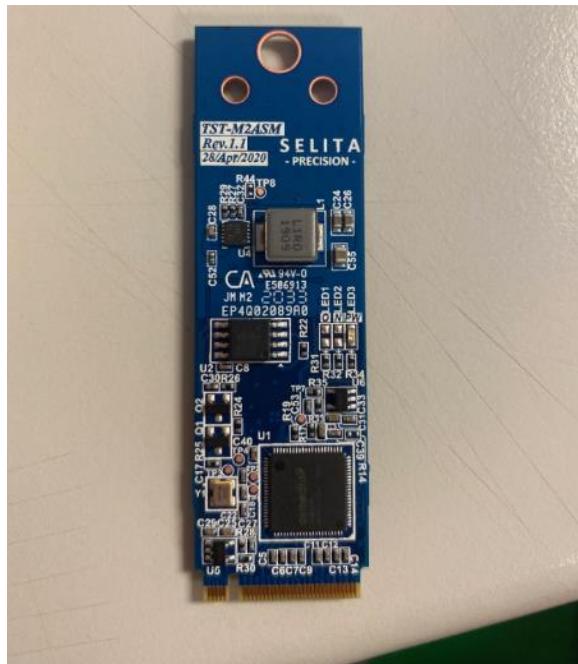


TST-M2ASM 測試卡

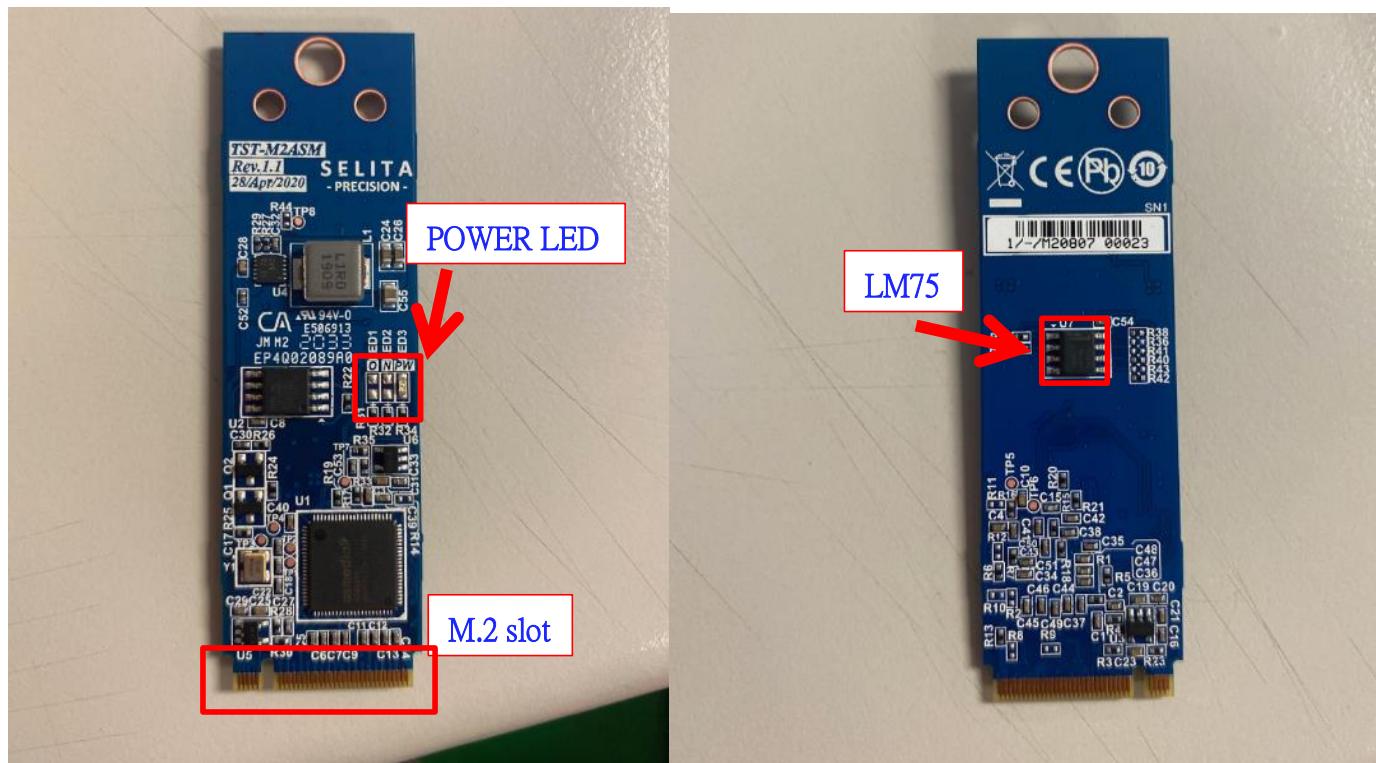
使用說明



一. TST-M2ASM 測試說明：

- 測試功能：提供 M.2 PCIE 訊號速率檢測,最高支援 GEN3 速率,可向下相容 GEN2.
- 測試環境：測試程式支援 DOS 及 WINDOWS

二. TST-M2ASM 測卡介面介紹：



三. TST-M2ASM 測試程式說明：

A. DOS 程式設定及測試：

A1. 主程式指令說明：**M2ASMSPD.EXE**

執行 **M2ASMSPD.EXE** 程式即會顯示相關參數說明及主程式指令範例.

```
PSH-L
TST-M2ASM Speed chk Rev.1.02(C)CopyRight by SELITA Technology Co.
SELITA--Date: Sep 29 2020 :Time: 17:02:57 * Edited by Joshua.Ans--SELITA
HELP message: X word can skip the check
Usage: m2asmspd [/W file][/U file][/skipaddr ][/skipvidid]
PORT:
1./W file : Data log write to file.
2./U file : Compare log file.
3./skipaddr: Skip Bus and Device and function address check.
4./skipvidid: Skip Device ID and Vendor ID check.
5.[?] : Call help message.
Max:Max Link Width. Nego:Negotiated Link Width.
Sup:Support Link Speed. Cur:Current Link Speed.
Tar:Target Link Speed. PN:Port Number. Rev:Capability Version.
Example:
m2asmspd /w sample.dat
m2asmspd /U sample.dat /skipaddr
m2asmspd /?
The return value:
0:Check All PASS!
-1:Check Fail!
-----
Press any key to list the all of PCI Express device information....
```

若已安裝測試卡會顯示相關 Device 資訊.

| Dev/Vend | Bus | Dev | Func | Max | Neg | Sup | Cur | PN | Tar | Rev | PCI | Device | Type |
|----------|-----|-----|------|-----|-----|-----|-----|----|-----|-----|-----|--------|------|
| _M2ASM_ | 001 | 00 | 00 | 4X | 4X | 8.0 | 8.0 | 00 | 8.0 | 02 | USB | 3.0 | |

(Return Code = -1)...FAIL

A2. 解讀測試卡所顯示的相關 PCIE 資訊，請參照程式說明內容.

| Dev/Vend | Bus | Dev | Func | Max | Neg | Sup | Cur | PN | Tar | Rev | PCI | Device | Type |
|----------|-----|-----|------|-----|-----|-----|-----|----|-----|-----|-----|--------|------|
| _M2ASM_ | 001 | 00 | 00 | 4X | 4X | 8.0 | 8.0 | 00 | 8.0 | 02 | USB | 3.0 | |

Max:Max Link Width. Nego:Negotiated Link Width.
Sup:Support Link Speed. Cur:Current Link Speed.
Tar:Target Link Speed. PN:Port Number. Rev:Capability Version.

A3. DOS 程式測試步驟

1. 先建立 PCIE Device 資訊比對檔, 程式指令 : M2ASMSPD /w sample.dat

建立成功, 於畫面上可確認所要比對的 PCIE Slot 規格.

```
