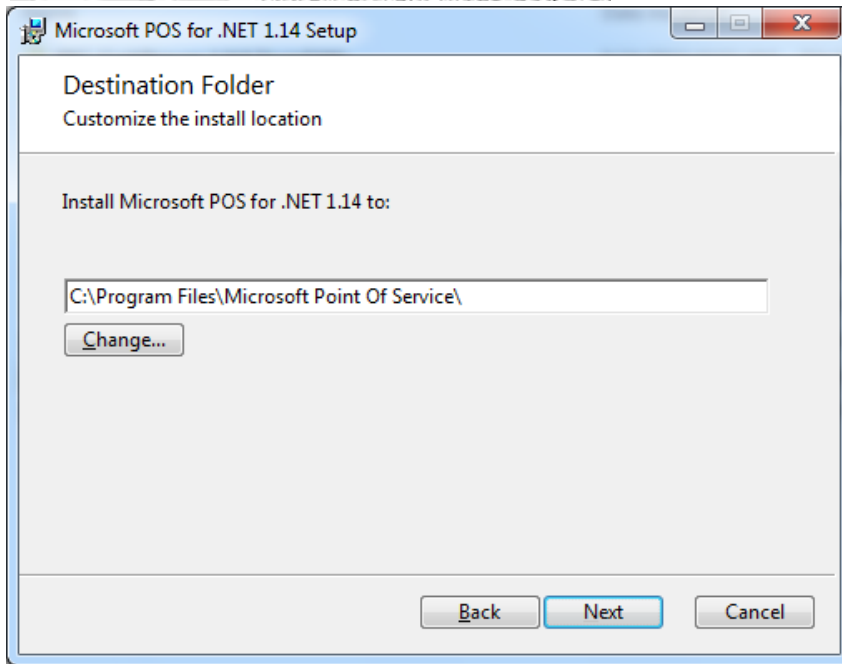
- To accept the license agreement



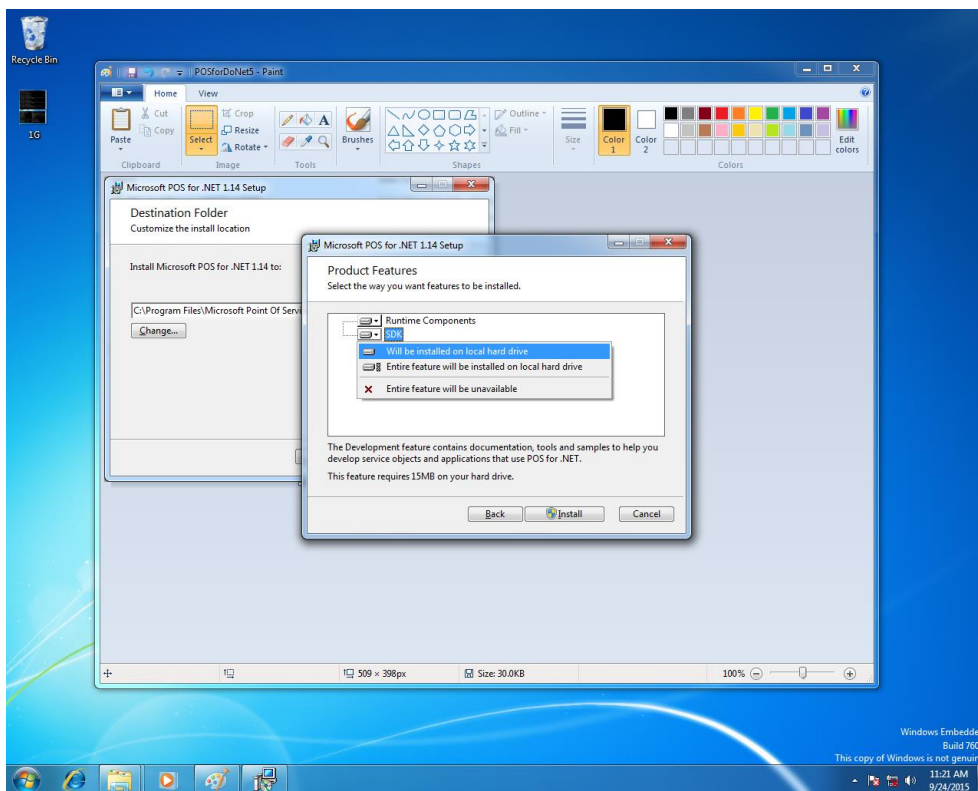
- Option for Customer Experience Improvement Program, Set "No thanks" for this step

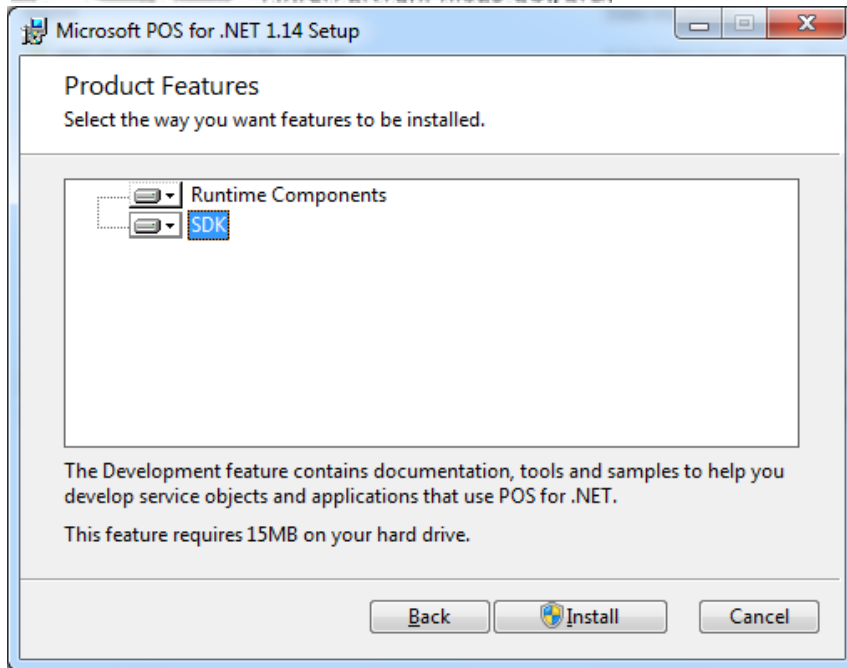


- Set up the install path for the program

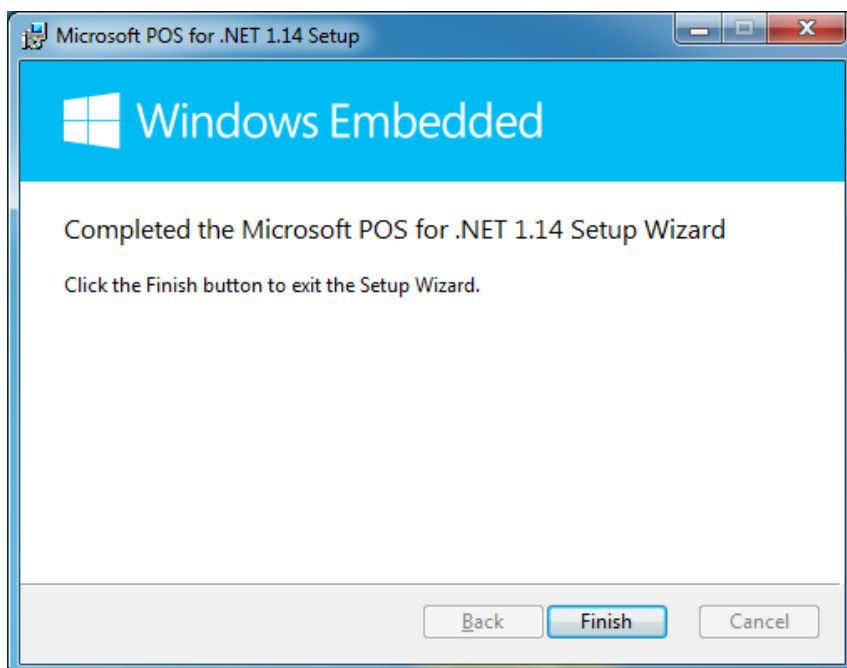


- Select install package for SDK

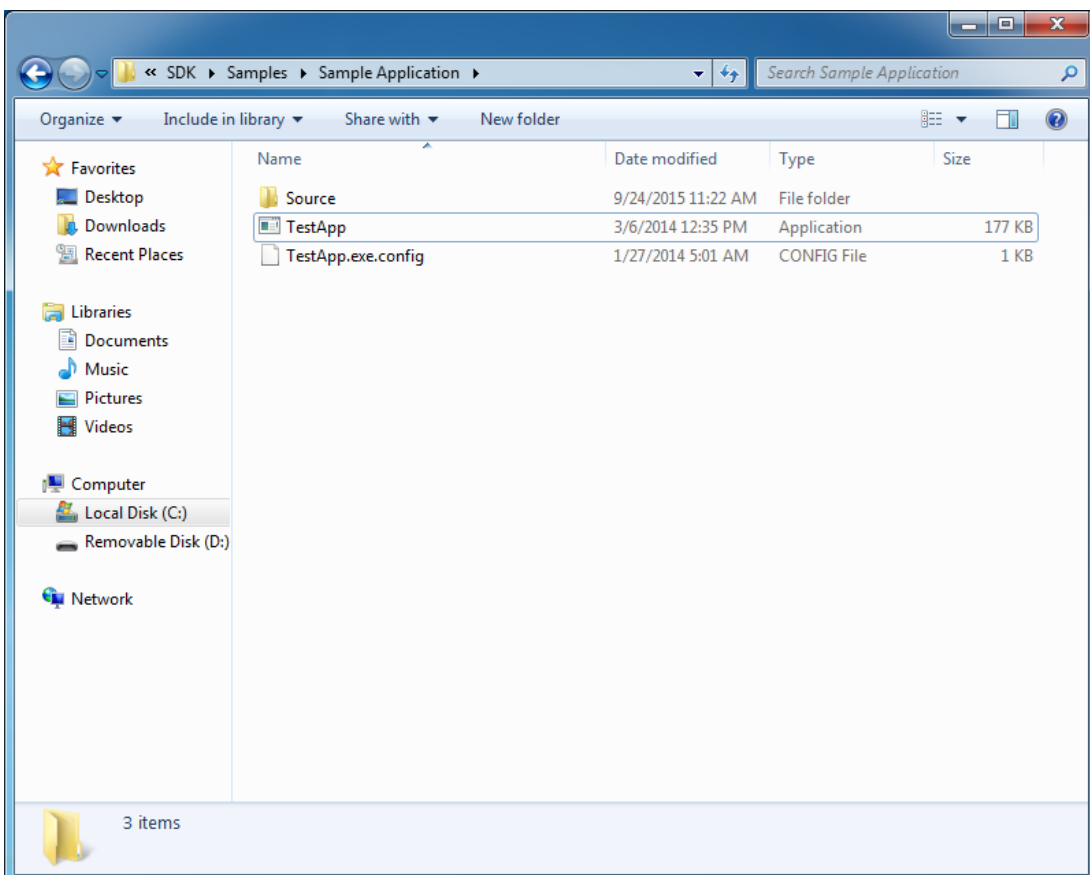
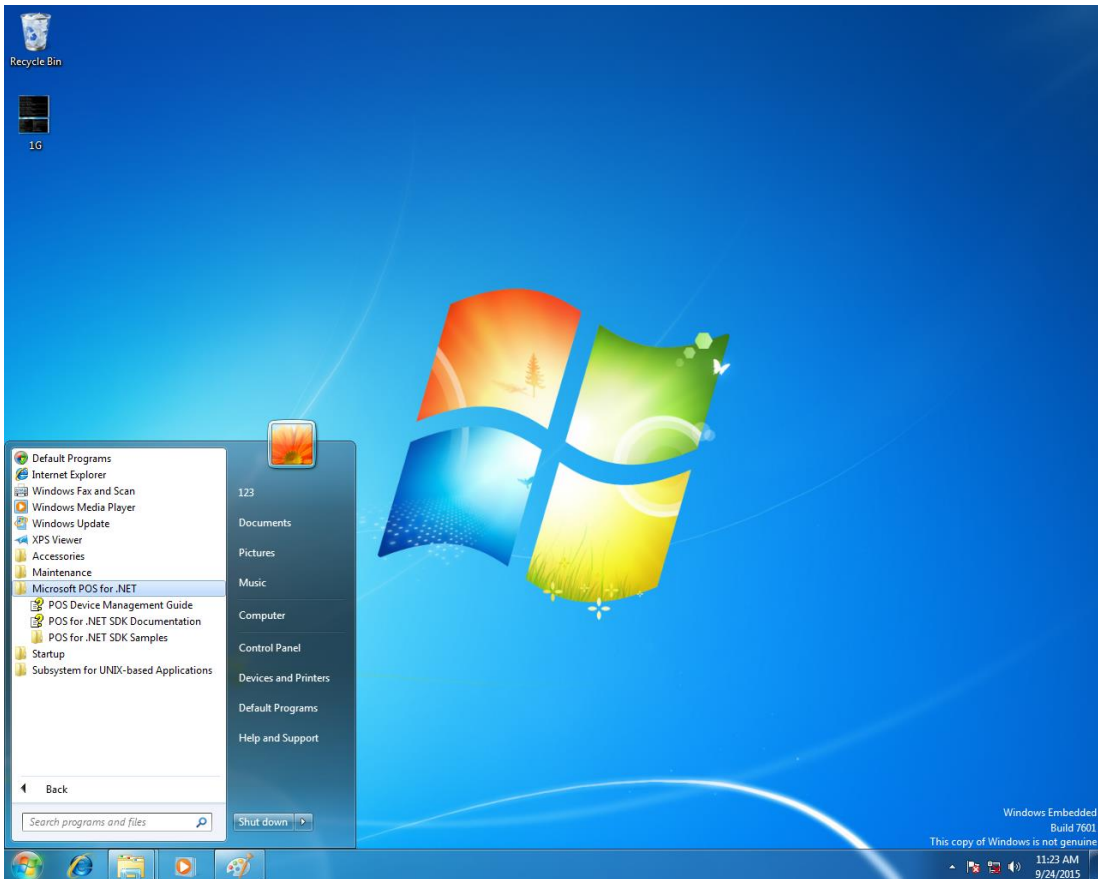




