

TST-M2WU02 M.2 KEY A & E 測試卡

使用說明



一. TST-M2WU02 M.2 KEY A & E slot 測試功能說明：

■ 測試功能：

1. 提供 PCIE 訊號速率檢測, 最高支援 GEN3 速率, 可向下相容.
2. 提供 USB2.0 訊號測試

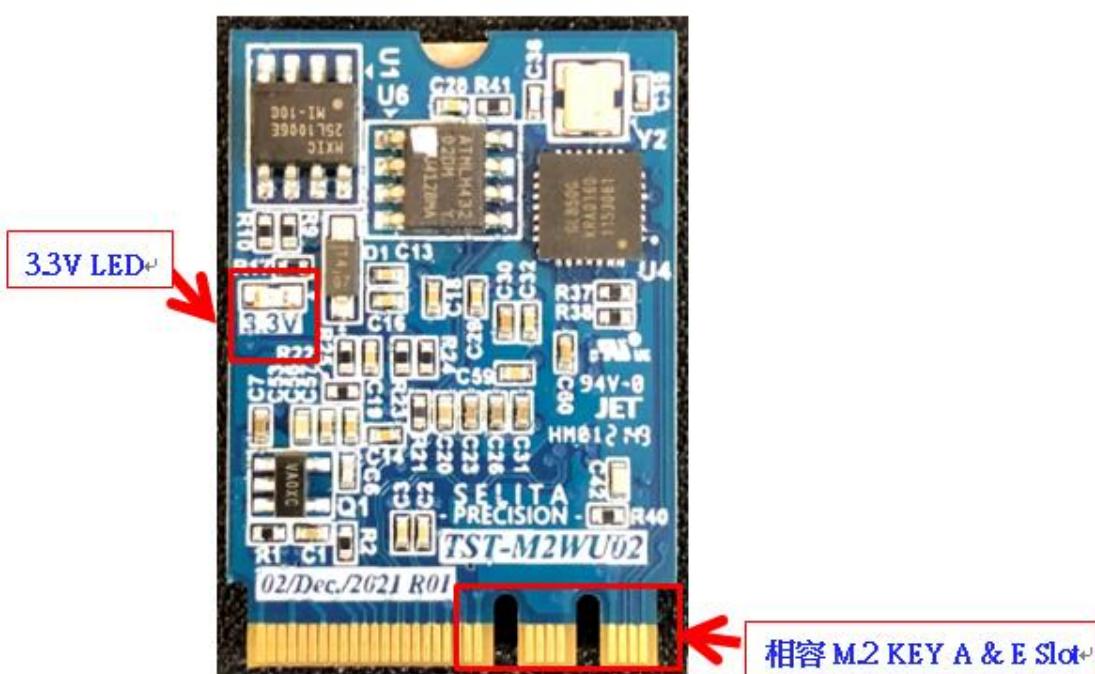
■ 測試環境：測試程式支援 WINDOWS.

Windows 10 請安裝 2005vcredist_x86_eng & NTPort2.8

Microsoft Visual C++ 2005 Redistributable
 NTPort Library Driver 2.8

Microsoft Corporation
Zeal SoftStudio

二. TST-M2WU02 測卡介面介紹：



三. TST-M2WU02 測試程式說明：(**共用 2022 年版 M2WU01 程式**)

A. Windows 程式設定及測試說明：

A1. 程式 Config.cfg 檔設定.