TST-M2ASM Speed chk Rev.1.01(C)CopyRight by SELITA Technology Co.  
SELITA--Date: Sep 29 2020 :Time: 09:05:05 * Edited by Joshua.Ans--SELITA  
Nm Dev/Vend Bus Dev Func Max Neg Sup Cur PN Tar Rev PCIe the status  
01 __M2ASM_ 001 00 00 4X 4X 8.0 8.0 00 8.0 02:USB 3.0  
(Return Code = 0)...PASS!!
```

2. 執行測試指令 : M2ASMSPD /v sample.dat

程式將比較建立的 sample 檔規格, 若相關 PCIE 資訊規格相同即顯示 PASS

```
TST-M2ASM Speed chk Rev.1.01(C)CopyRight by SELITA Technology Co.  
SELITA--Date: Sep 29 2020 :Time: 09:05:05 * Edited by Joshua.Ans--SELITA  
Nm Dev/Vend Bus Dev Func Max Neg Sup Cur PN Tar Rev PCIe Test Result  
01 __M2ASM_ 001 00 00 4X 4X 8.0 8.0 00 8.0 02 ==> Pass  
(Return Code = 0)...PASS!!  
C:\M2ASMSPD>_
```

若抓取的資訊有差異即會顯示 FAIL.

```
TST-M2ASM Speed chk Rev.1.01(C)CopyRight by SELITA Technology Co.  
SELITA--Date: Sep 29 2020 :Time: 09:05:05 * Edited by Joshua.Ans--SELITA  
Nm Dev/Vend Bus Dev Func Max Neg Sup Cur PN Tar Rev PCIe Test Result  
01 __M2ASM_ 001 00 00 4X 4X 8.0 8.0 00 8.0 02 ==> ADDR Lose  
  
Error Card number data as below  
01 __M2ASM_ 001 00 00 4X 4X 8.0 8.0 00 8.0 02:USB 3.0  
  
(Return Code = -1)...FAIL  
C:\M2ASMSPD>_
```

B. UEFI 程式設定及測試：

B1. 主程式指令說明 : m2asmspd.efi

測試方法指令與 DOS 環境相同

執行 m2asmspd.efi 程式即會顯示相關參數說明及主程式指令範例.

```
2 Dir(s)
FS0:\Selita_tool\1\Selita_tool\> m2asmspd.efi
TST-M2ASM Card Test Rev.1.00(C)CopyRight by SELITA Technology Co.
SELITA--Date: Mar 10 2022 :Time: 09:21:15 * Edited by Joshua.Ans--SELITA
HELP message: X word can skip the check
Usage: m2asmspd [/W file] [/V file] [/skipaddr || /skipvdid]
PORT:
    1./W file : Data log write to file.
    2./V file : Compare log file.
    3./skipaddr: Skip Bus and Device and function address check.
    4./skipvdid: Skip Device ID and Vendor ID check.
Max:Max Link Width. Nego:Negotiated Link Width.
Sup:Support Link Speed. Cur:Current Link Speed.
Tar:Target Link Speed. PN:Port Number. Rev:Capability Version.
Example:
m2asmspd /w sample.dat
m2asmspd /V sample.dat /skipaddr
The return value:
0:Check All PASS!
-1:Check Fail!

-----  
Dev/Vend Bus Dev Func Max Neg Sup Cur PN Tar Rev PCI Device Type
```