- Finish installation

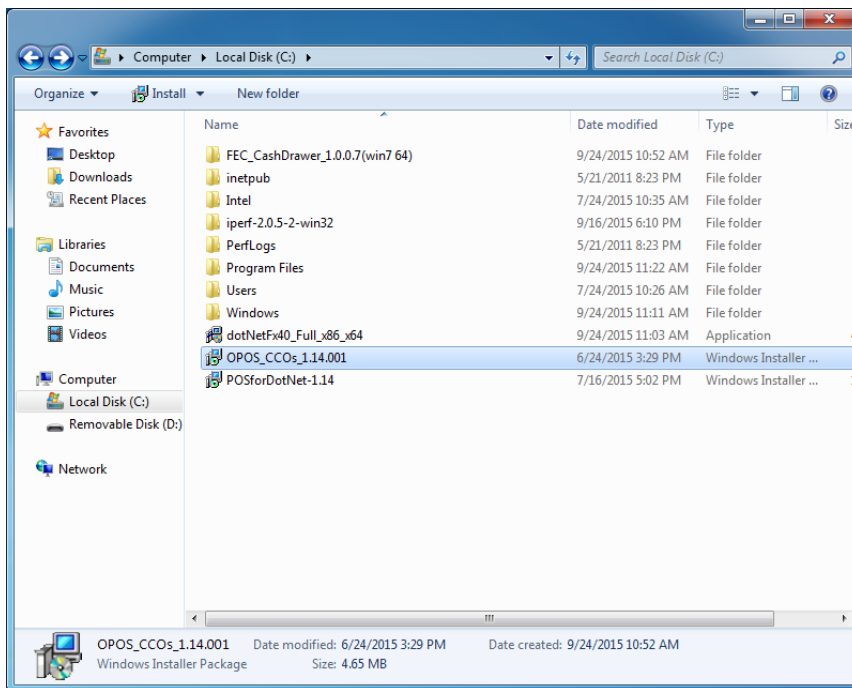


- Check Test Application of POSfor.Net has been installed

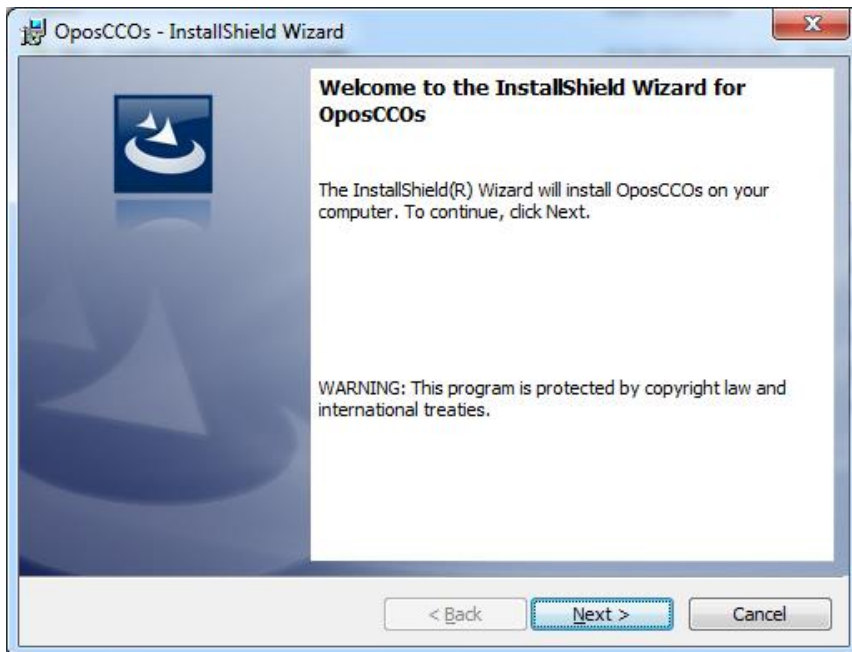


2.3. Common Control Object (CCO)

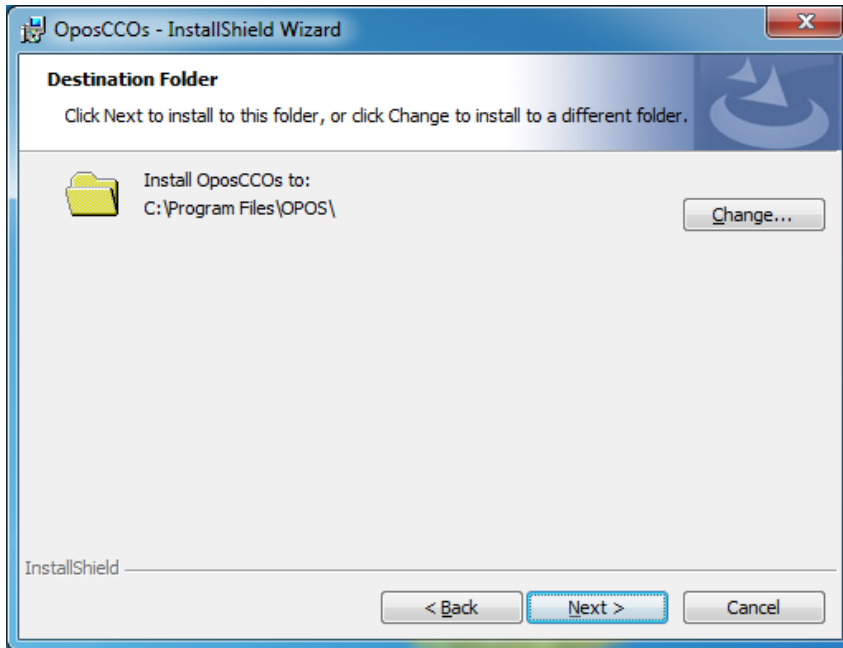
- Double-Click for POSforDoNet-1.14 to begin install



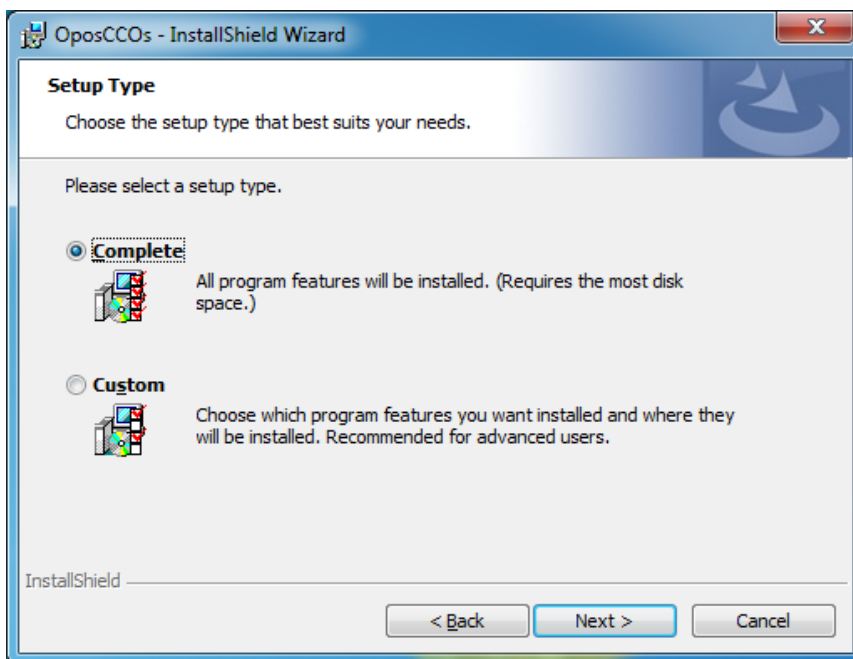
- First Screen for installation



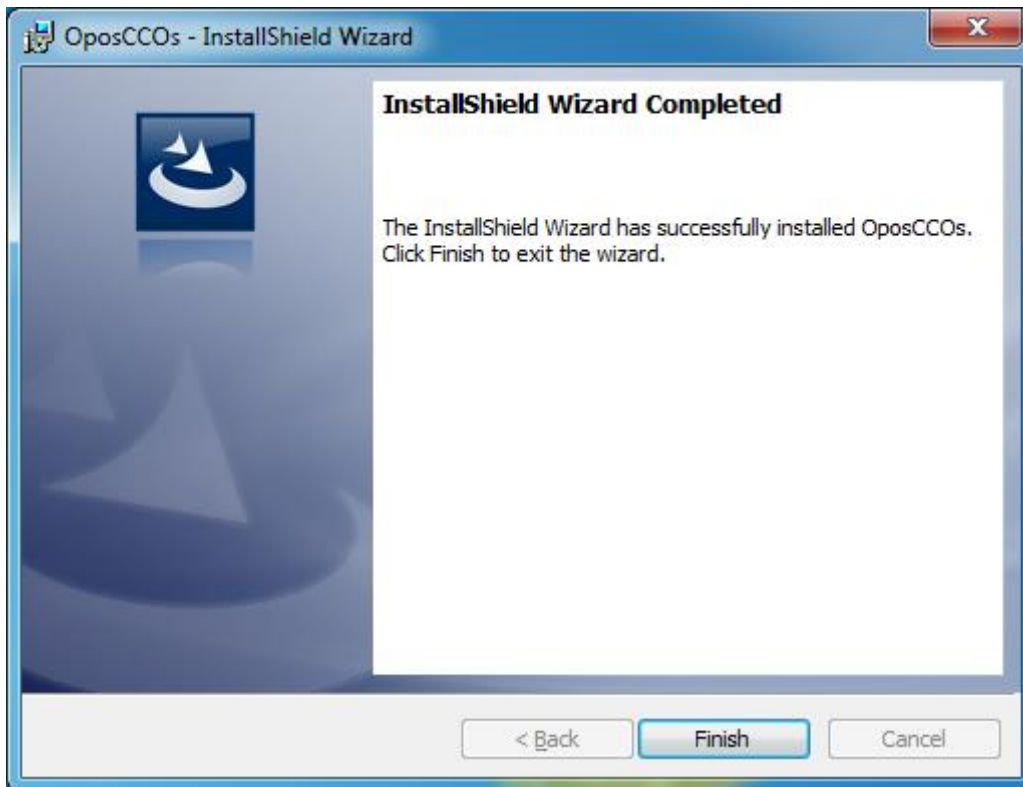
- Set up the install path for the program



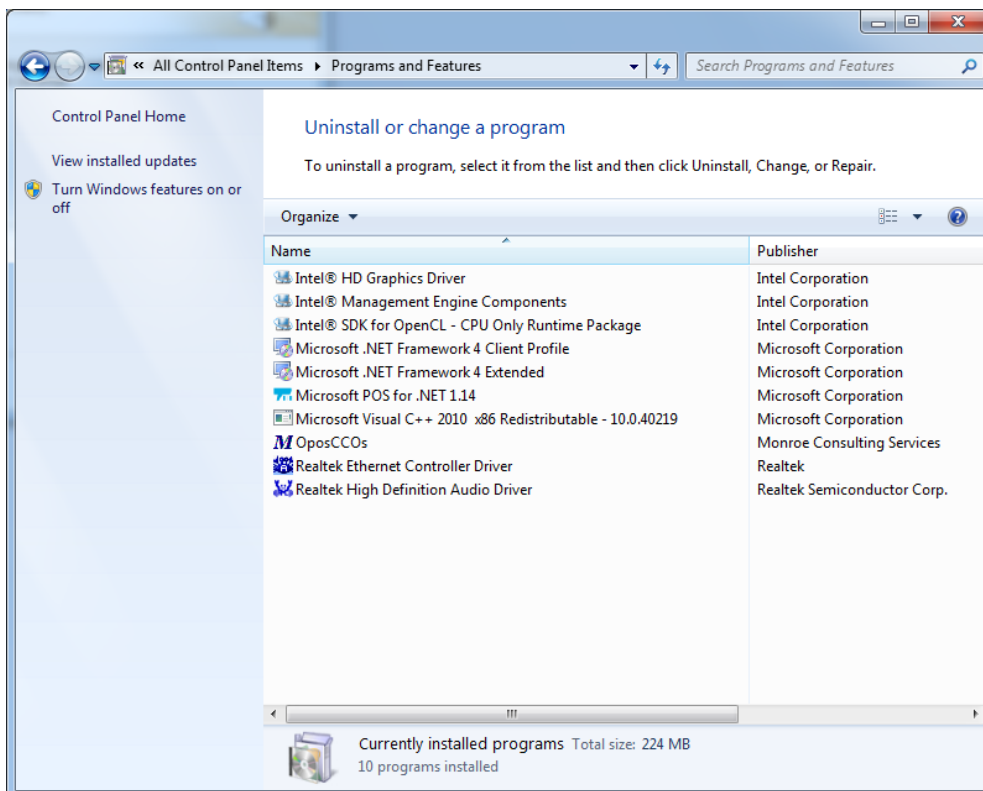
- Select setup type for complete



- Finish installation

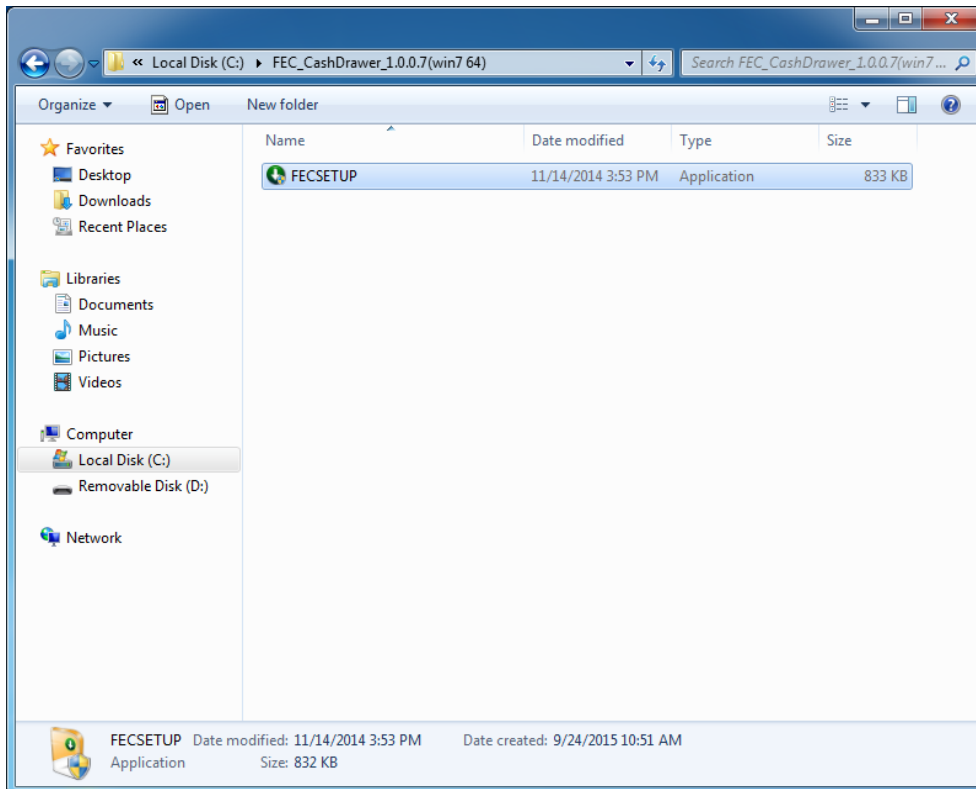


- Check CCOs has been installed

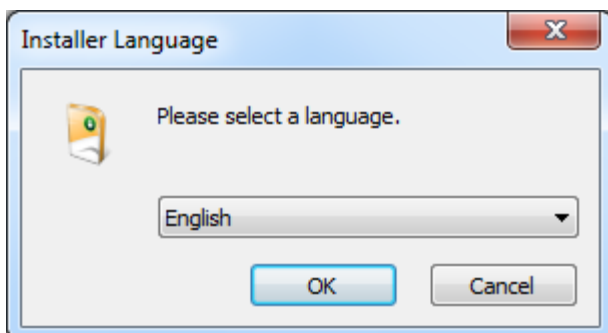


2.4. FEC OPOS Driver for VFD/LCM

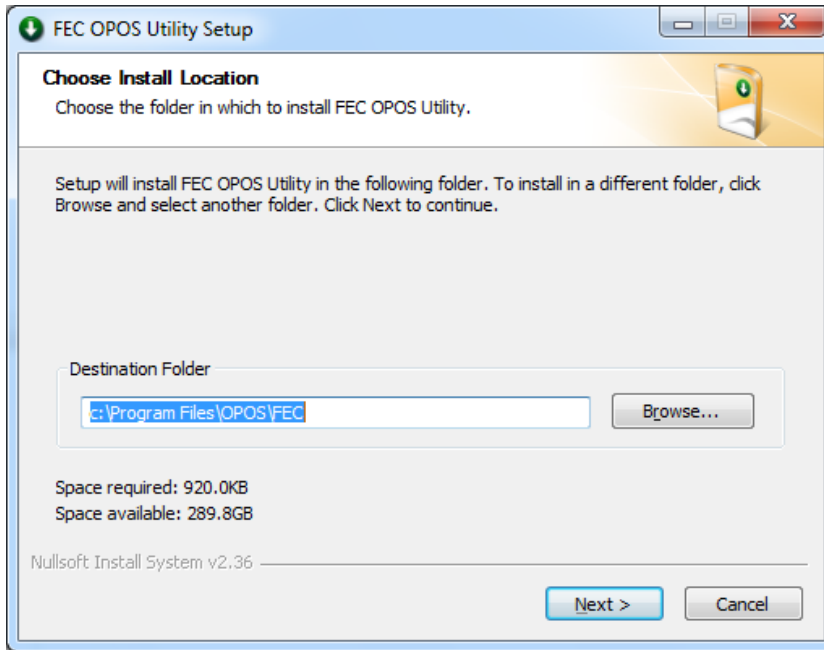
- Double-Click for FECSETUP of FEC_CashDrawer1.0.0.7(Win7 64) to begin install