用於設定 PCIE & USB 功能是否檢測及確認 PCIE 比對 Sample 檔路徑是否正確.

```
config - Notepad
File Edit Format View Help
[PCIEITEM]
;VFYMODE is PCIe device check 0:Skip Test 1:Verify test.
VFYMODE=1 VFYMODE=1, 檔案比對模式，請保持設定為 1
; FILENAME is set PCIe device setup 1 (Verify PCIe device)
FILENAME=C:\GST2\PCIE\TST-M2WU01\GENERAL\001\sample.dat
;FILENAME2=0 設定比對 Sample.dat 檔路徑
; SKIPADDR is Address check.
SKIPADDR=0 Skip 比對 PCIe Bus 位置設 1；預設 0

[USBITEM]
; USB_DEV_SUM is set USB Device number. (0:Skip USB device test)
USB_DEV_SUM=1
```

A2. 程式 SYSTEM.INI 檔設定.

```
SYSTEM.INI - 記事本
檔案(F) 編輯(E) 格式(O) 檢視(V) 說明
[EXECUTE] 程式開啟即自動測試：設定 1 開啟自動測試；0 關閉
AUTORUN=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
STOPEND=0 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。
SETUPSET=1
Debug_Mode=0 程式除錯模式，設定 1 開啟；0 關閉

[PATH] 設定程式路徑位置
PATH=C:\TSTM2WU01CK\
LOG_PATH=C:\TSTM2WU01CK\result.log 設定 TEST LOG 路徑位置

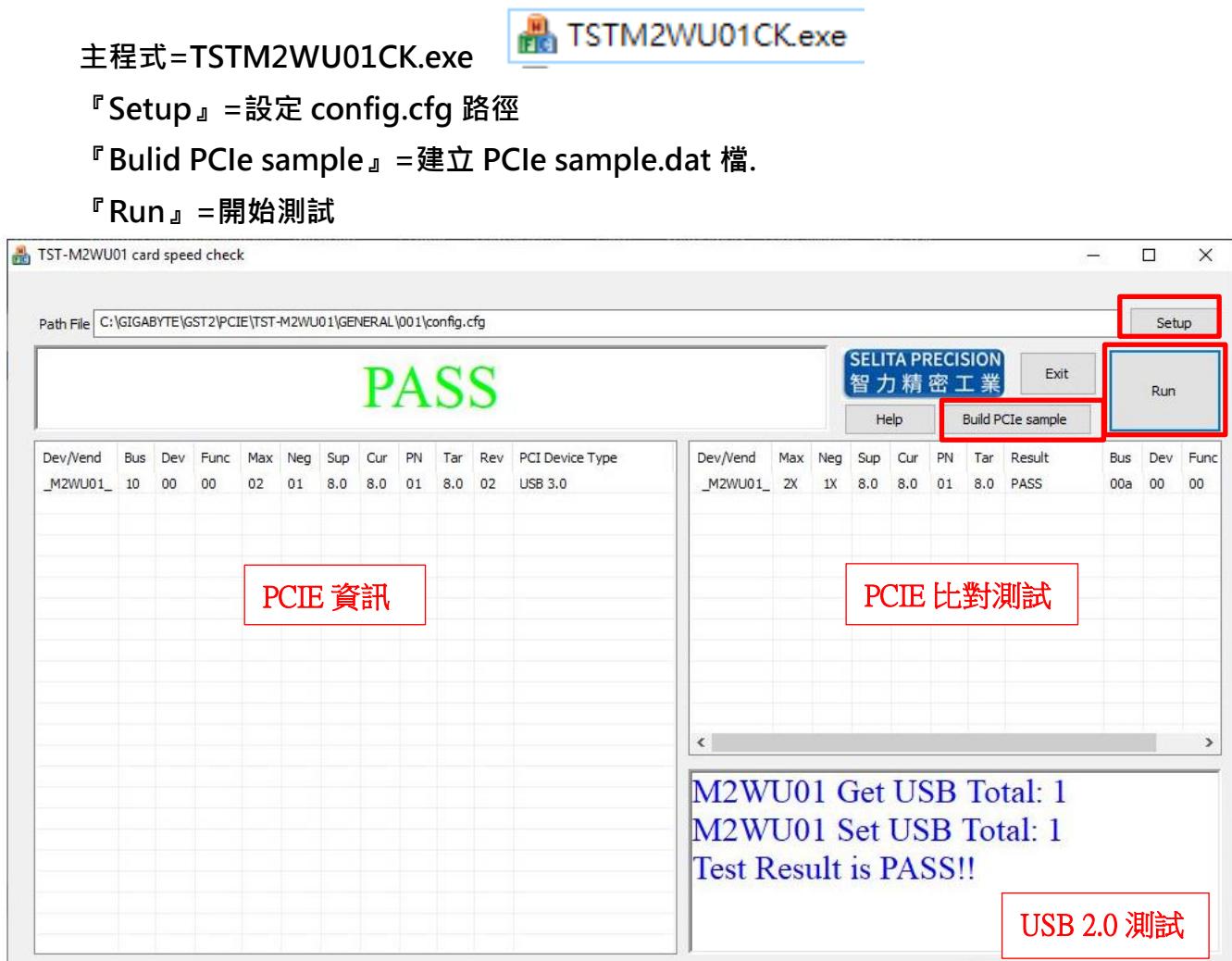
[ERRORCODE]
ERRORCODE=MATFOF 預設不良代碼，可依需求變更

[ITEM]
ITEM=TST-MPCIECK check

[MULTI]
WINIO=on

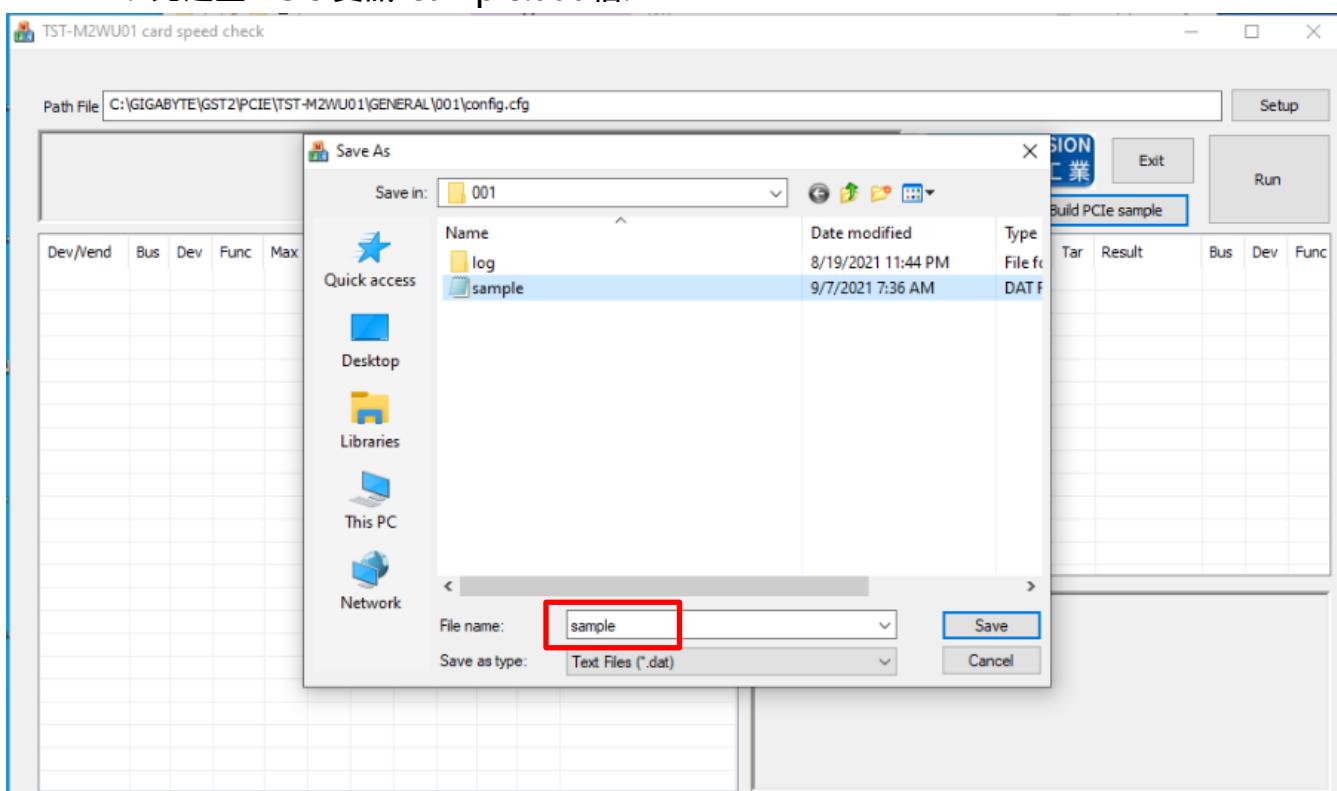
[EXECUTE]
```