B3. DOS 程式測試步驟

1. 先建立 PCIE Device 資訊比對檔, 程式指令 : M2ASMSPD.efi /w 1.dat

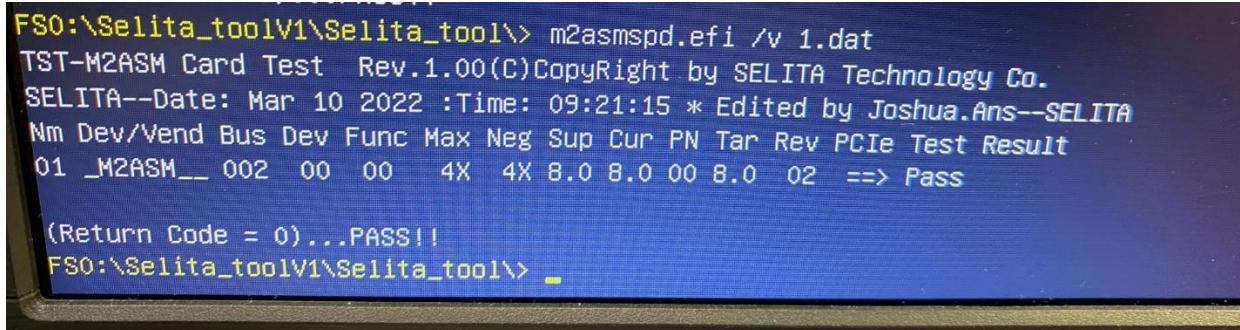
建立成功, 於畫面上可確認所要比對的 PCIE Slot 規格.

```
FS0:\Selita_tool\1\Selita_tool\> m2asmspd.efi /w 1.dat
TST-M2ASM Card Test Rev.1.00(C)CopyRight by SELITA Technology Co.
SELITA--Date: Mar 10 2022 :Time: 09:21:15 * Edited by Joshua.Ans--SELITA
Dev/Vend Bus Dev Func Max Neg Sup Cur PN Tar Rev PCIe the status
_M2ASM_ 002 00 00 4X 4X 8.0 8.0 00 8.0 02;Serial Bus Controller

(Return Code = 0)...PASS!!
FS0:\Selita_tool\1\Selita_tool\>
```

2. 執行測試指令：**M2ASMSPD /v 1.dat**

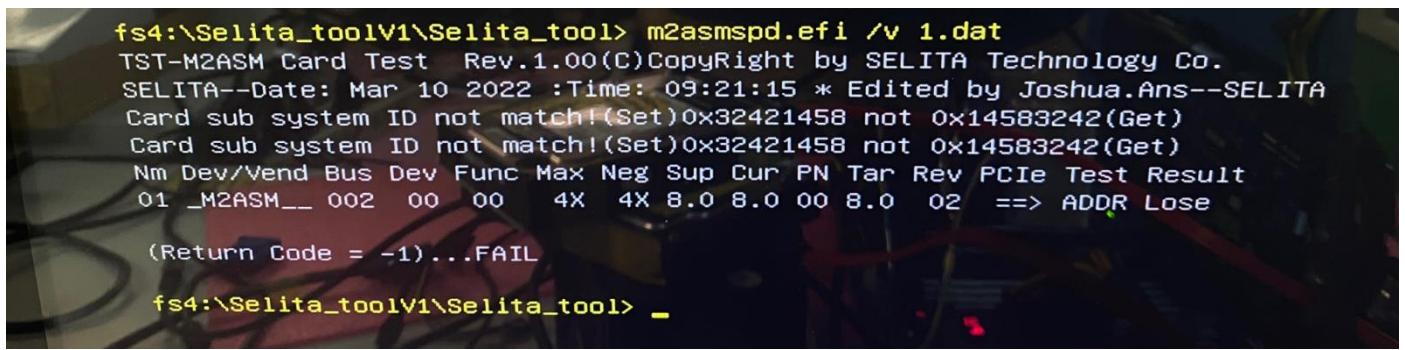
程式將比較建立的 1.dat 檔規格，若相關 PCIE 資訊規格相同即顯示 PASS



```
FS0:\Selita_tool\1\Selita_tool> m2asmspd.efi /v 1.dat
TST-M2ASM Card Test Rev.1.00(C)CopyRight by SELITA Technology Co.
SELITA--Date: Mar 10 2022 :Time: 09:21:15 * Edited by Joshua.Ans--SELITA
Nm Dev/Vend Bus Dev Func Max Neg Sup Cur PN Tar Rev PCIe Test Result
01 _M2ASM__ 002 00 00 4X 4X 8.0 8.0 00 8.0 02 ==> Pass

(Return Code = 0)...PASS!!
FS0:\Selita_tool\1\Selita_tool> _
```

若抓取的資訊有差異即會顯示 FAIL.