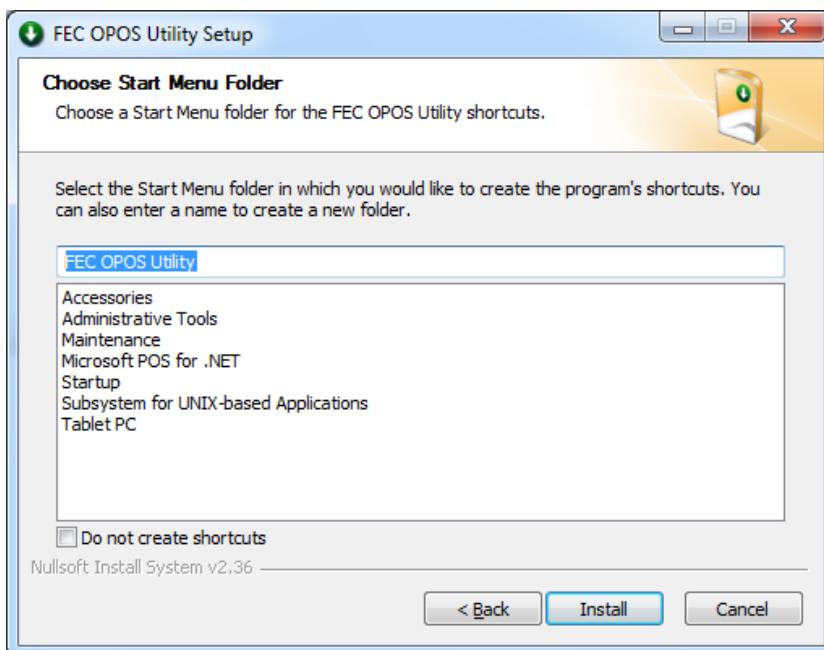
- Select Language for English



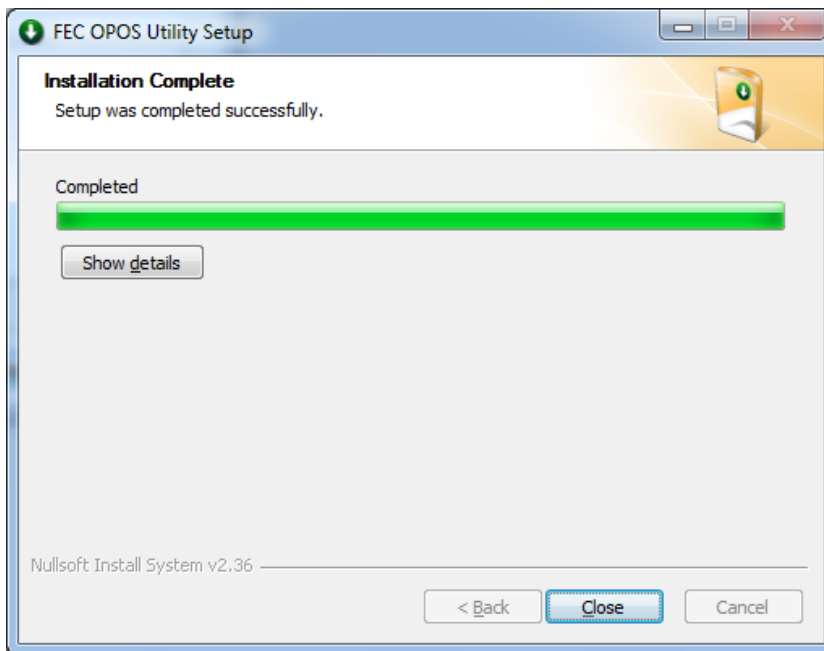
- Set up the install path for the program



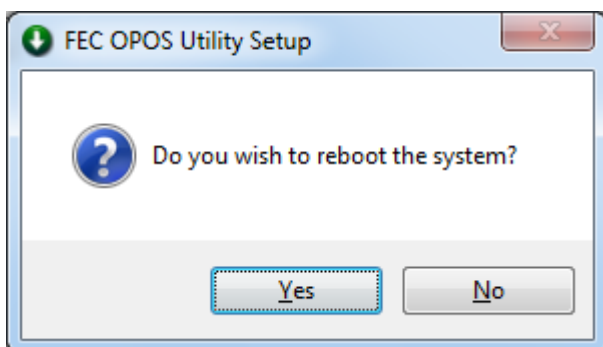
- Choose start menu folder



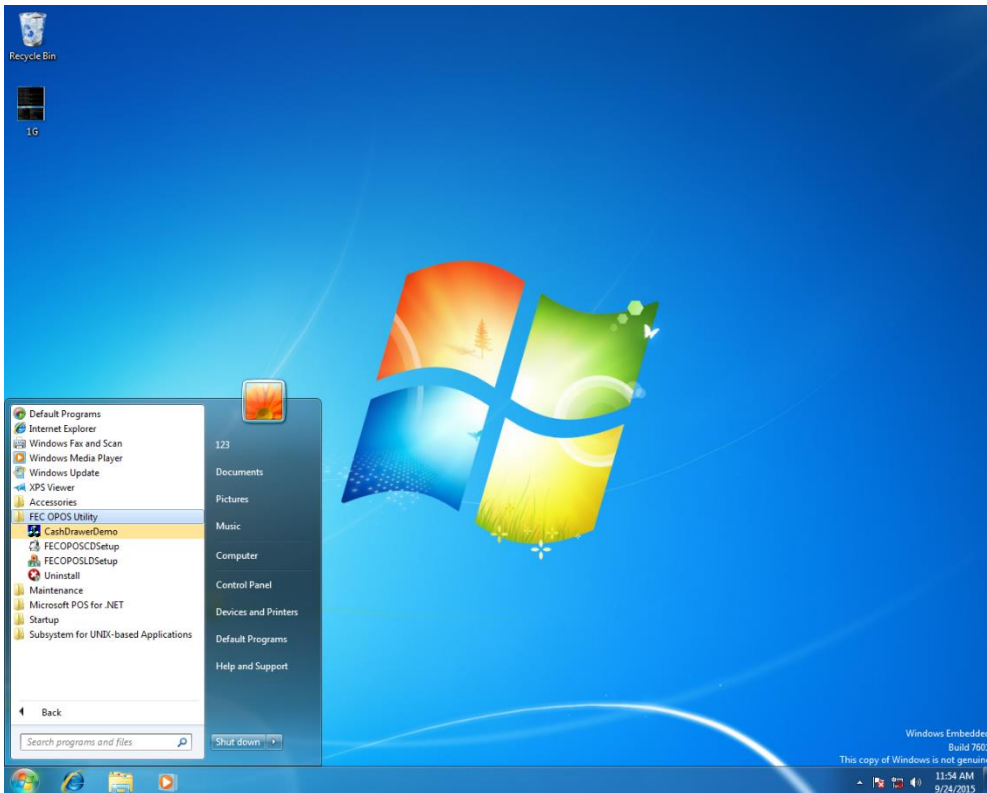
- Finish installation



- Request for Reboot Windows

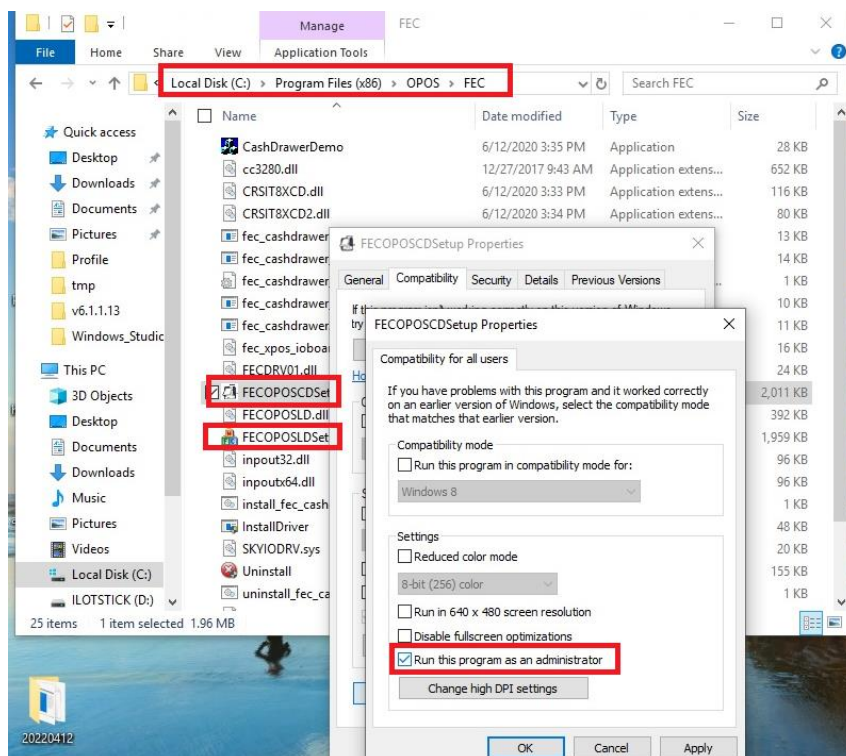


- Check FEC OPOS Driver has been installed



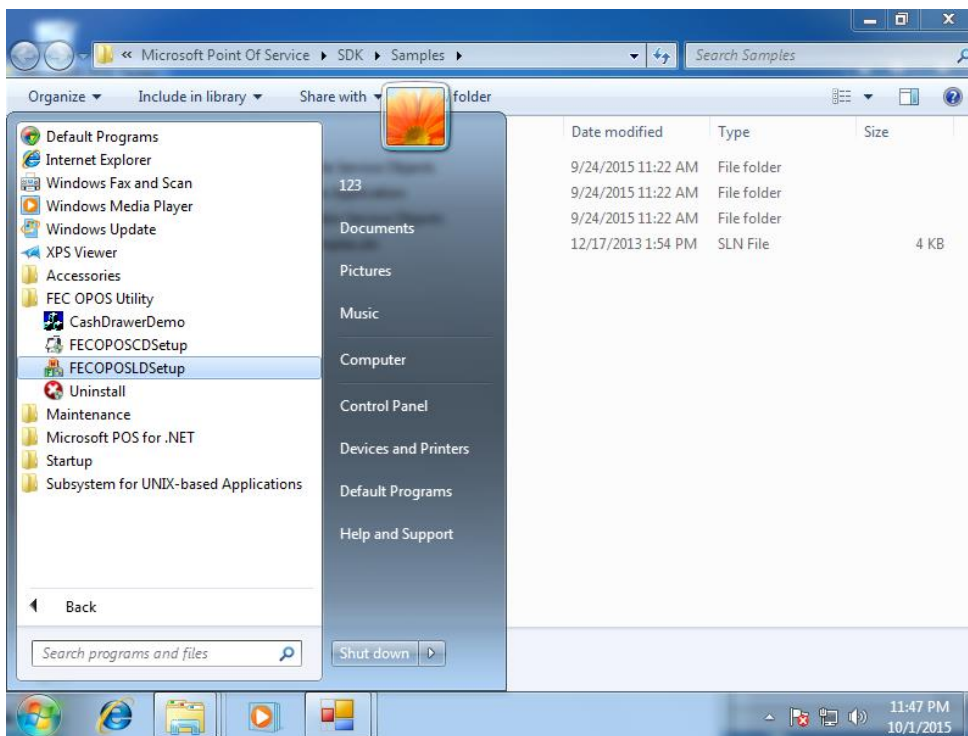
3. Setting up the file for executed as administrator

- Go to the default install path and make sure the file properties of the FECOPOSLDSetup.exe were been set "Run this program as administrator".

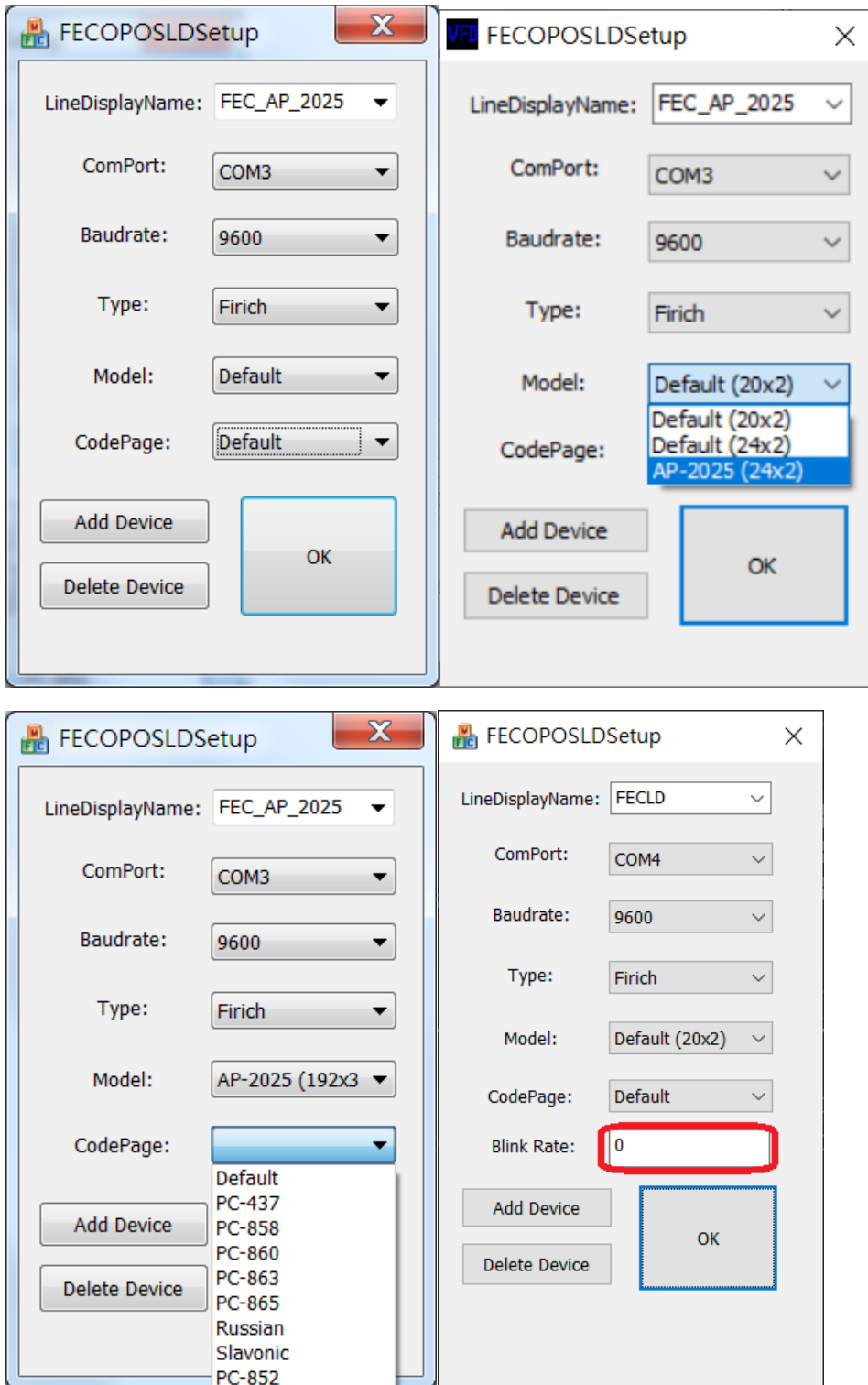


4. Setting up the VFD/LCM configuration

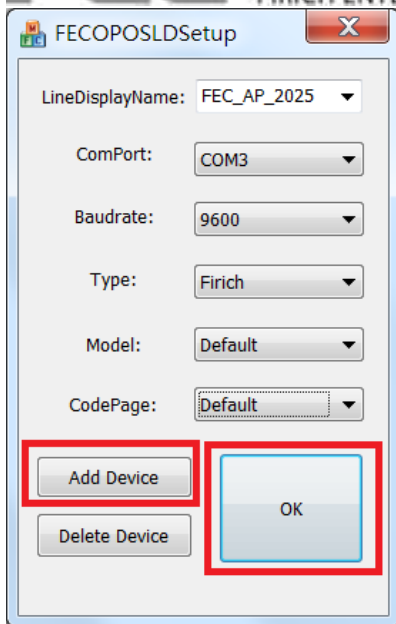
- Run FECOPOS�DSetup program for setting up cash drawer