B3. Windows 測試程式畫面說明.

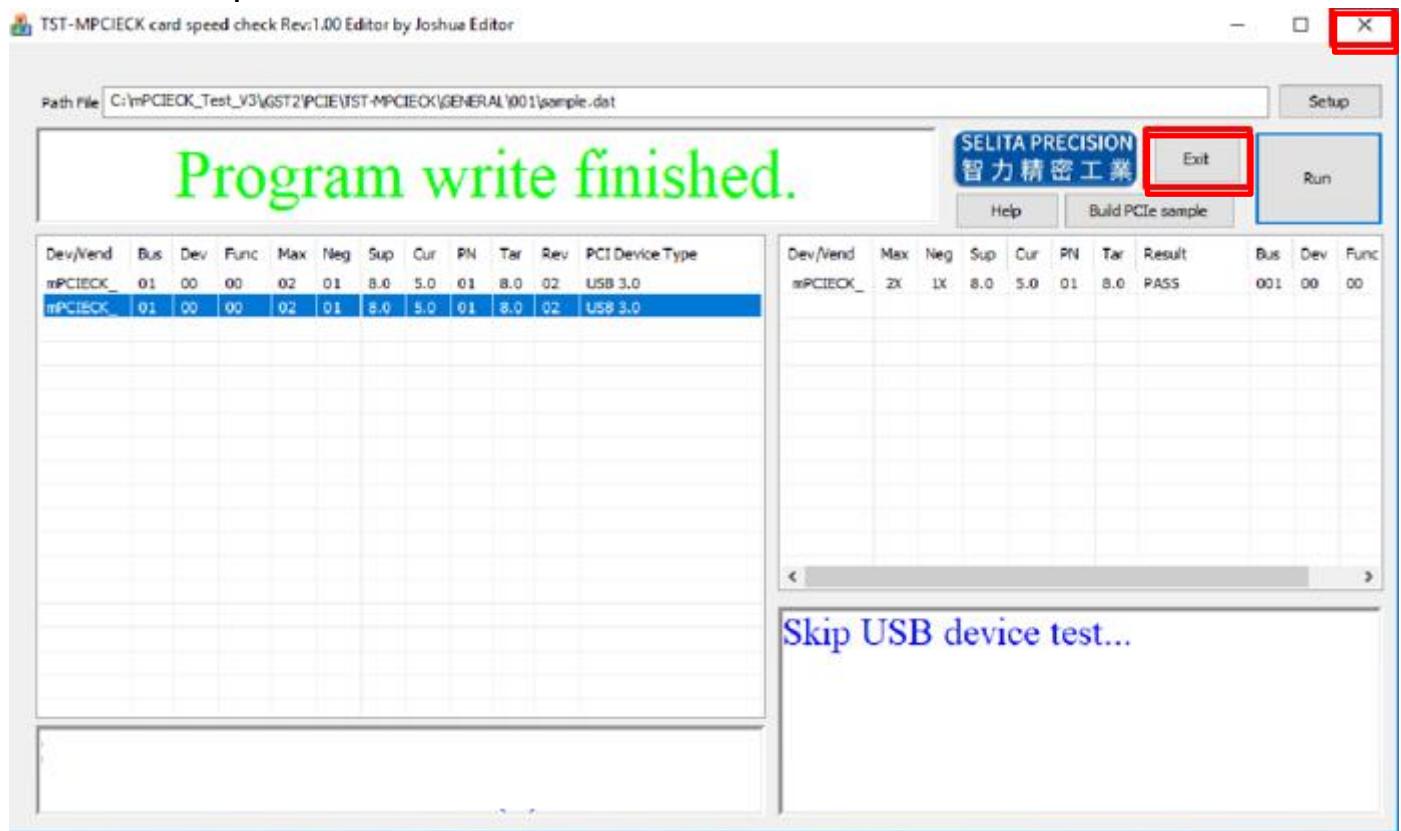


B4. 測試步驟.

1. 先建立 PCIe 資訊 sample.dat 檔.



2. sample 檔建立完成請先關掉程式.



3. 開啟程式按『Run』即執行測試. (SYSTEM.INI 設定 AUTORUN=1 開啟程式即自動測試)

測試結果 PASS 畫面.



測試結果 FAIL 畫面.

The screenshot shows a software window titled "TST-M2WU01 card speed check". The "Path File" is set to "C:\GIGABYTE\GST2\PCIE\TST-M2WU01\GENERAL\001\config.cfg". The main display area shows a large red "FAIL" message. In the top right corner, there is a "SELITA PRECISION" logo with the Chinese text "智力精密工業". Below the logo are buttons for "Exit", "Run", "Help", and "Build PCIe sample". On the right side of the window, there are two tables. The left table shows device configuration data:

Dev/Vend	Bus	Dev	Func	Max	Neg	Sup	Cur	PN	Tar	Rev	PCI Device Type
M2WU01	09	00	00	02	01	8.0	8.0	01	8.0	02	USB 3.0

The right table shows results:

Dev/Vend	Max	Neg	Sup	Cur	PN	Tar	Result	Bus	Dev	Func
M2WU01	2X	1X	8.0	8.0	01	8.0	PASS	009	00	00

Below the tables, a message box displays the test results in red text:

M2WU01 Get USB Total: 0
M2WU01 Set USB Total: 1
Test Result is FAIL!!

4. Config.cfg 若有設定 skip USB 測項，測試畫面會顯示 Skip USB 資訊.

The screenshot shows a software window titled "TST-M2WU01 card speed check". The "Path File" is set to "C:\GIGABYTE\GST2\PCIE\TST-M2WU01\GENERAL\001\config.cfg". The main display area shows a large green "PASS" message. In the top right corner, there is a "SELITA PRECISION" logo with the Chinese text "智力精密工業". Below the logo are buttons for "Exit", "Run", "Help", and "Build PCIe sample". On the right side of the window, there are two tables. The left table shows device configuration data:

Dev/Vend	Bus	Dev	Func	Max	Neg	Sup	Cur	PN	Tar	Rev	PCI Device Type
M2WU01	07	00	00	02	01	8.0	8.0	01	8.0	02	USB 3.0

The right table shows results:

Dev/Vend	Max	Neg	Sup	Cur	PN	Tar	Result	Bus	Dev	Func
M2WU01	2X	1X	8.0	8.0	01	8.0	PASS	007	00	00

Below the tables, a message box displays the test results in blue text:

Skip USB device test...