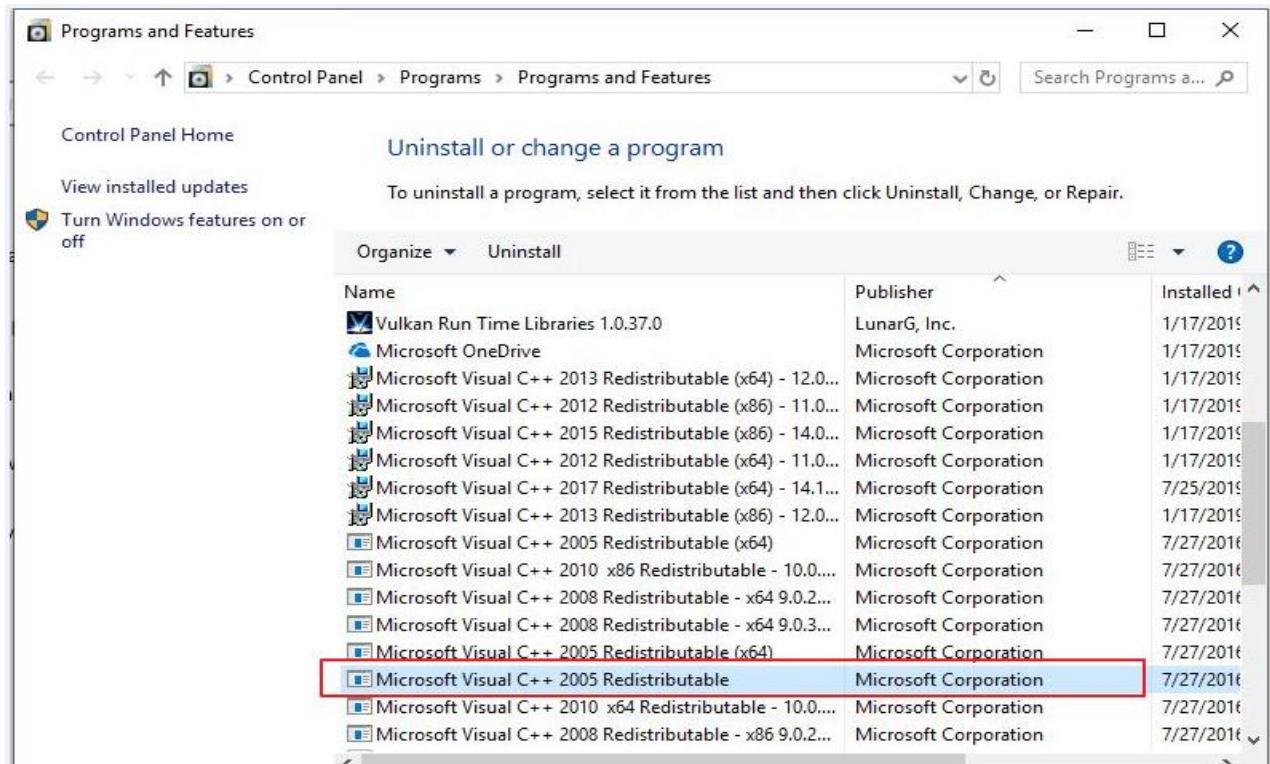
```
fs4:\Selita_tool\1\Selita_tool> m2asmspd.efi /v 1.dat
TST-M2ASM Card Test Rev.1.00(C)CopyRight by SELITA Technology Co.
SELITA--Date: Mar 10 2022 :Time: 09:21:15 * Edited by Joshua.Ans--SELITA
Card sub system ID not match! (Set)0x32421458 not 0x14583242 (Get)
Card sub system ID not match! (Set)0x32421458 not 0x14583242 (Get)
Nm Dev/Vend Bus Dev Func Max Neg Sup Cur PN Tar Rev PCIe Test Result
01 _M2ASM__ 002 00 00 4X 4X 8.0 8.0 00 8.0 02 ==> ADDR Lose

(Return Code = -1)...FAIL
fs4:\Selita_tool\1\Selita_tool> _
```