- Modify LineDisplayName for new configuration of Line Display, and also set up parameter for COM Port, BaudRate, Type and Model.
- For the Model selection, the 3rd ~ 6th models: "AP-2025(192x32 LCM), AP-2029, AP-2029 CSI and XP-2025" support multiple codepages, if these models were been selected, the codepages in the "CodePage" combobox become selectable, otherwise please select the only option: Default" in the "CodePage" combobox.
- If you don't know what Line Display model you're using, please select the "Default 20x2" or "Default 24x2" in the combobox: "Model".
- Set Blink Rate 0~255, 0 means not to blink, 1 is the fastest blink rate, 255 is the lowest.
- Press "Add Device" button to add configuration, and Press "OK Button" to exit

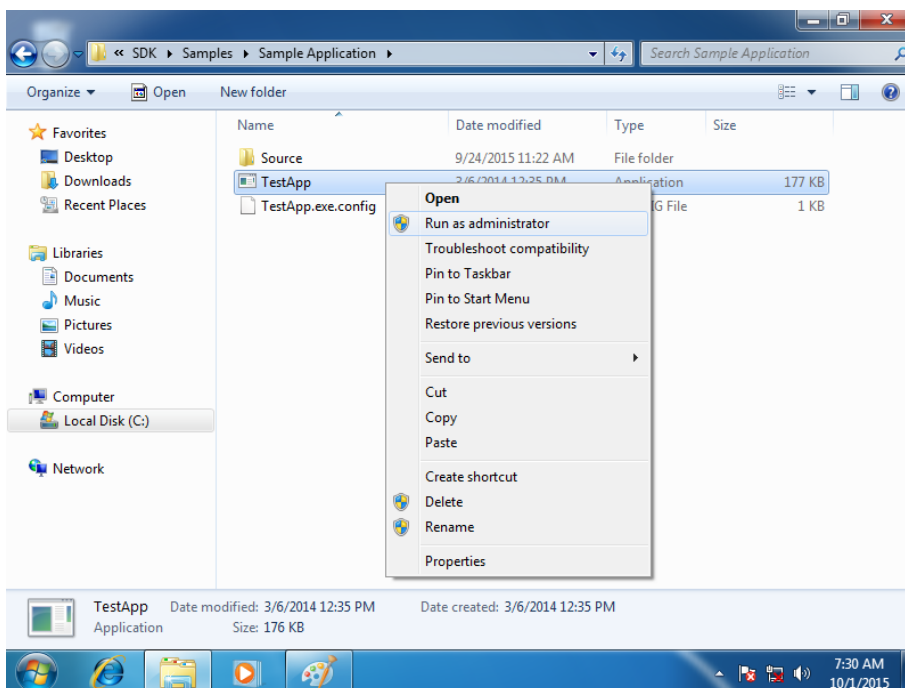


- Press "Add Device" button to add configuration, and Press "OK Button" to exit



5. How to test the VFD/LCM by POS for .Net TestAPP

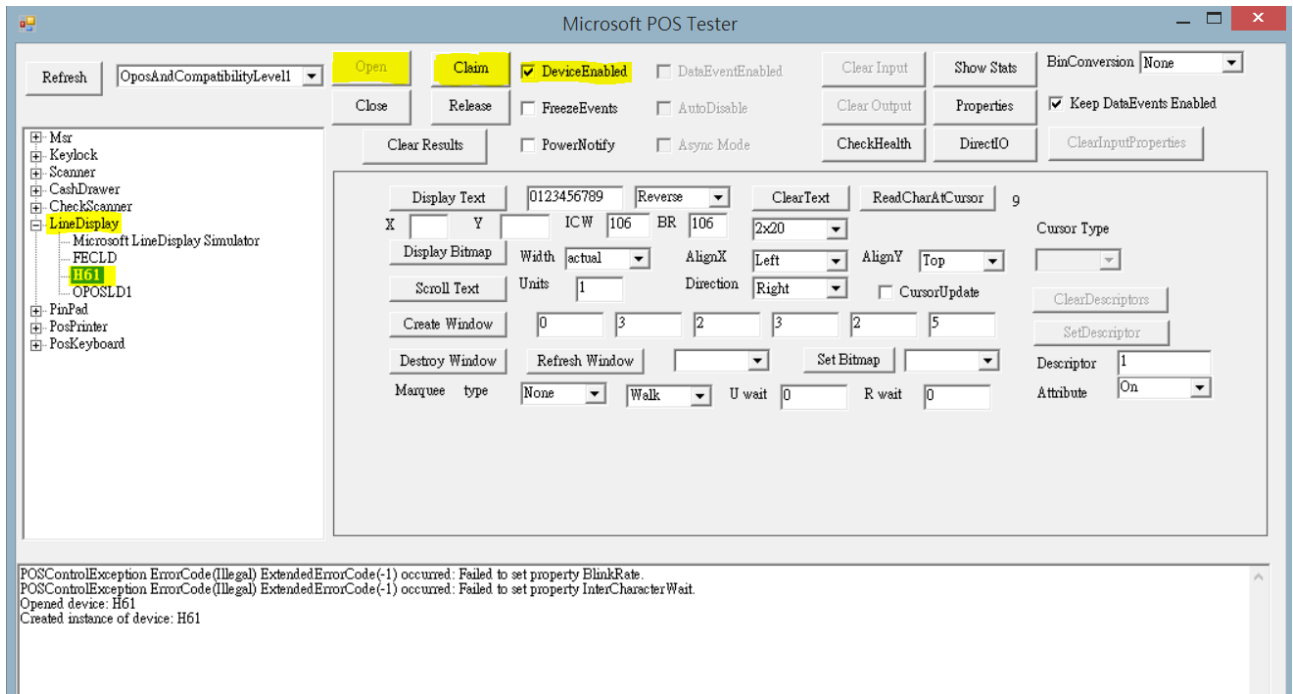
- Run TestApp program for testing VFD/LCM with administrator permission



5.1. Initialize

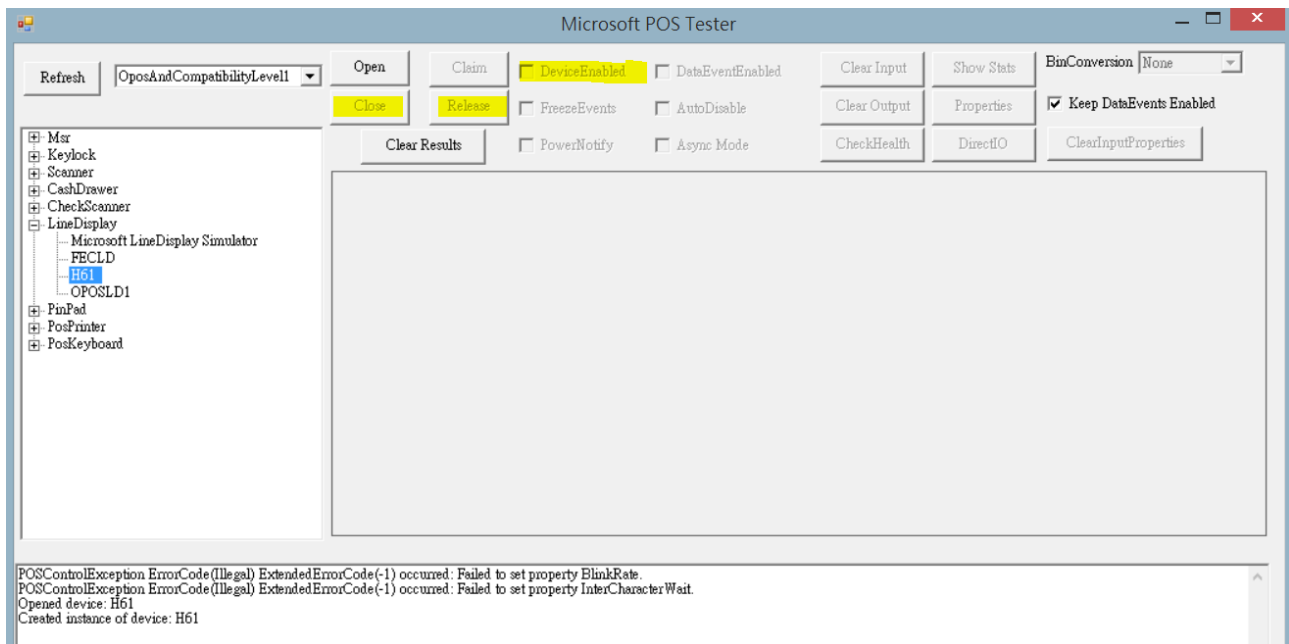
- Select device for VFD/LCM setting

- Continued according to press “Open” and “Claim” button and then checked DeviceEnabled check box to initialize VFD/LCM OPOS driver



5.2. Terminate

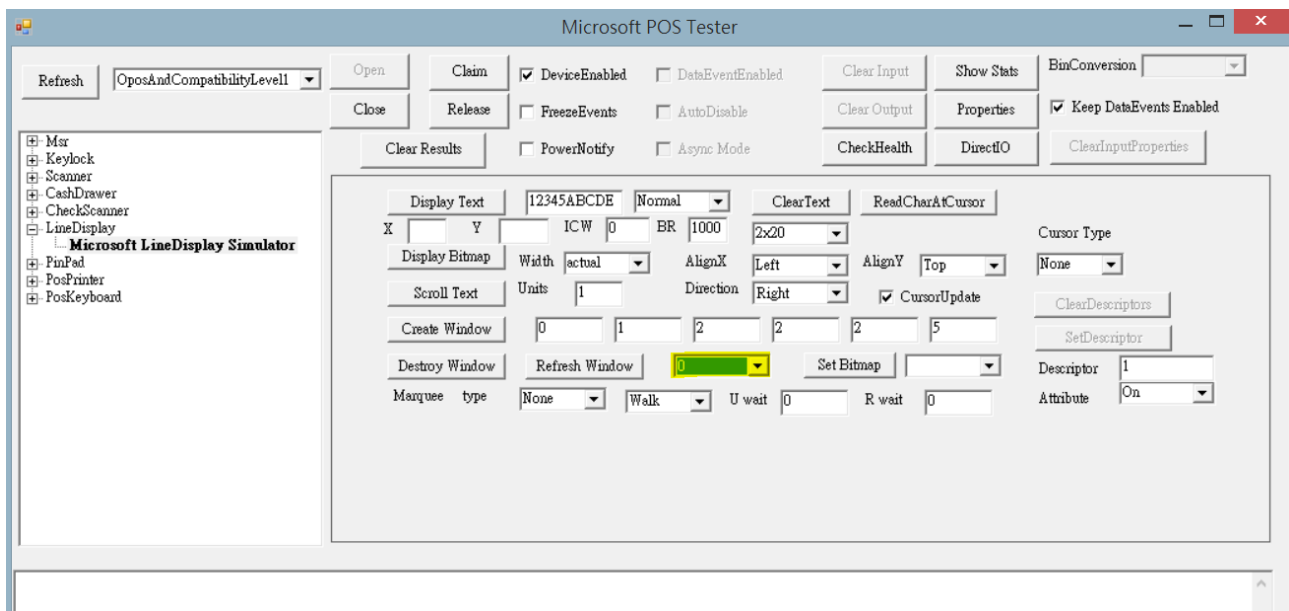
Continued according to un-check DeviceEnabled check box, and then press “Release” and “Close” to terminate VFD/LCM OPOS driver



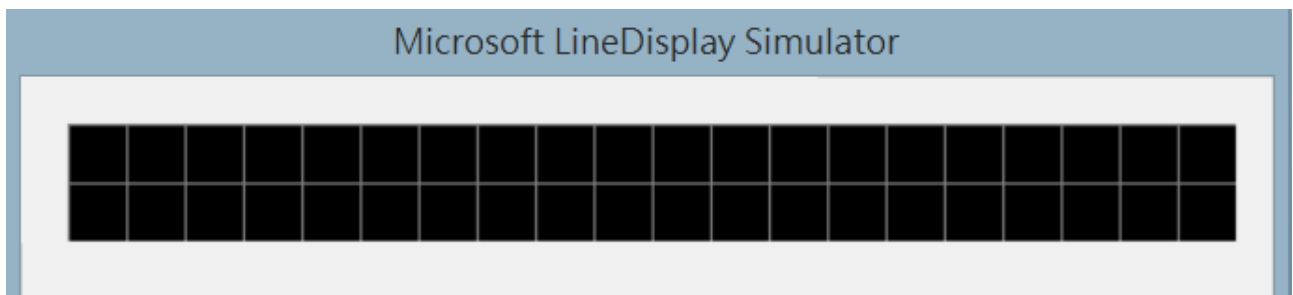
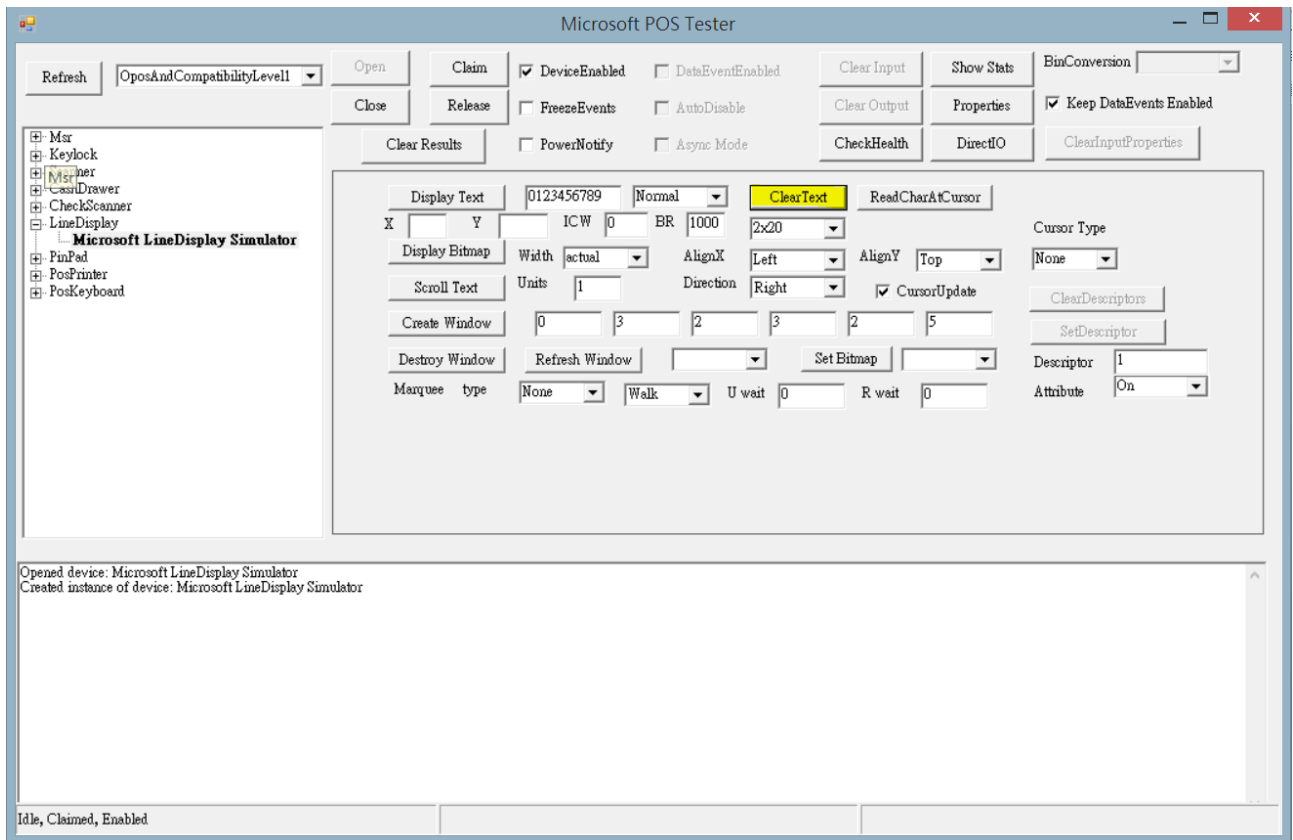
5.3. Display Text