B. UEFI 程式設定及測試：(此程式支援 M2 及 Mini PCIE 測試卡)

B1. 主程式指令說明：**mpcbeck**

執行 **mpcbeck** 程式即會顯示相關參數說明及+主程式指令範例。

```
fs0:\mpcie> mpcbeck
mpcbeck Test Program Rev.1.00(C)CopyRight by SELITA Technology Co.
SELITA--Date: Mar 18 2022 :Time: 11:13:11 * Edited by Lance.H--SELITA
HELP message:
Usage: mpcbeck [/W file] [/V file]
PORT:
    1./w file : Data log write to file
    2./v file : Compare log file.
    3./u file : Test USB qty.
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:
    mpcbeck /w sample.dat
    mpcbeck /v sample.dat /u 3
    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 PCIE Device 資訊。

Dev/Vend	Bus	Dev	Func	Max	Neg	Sup	Cur	PN	Tar	Rev	PCI	Device	Type
mPCIE	001	00	00	2X	1X	8.0	8.0	00	8.0	02	Serial	Bus Controller	
m2WU	003	00	00	2X	1X	8.0	8.0	00	8.0	02	Serial	Bus Controller	

(Return Code = -1)No Para...

B2. UEFI 程式測試步驟

1. 先建立 PCIE Device 資訊比對 Sample.dat 檔, 程式指令：**mpcbeck /w sample.dat**

建立成功, 於測試畫面上可確認所存取到的 PCIE 資訊, 將以此資訊作測試比對。

```
fs0:\mpcie> mpcbeck /w sample.dat
mpcbeck Test Program Rev.1.00(C)CopyRight by SELITA Technology Co.
SELITA--Date: Mar 18 2022 :Time: 11:13:11 * Edited by Lance.H--SELITA
Dev/Vend Bus Dev Func Max Neg Sup Cur PN Tar Rev PCIe the status
mPCIE 001 00 00 2X 1X 8.0 8.0 00 8.0 02 Serial Bus Controller
m2WU 003 00 00 2X 1X 8.0 8.0 00 8.0 02 Serial Bus Controller
(Return Code = 0)...PASS!!
```

2. 執行測試指令 : **mpcieck /v sample.dat /u 2**

/U = USB 測試 ; 後面需填入數量

程式將比較建立的 sample 檔規格及確認 USB2.0 裝置數量，判定 PASS/FAIL

```
fs0:\mpcie> mpnieck /v sample.dat /u 2
mpnieck Test Program Rev.1.00(C)CopyRight by SELITA Technology Co.
SELITA--Date: Mar 18 2022 :Time: 11:13:11 * Edited by Lance.H--SELITA
Nm Dev/Vend Bus Dev Func Max Neg Sup Cur PN Tar Rev PCIe Test Result
01 mPCIE 001 00 00 2X 1X 8.0 8.0 00 8.0 02 ==> Pass
02 m2WU 003 00 00 2X 1X 8.0 8.0 00 8.0 02 ==> Pass

DevName BcdUSB VendorID ProductID
m2WU 0x210 0x1458 0x318
mPCIE 0x210 0x1458 0x317
want test usb20 QTY:2
read get usb20 QTY:2
(Return Code = 0)...PASS!!
```

若抓取的資訊有差異即會顯示 FAIL.

PCIE 測試 FAIL

```
fs0:\mpcie> mpnieck /v sample.dat /u 1
mpnieck Test Program Rev.1.00(C)CopyRight by SELITA Technology Co.
SELITA--Date: Mar 18 2022 :Time: 11:13:11 * Edited by Lance.H--SELITA
Nm Dev/Vend Bus Dev Func Max Neg Sup Cur PN Tar Rev PCIe Test Result
01 m2WU 003 00 00 2X 1X 8.0 5.0 00 8.0 02 ==> SPD Fail
```

USB 測試 FAIL.

```
fs0:\mpcie> mpnieck /v sample.dat /u 1
mpnieck Test Program Rev.1.00(C)CopyRight by SELITA Technology Co.
SELITA--Date: Mar 18 2022 :Time: 11:13:11 * Edited by Lance.H--SELITA
Nm Dev/Vend Bus Dev Func Max Neg Sup Cur PN Tar Rev PCIe Test Result
01 m2WU 003 00 00 2X 1X 8.0 8.0 00 8.0 02 ==> Pass

DevName BcdUSB VendorID ProductID
want test usb20 QTY:1
read get usb20 QTY:0
(Return Code = -1)...FAIL
```