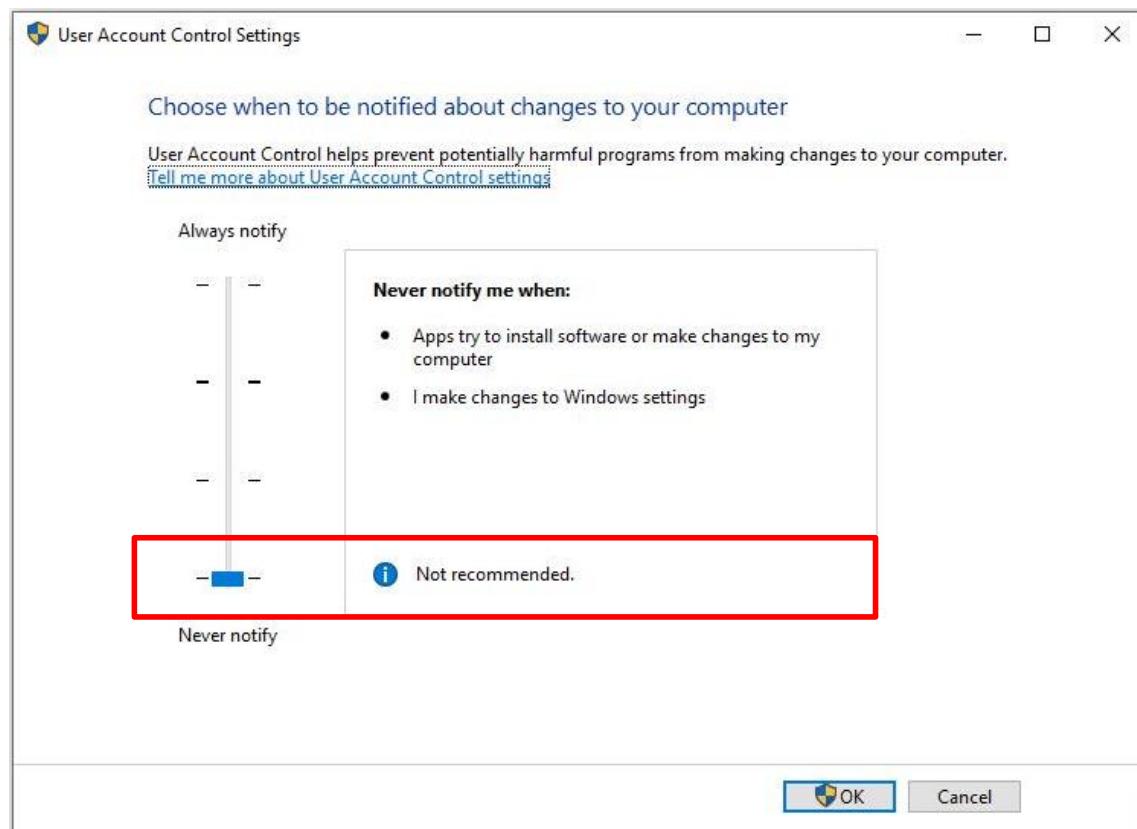
C. Windows 程式設定及測試說明：

C1. Windows 環境設定.

1. 發散套件安裝：請先安裝 Microsoft Visual C++ 2005 發散套件 vc2005_x86_EN.exe



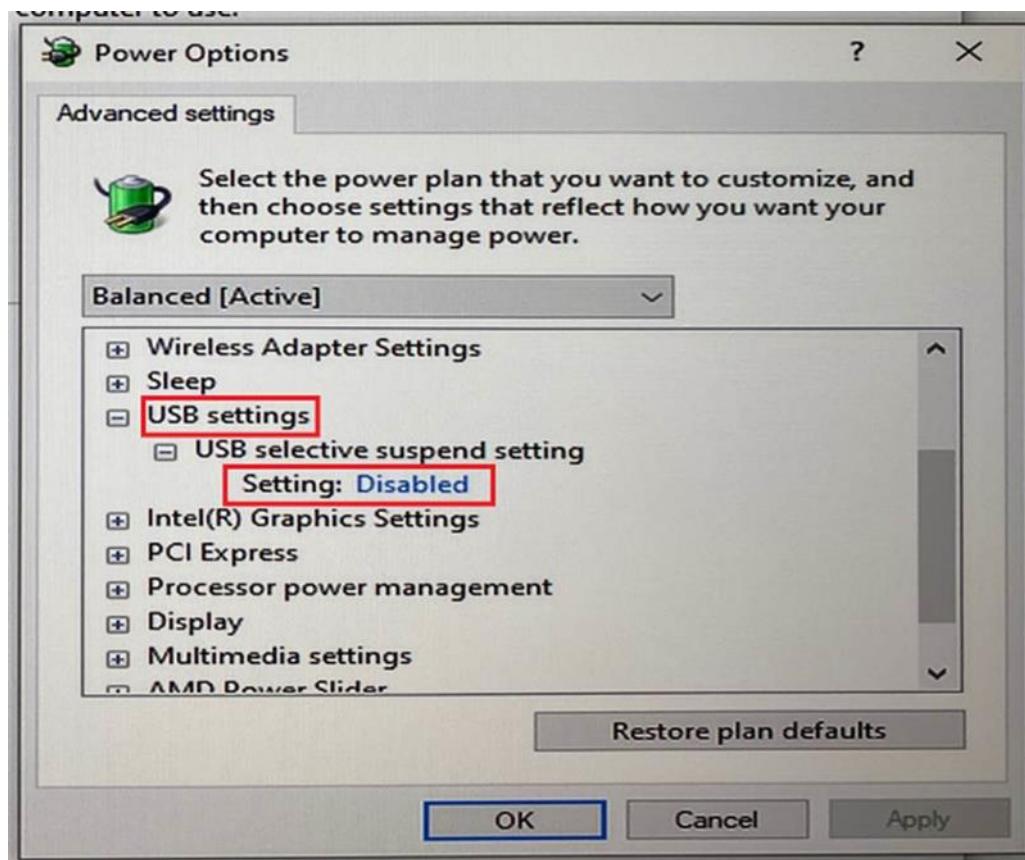
2. UAC(使用者帳戶控制)權限拉到最低



3. 關閉 USB 省電模式

進入 Power Options -> Change plan Settings -> Change advanced power settings

-> USB settings -> USB selective suspend setting -> Setting: **Disabled**



C2. 程式 Config.cfg 檔設定.