5.3.1. Set Current Window

Sets the current window display to be operated



5.3.2. Clear Text



5.3.3.Display Text for Position

- Show text by current cursor position

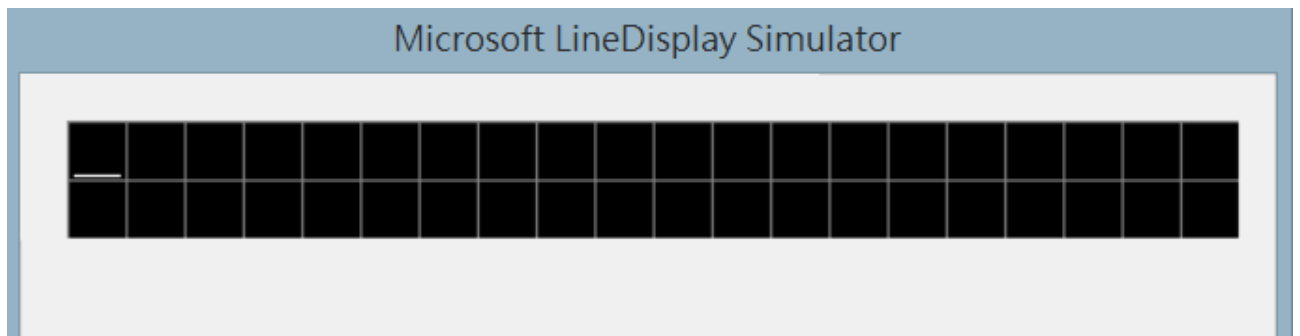
Microsoft POS Tester

Refresh OposAndCompatibilityLevell Open Claim ☒ DeviceEnabled ☐ DataEventEnabled Clear Input Show Stats BinConversion
Close Release ☐ FreezeEvents ☐ AutoDisable Clear Output Properties ☒ Keep DataEvents Enabled
Clear Results ☐ PowerNotify ☐ Async Mode CheckHealth DirectIO ClearInputProperties

Msr
Keylock
Scanner
CashDrawer
CheckScanner
LineDisplay
Microsoft LineDisplay Simulator
PinPad
PosPrinter
PosKeyboard

Display Text 0123456789 Normal ClearText ReadCharAtCursor
X Y ICW 0 BR 1000 2x20 Cursor Type
Display Bitmap Width actual AlignX Left AlignY Top Underline
Scroll Text Units 1 Direction Right ☒ CursorUpdate ClearDescriptors
Create Window 0 3 2 3 2 5 SetDescriptor
Destroy Window Refresh Window Set Bitmap Descriptor 1
Marquee type None Walk U wait 0 R wait 0 Attribute On

Opened device: Microsoft LineDisplay Simulator
Created instance of device: Microsoft LineDisplay Simulator



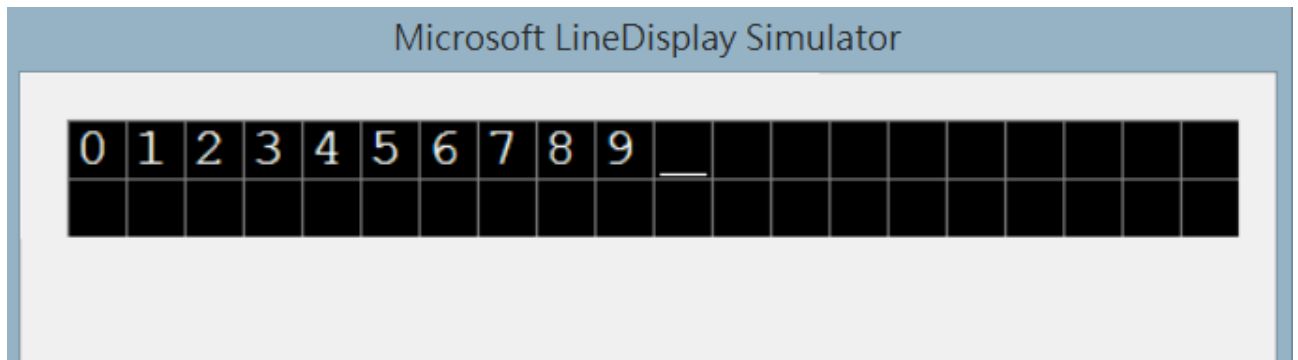
Microsoft POS Tester

Refresh OposAndCompatibilityLevell Open Claim ☒ DeviceEnabled ☐ DataEventEnabled Clear Input Show Stats BinConversion
Close Release ☐ FreezeEvents ☐ AutoDisable Clear Output Properties ☒ Keep DataEvents Enabled
Clear Results ☐ PowerNotify ☐ Async Mode CheckHealth DirectIO ClearInputProperties

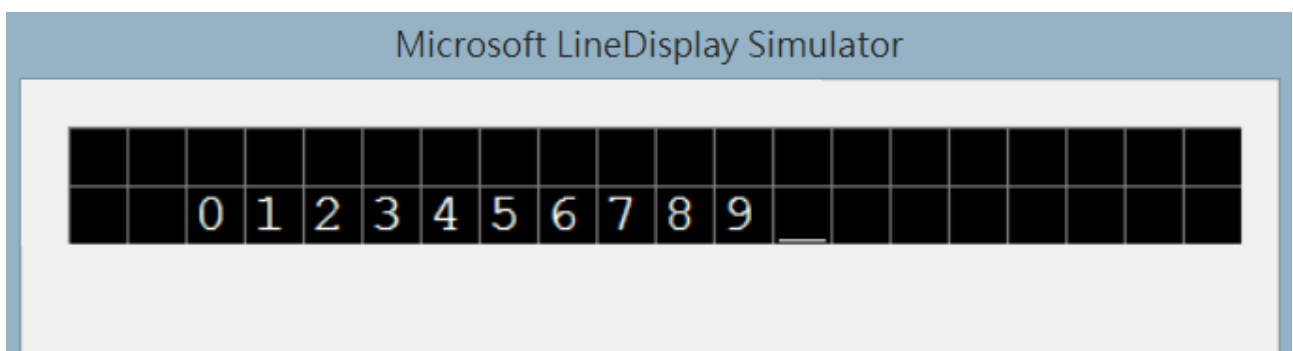
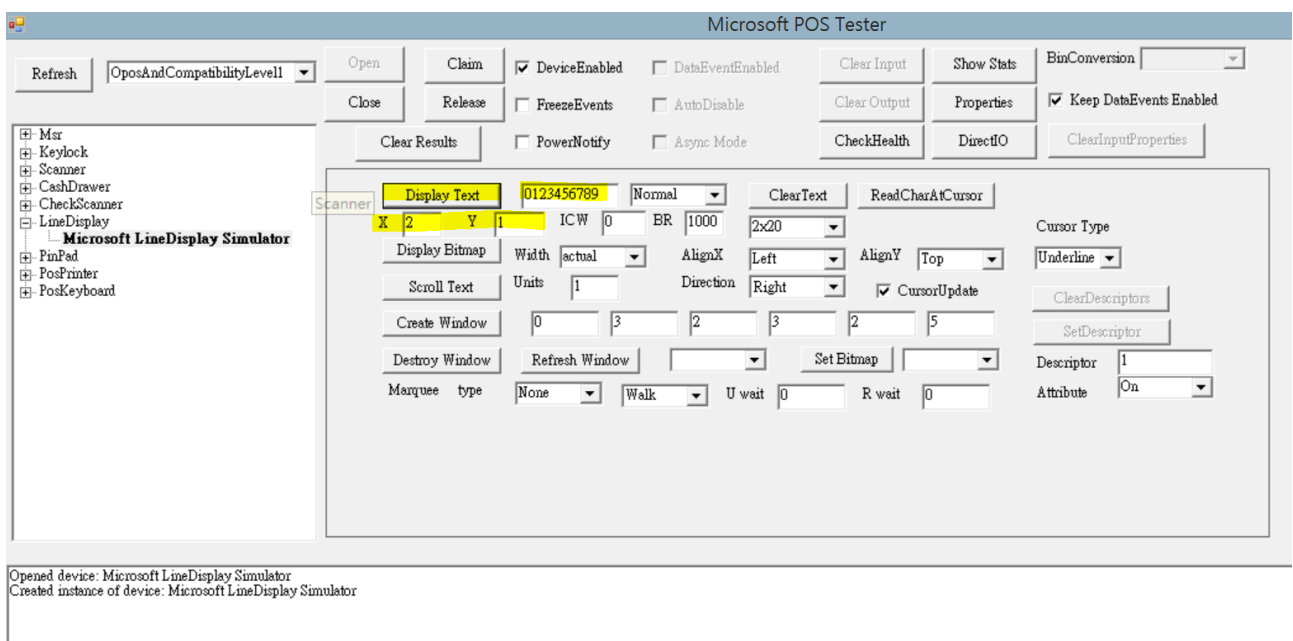
Msr
Keylock
Scanner
CashDrawer
CheckScanner
LineDisplay
Microsoft LineDisplay Simulator
PinPad
PosPrinter
PosKeyboard

Display Text 0123456789 Normal ClearText ReadCharAtCursor
X Y ICW 0 BR 1000 2x20 Cursor Type
Display Bitmap Width actual AlignX Left AlignY Top Underline
Scroll Text Units 1 Direction Right ☒ CursorUpdate ClearDescriptors
Create Window 0 3 2 3 2 5 SetDescriptor
Destroy Window Refresh Window Set Bitmap Descriptor 1
Marquee type None Walk U wait 0 R wait 0 Attribute On

Opened device: Microsoft LineDisplay Simulator
Created instance of device: Microsoft LineDisplay Simulator



- Show Text by specific position

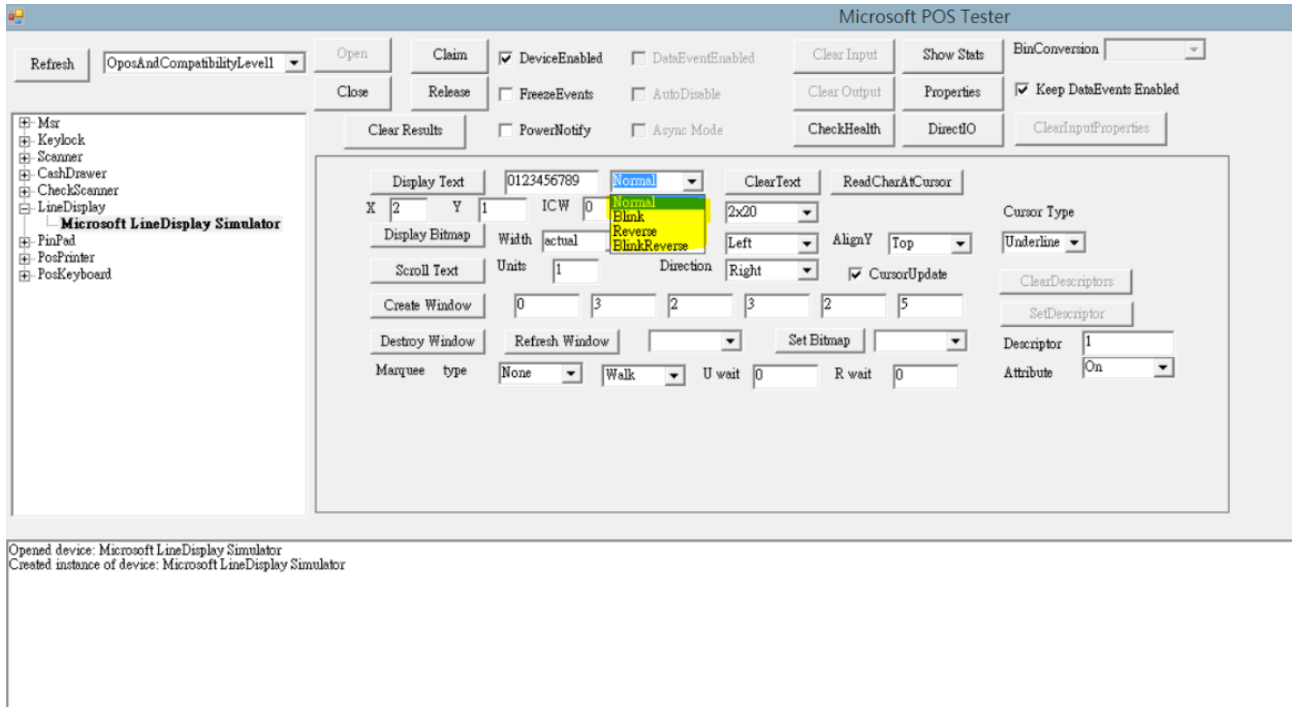


5.3.4.Display Effect Type

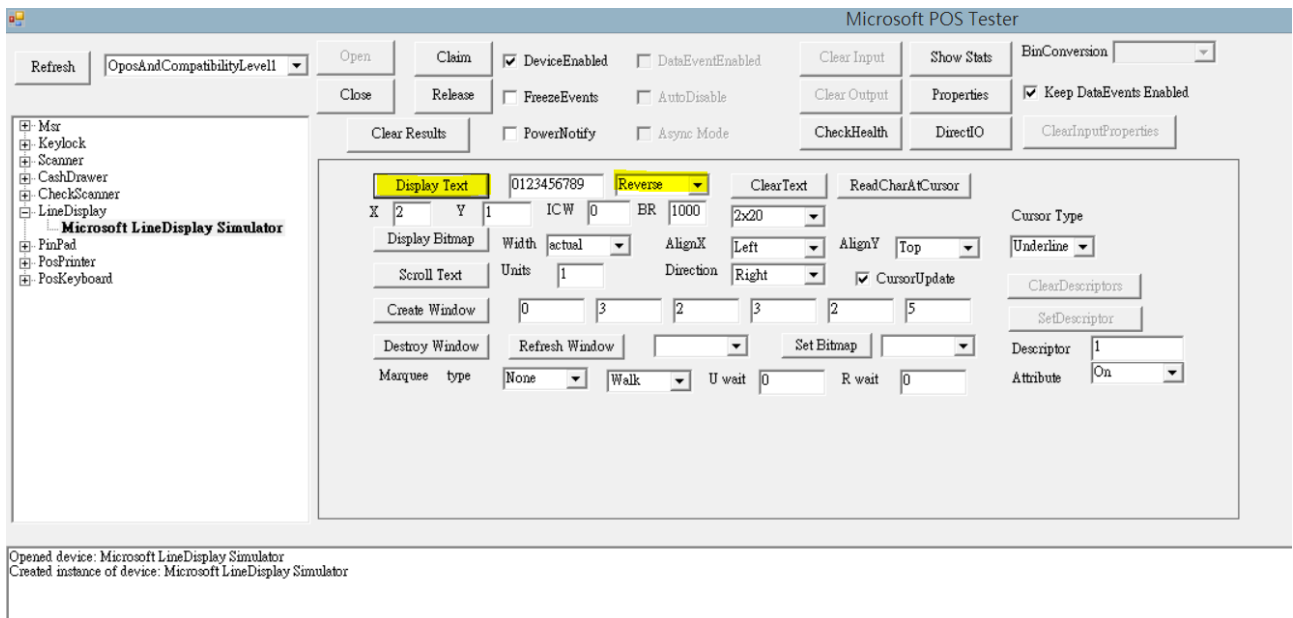
- Normal
- Blink & Blink Rate (Please refer Ch.4 for the blink rate)
- Reverse

● Reverse & Blink

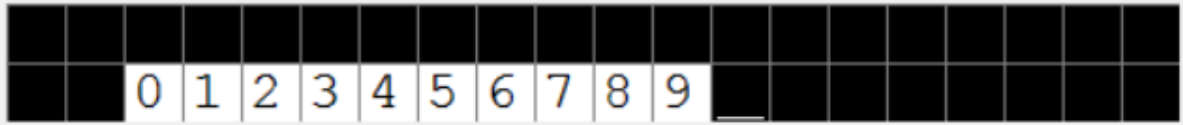
Select Display Type First for Normal, Blink, Reverse and Reverse & Blink First



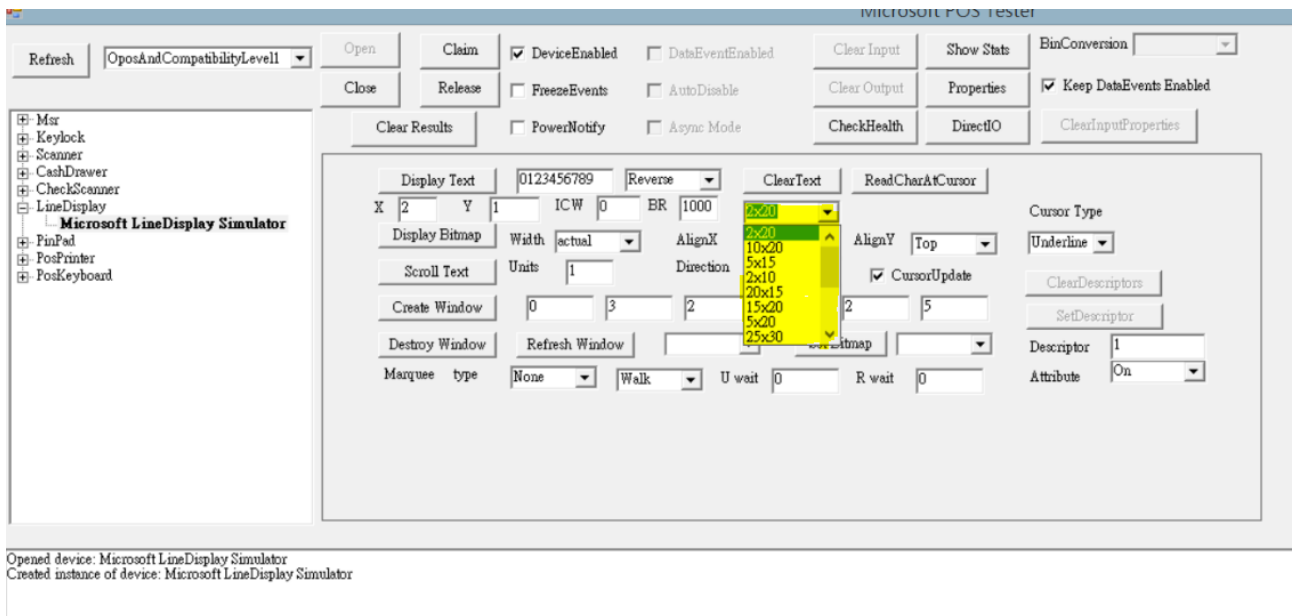
And then press display text button to showed text with effect type



Microsoft LineDisplay Simulator



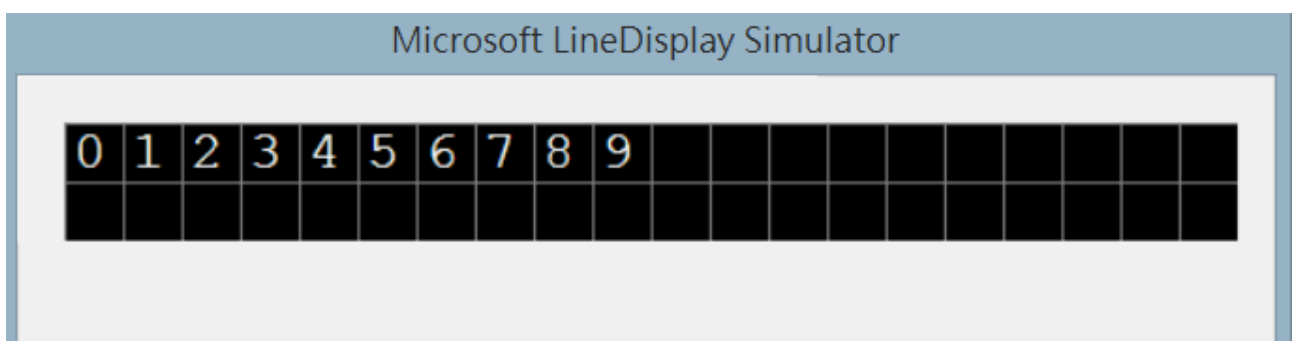
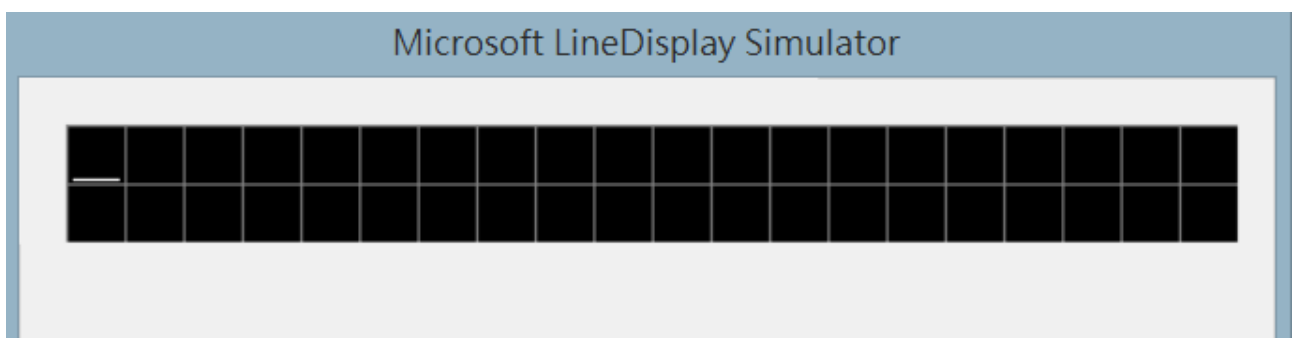
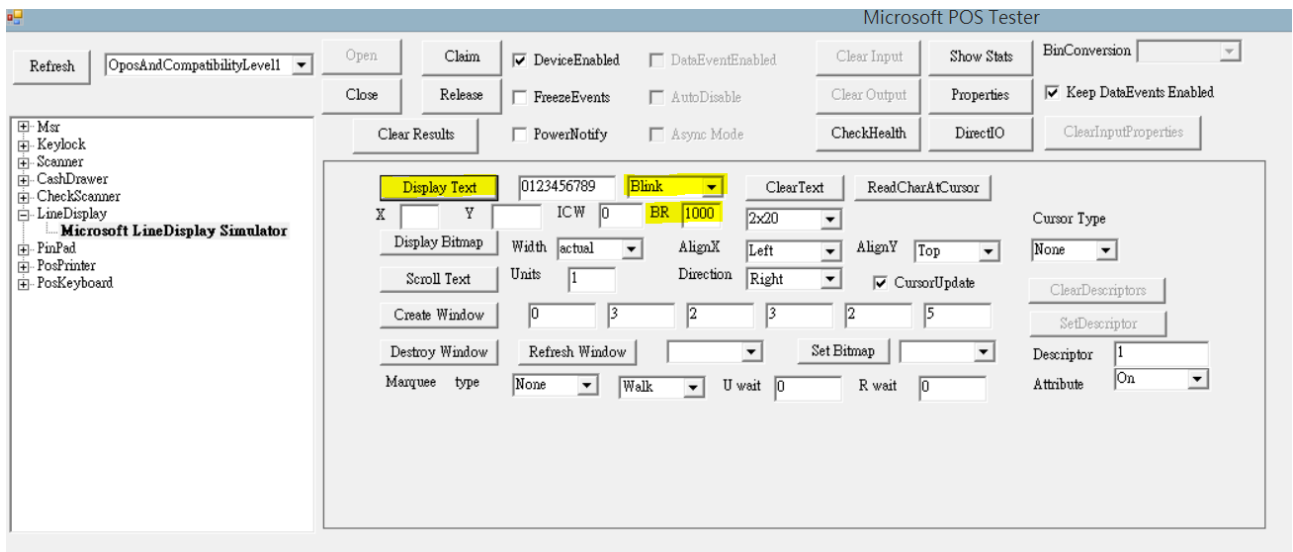
5.3.5.Screen Resolution (**Not Support Yet**)



5.3.6.Blink Rate (**Not Support Yet**)

Blink time for displayed ON/OFF interval

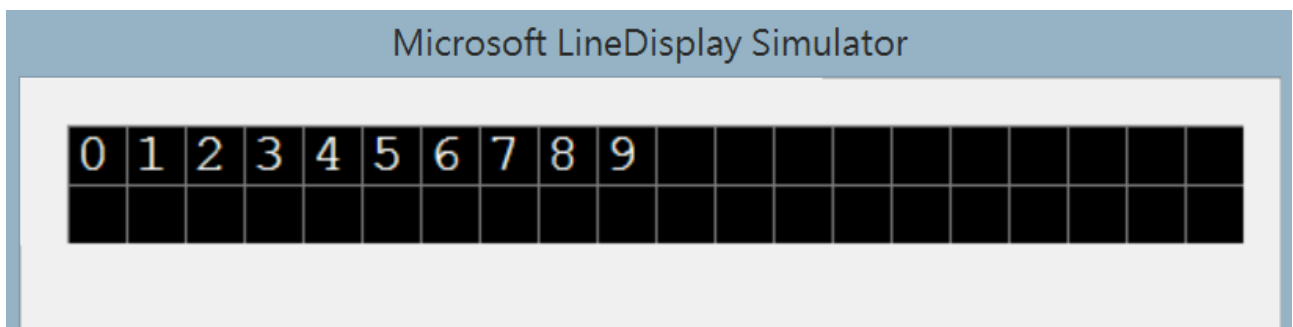
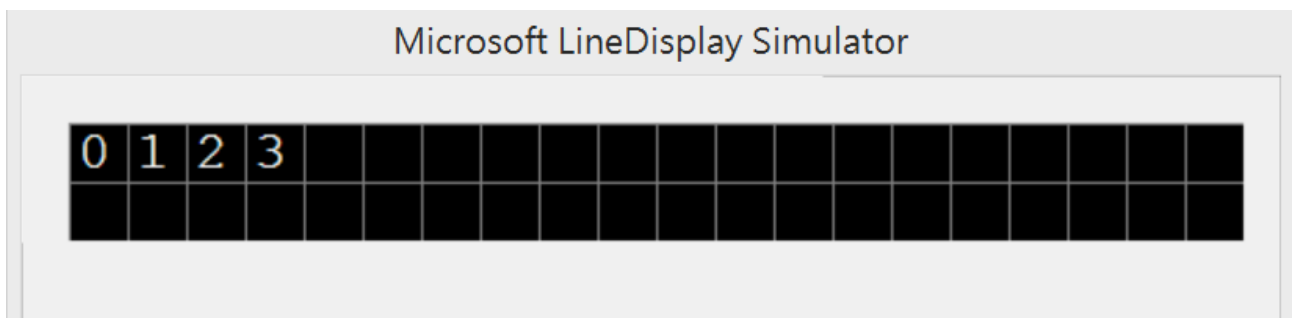
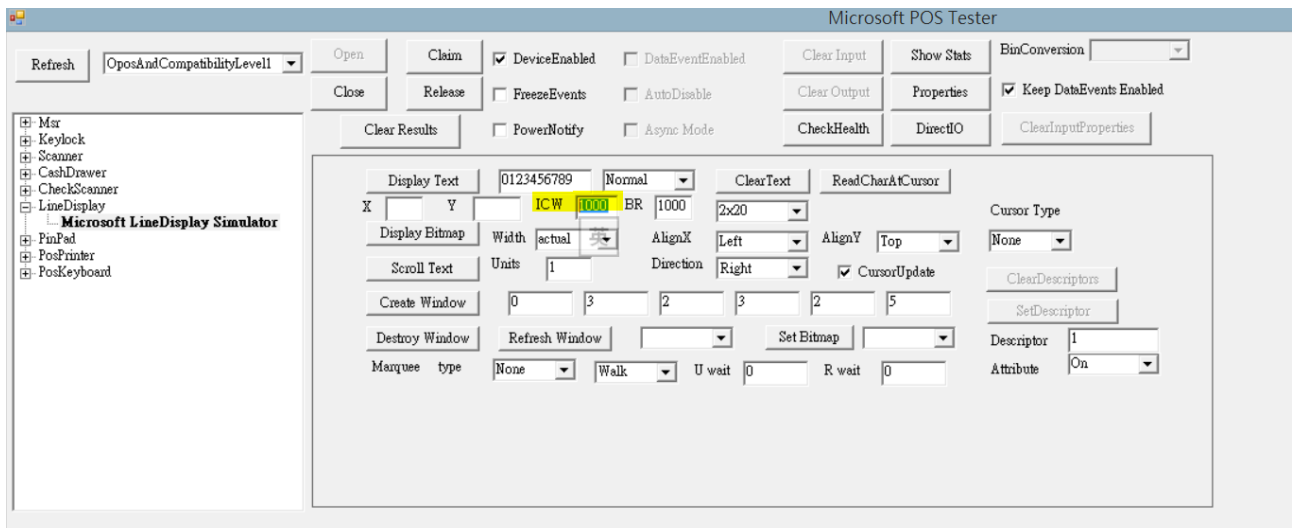
1. Set blink time interval (ex:1000=1s)
2. Press Display Text button to showed text with blink effect