主要用於設定 PCIE 比對 Sample.dat 資訊檔的路徑.

```
CONFIG - Notepad
File Edit Format View Help
[VFYITEM]
VFYMODE=1 VFYMODE=1, 檔案比對模式 . 請保持設定為 1
FILENAME=C:\TSTM2ASM\sample.dat 設定比對 Sample.dat 檔路徑
SKIPADDR=0 預留特殊功能 . 請勿變動. (預設 0)
SKIPV DID=0
```

C3. 程式 SYSTEM.INI 檔設定.

```
SYSTEM - Notepad
File Edit Format View Help
[EXECUTE]
AUTORUN=0 程式開啟即自動測試 : 設定 1 開啟自動測試 ; 0 關閉
STOPEND=0 測試完成自動關閉畫面結束 : 設定 1 關閉畫面 ; 0 保留畫面
SETUPSET=1 設定 1 開啟程式比對檔設定 ; 0 關閉 . 建議設定完成改為 0 避免測試人員誤設定.
Debug Mode=0 程式除錯模式, 設定 1 開啟 ; 0 關閉

[PATH]
PATH=C:\TSTM2ASM\ 設定程式路徑位置
LOG_PATH=C:\TSTM2ASM\LOG\result.log 設定 TEST LOG 路徑位置

[ERRORCODE]
ERRORCODE=MATF0F 預設不良代碼 . 可依需求變更

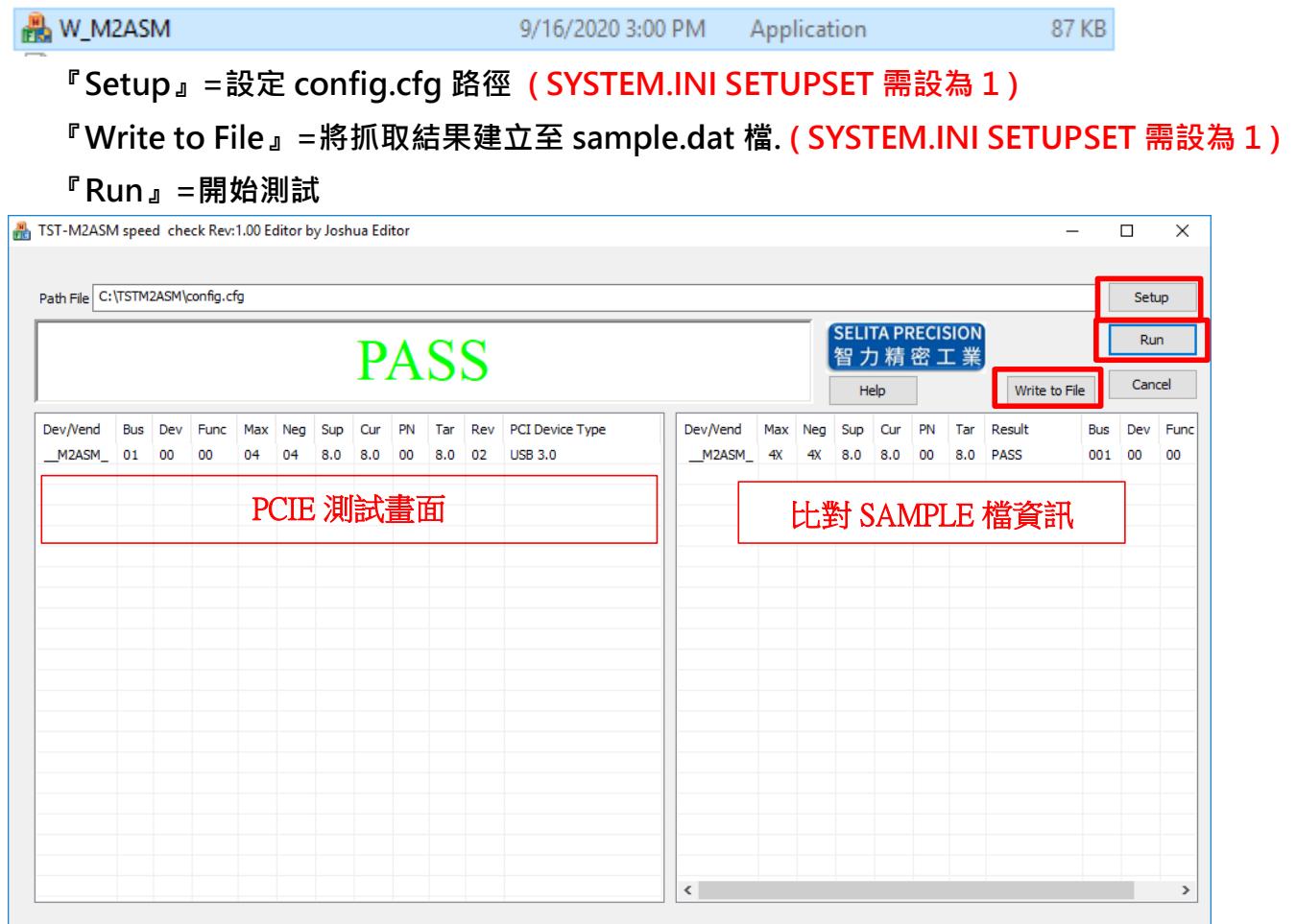
[ITEM]
ITEM=TST-M2ASM Card check

[MULTI]
WINIO=on

[EXECUTE]
```