5.3.7.ICW Function (Inter-Character Wait) (**Not Support Yet**)

Delay waiting time for Inter-Character display

1. Set ICW interval for Inter-Character delay time (ex:1000=1s)
2. Press Display Text button to showed text with Inter-Character effect



5.4. Cursor Type (Not Support Yet)

Microsoft POS Tester

Refresh | OposAndCompatibilityLevel1 | Open | Claim | ☒ DeviceEnabled | ☐ DataEventEnabled | Clear Input | Show Stats | BinConversion |

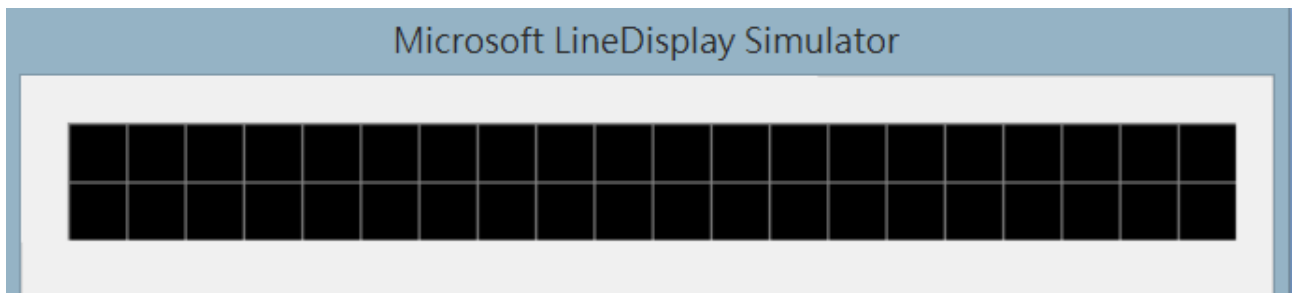
Close | Release | ☐ FreezeEvents | ☐ AutoDisable | Clear Output | Properties | ☒ Keep DataEvent Enabled

Clear Results | ☐ PowerNotify | ☐ Async Mode | CheckHealth | DirectIO | ClearInputProperties

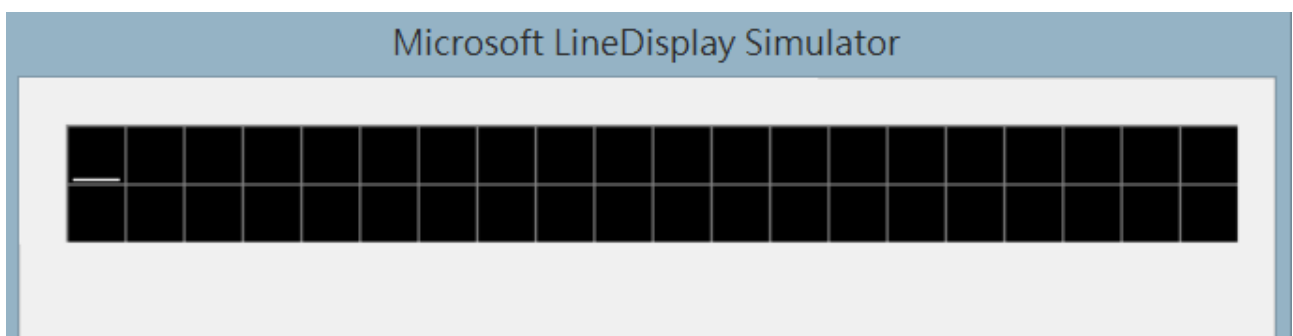
☒ Msr
☒ Keylock
☒ Scanner
☒ CashDrawer
☒ CheckScanner
☒ LineDisplay
☒ Microsoft LineDisplay Simulator
☒ PinPad
☒ PosPrinter
☒ PosKeyboard

Display Text: 0123456789 | Normal | ClearText | ReadCharAtCursor
 X: | Y: | ICW: 1000 | BR: 1000 | 2x20
 Display Bitmap: Width: actual | AlignX: Left | AlignY: Top
 Scroll Text: Units: 1 | Direction: Right | ☒ CursorUpdate
 Create Window: 0 | 3 | 2 | 3 | 2 | 5
 Destroy Window: Refresh Window | Set Bitmap: |
 Marquee type: None | Walk | U wait: 0 | R wait: 0
 Cursor Type: None | Underline |
 SetDescriptor: |
 Descriptor: 1 | Attribute: On

None



Underline



5.5. Scroll Text

Microsoft LineDisplay Simulator

Refresh | OposAndCompatibilityLevell | Open | Claim | ☒ DeviceEnabled | ☐ DataEventEnabled | Clear Input | Show Stats | BinConversion |

Close | Release | ☐ FreezeEvents | ☐ AutoDisable | Clear Output | Properties | ☒ Keep DataEvents Enabled

Clear Results | ☐ PowerNotify | ☐ Async Mode | CheckHealth | DirectIO | ClearInputProperties

Display Text: 0123456789 | Normal | ClearText | ReadCharAtCursor

X: | Y: | ICW: 0 | BR: 1000 | 2x20 | Cursor Type: None

Display Bitmap: Width: actual | AlignX: Left | AlignY: Top

Scroll Text: Units: 1 | Direction: Right | ☐ CursorUpdate

Create Window: 0 | 3 | 2 | 2 | 5

Destroy Window: Refresh Window: | Scrollmap: |

Marquee type: None | Walk | U wait: 0 | R wait: 0

ClearDescriptors | SetDescriptor | Descriptor: 1 | Attribute: On

Display Text

Microsoft LineDisplay Simulator

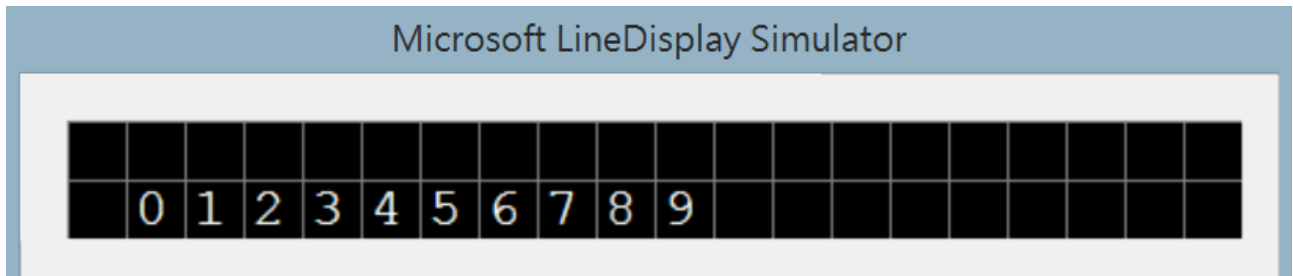
0	1	2	3	4	5	6	7	8	9										

Right

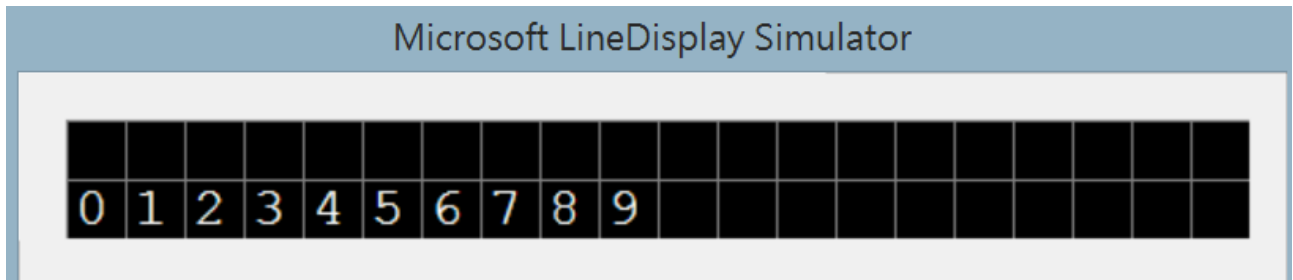
Microsoft LineDisplay Simulator

	0	1	2	3	4	5	6	7	8	9									

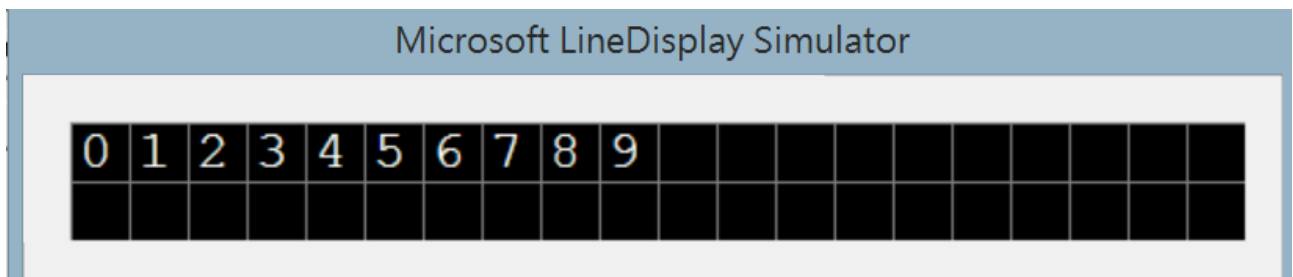
Down



Left



Up



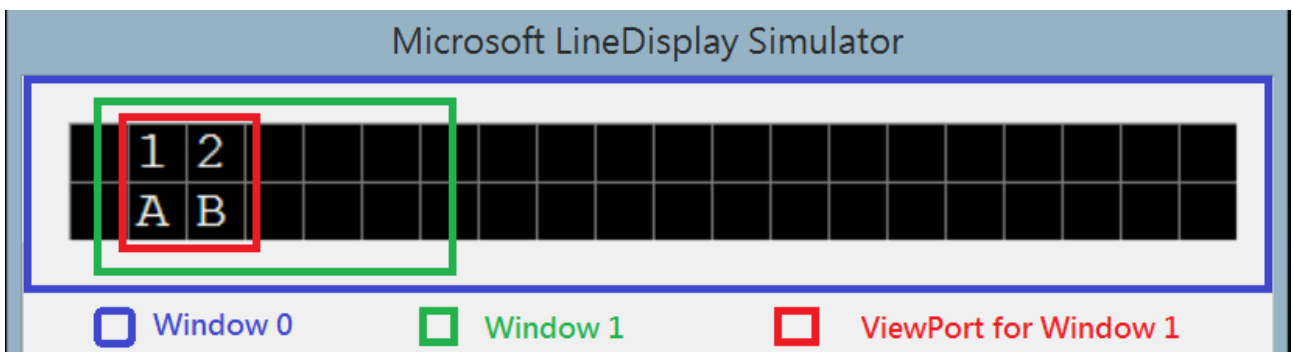
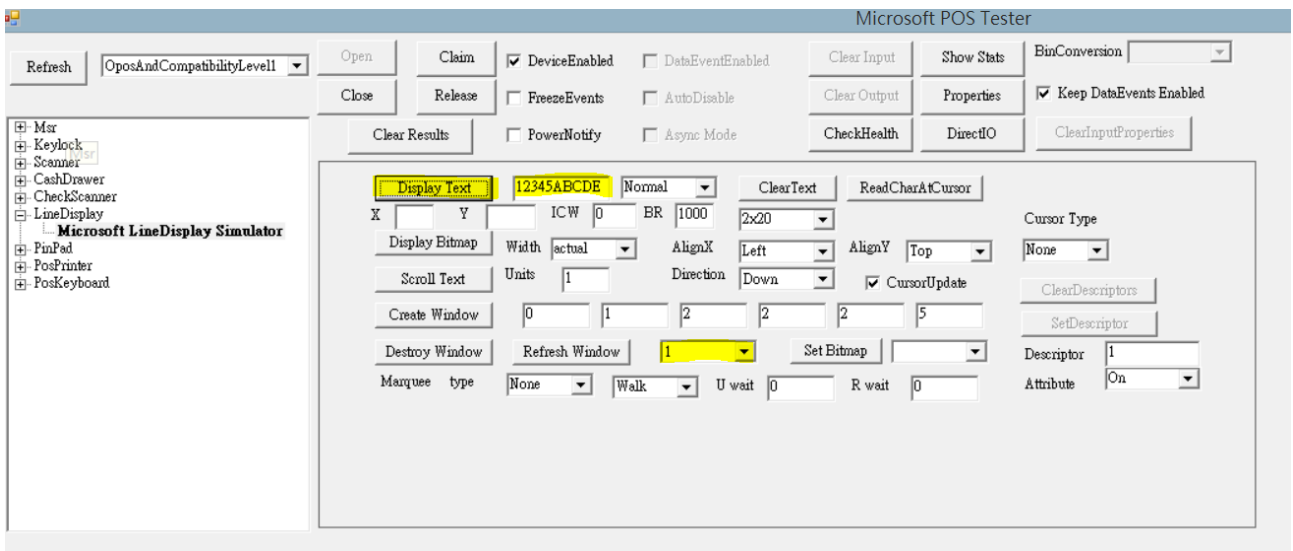
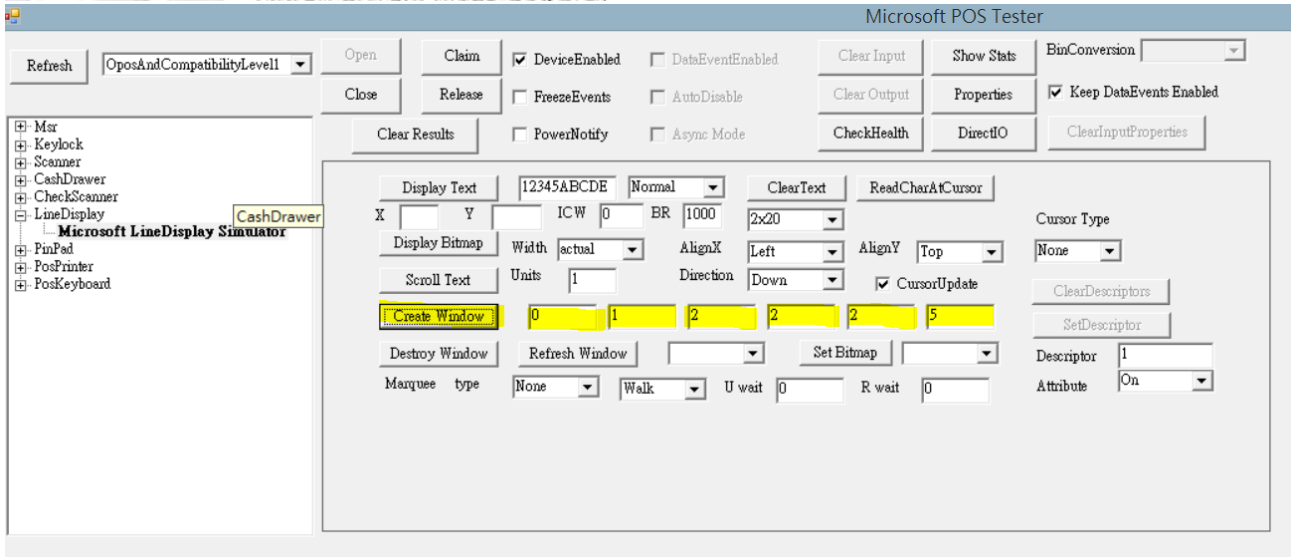
5.6. Window

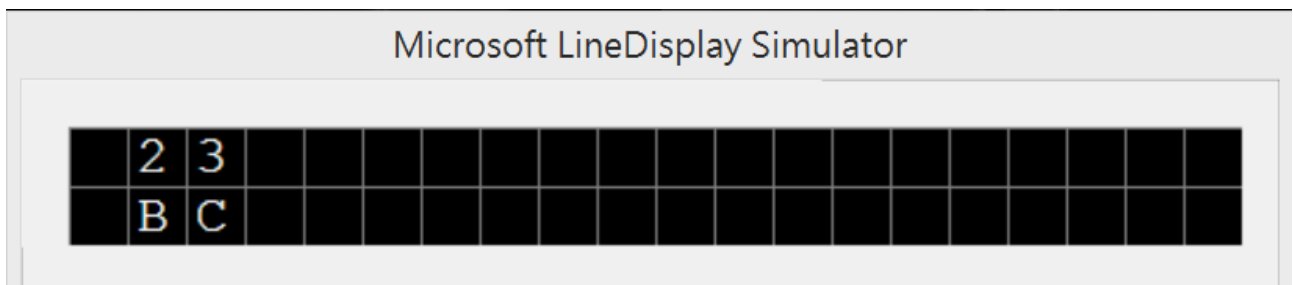
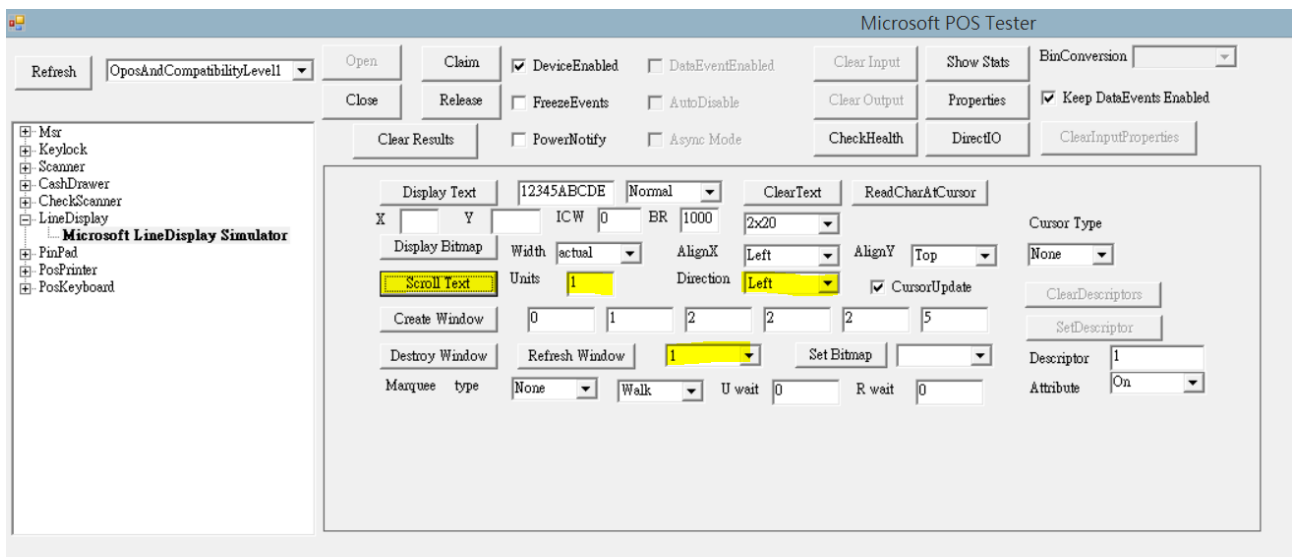
5.6.1. Create Window

Example: ViewportColumn = 0, ViewportROW= 1

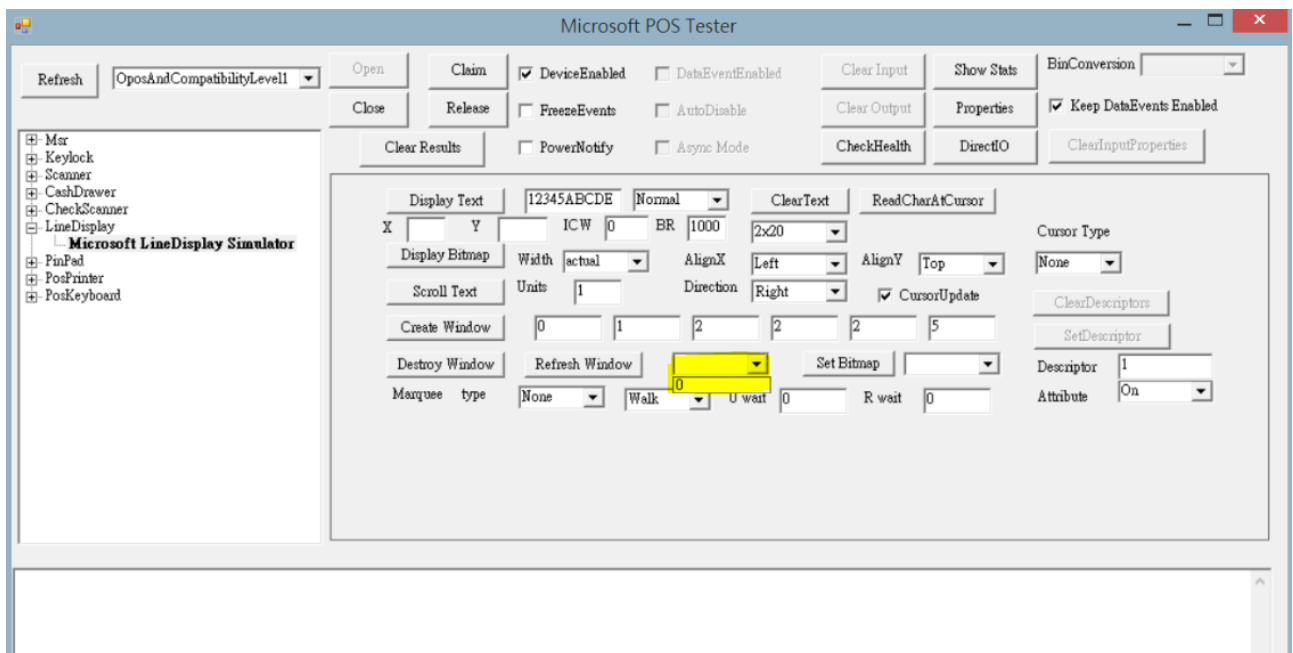
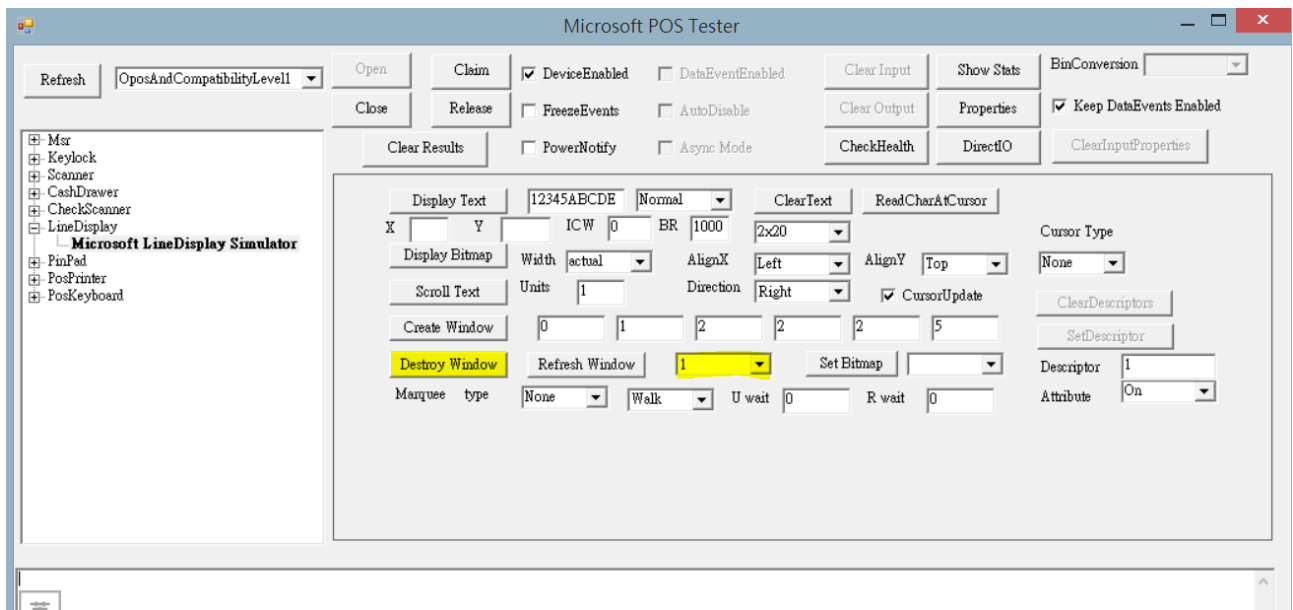
ViewportHeight = 2, ViewportWidth= 2

WindowHeight = 2, WindowWidth = 5

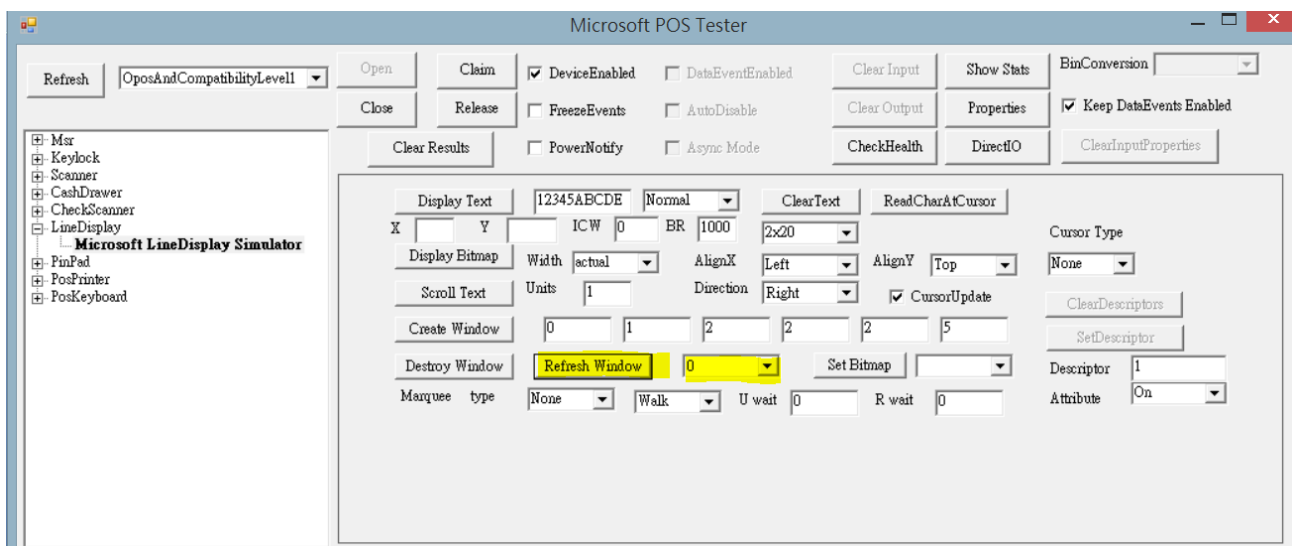
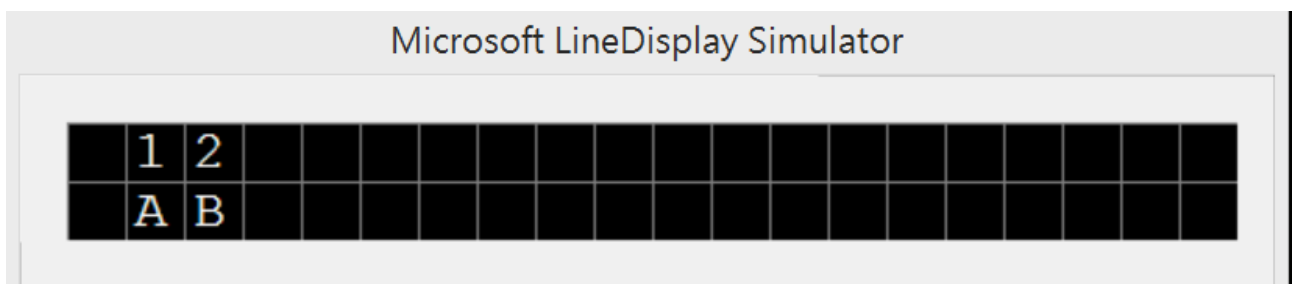
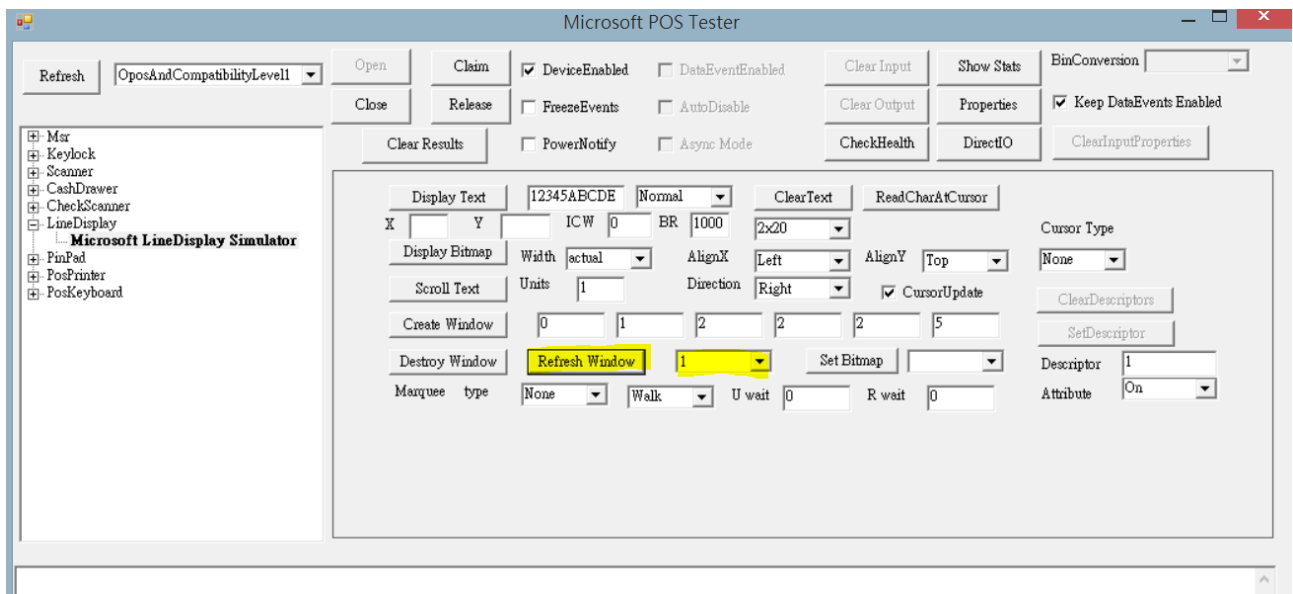




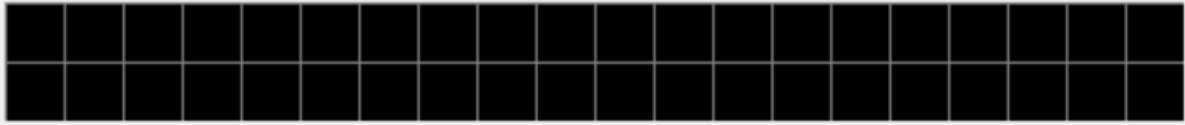
5.6.2.Destory Window



5.6.3.Refresh Window



Microsoft LineDisplay Simulator



5.6.4. Set Current Window