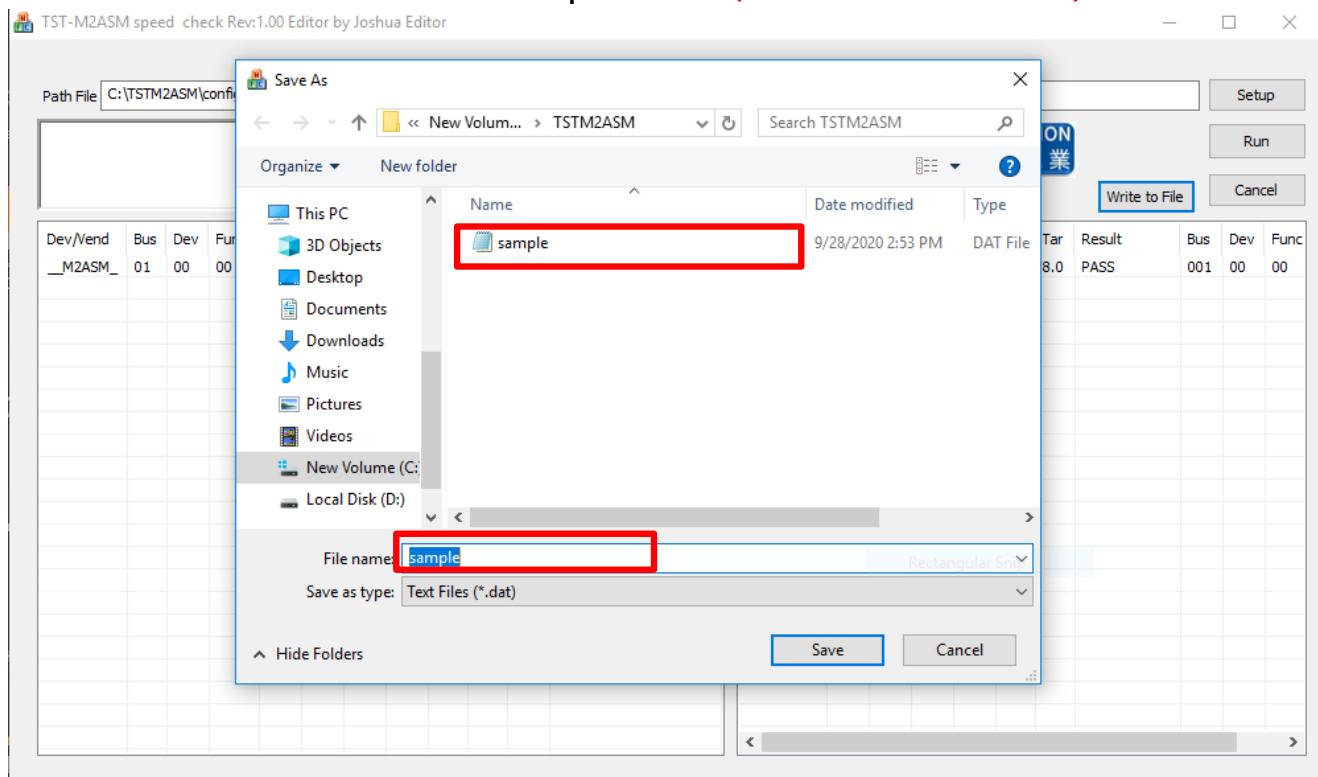
C4. Windows 測試程式畫面說明.

主程式=W_M2ASM.exe

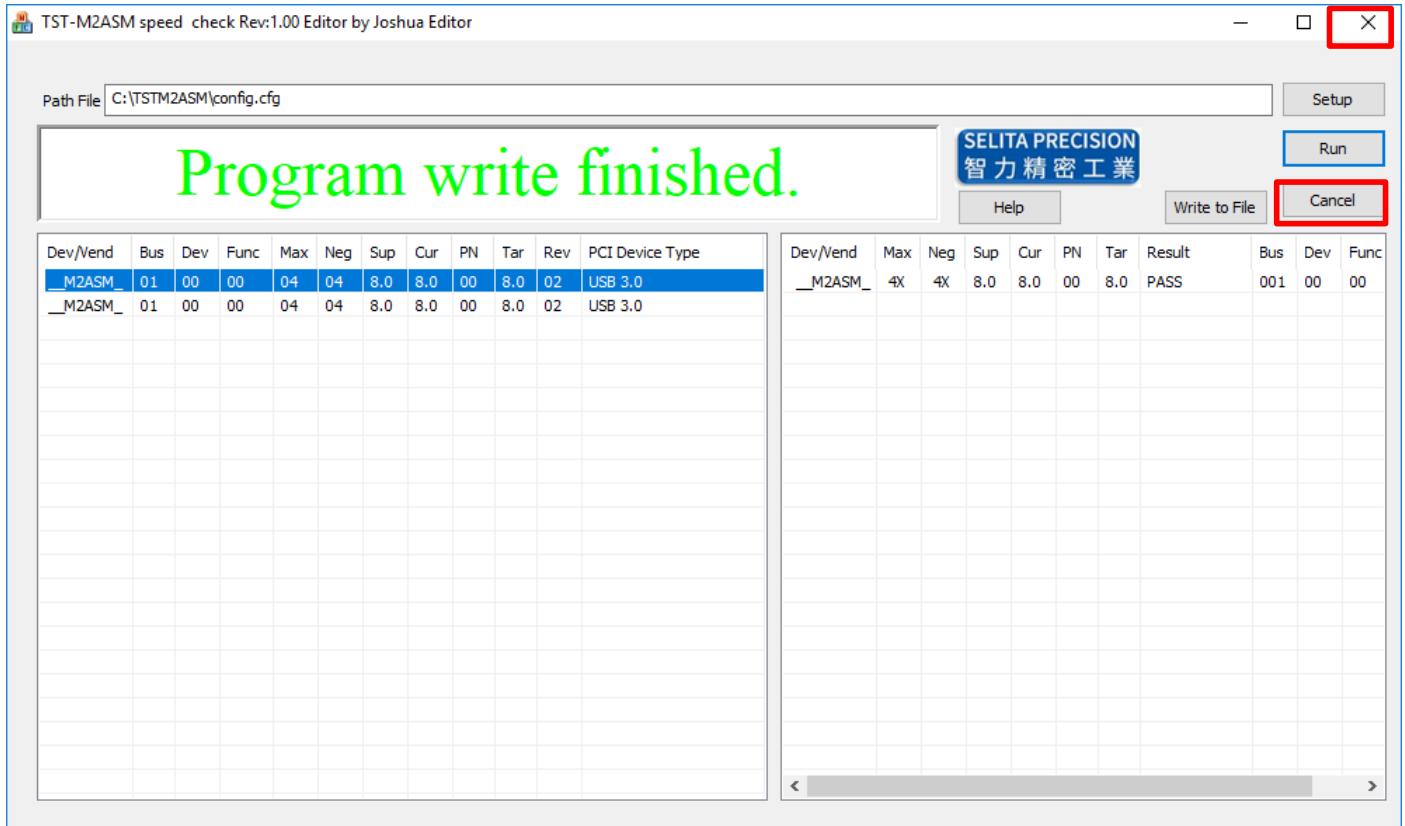


C5. 測試步驟.

1. 先建立 PCIE 正確比對資訊 sample.dat 檔. (檔名可依需求變更*.dat)



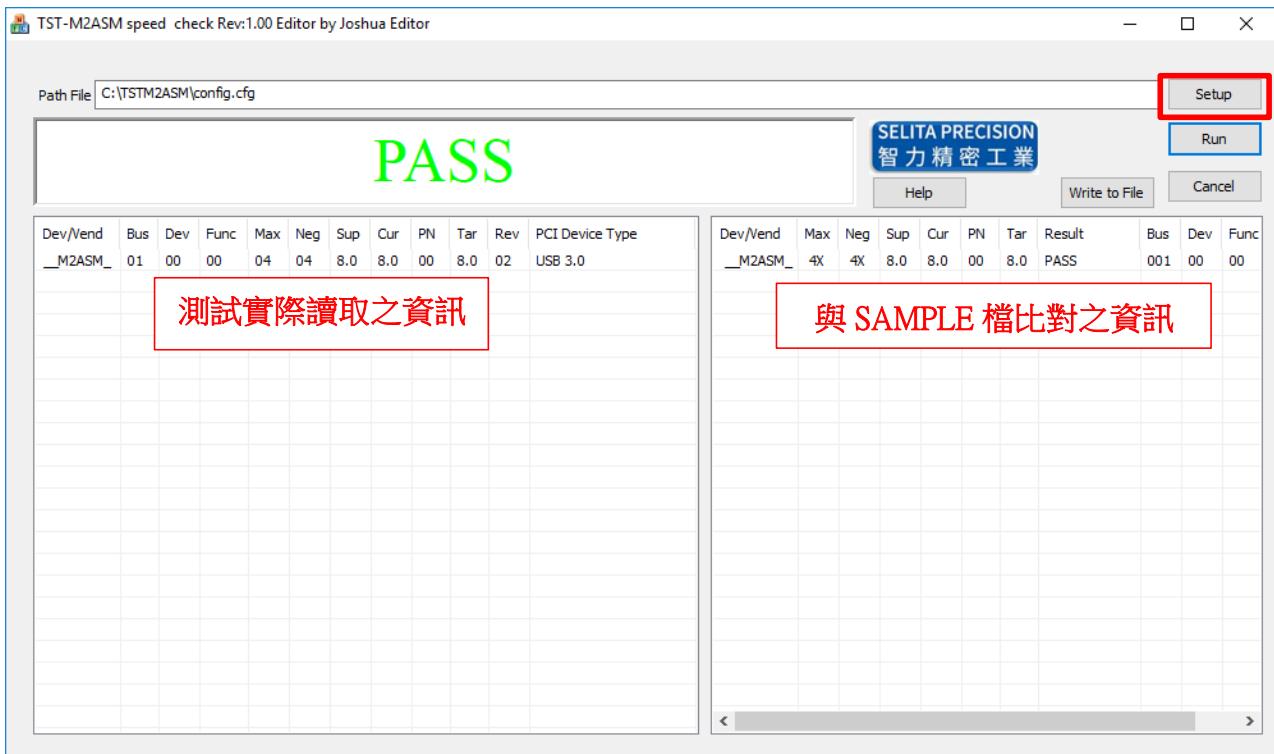
2. sample 檔建立完成後請先關掉程式.



3. 開啟程式按下『Run』執行測試.

(SYSTEM.INI 設定 AUTORUN=1 開啟程式即會自動測試)

測試結果 PASS 畫面.



測試結果 FAIL 畫面.

