PCFACE - mPCIE
USERS MANUAL

LEAP ELECTRONIC CO., LTD.

CONTENTS

INTRODUCTION····· 1

INTERFACE····· 2

FEATURES & SPECIFICATIONS····· 4

INSTALLATION····· 5

OPERATION PROCEDURES ····· 7

POWER CONTROL····· 9

MAINTENANCE····· 11

INTRODUCTION

Leap Electronic has been developing and producing PC interface Extension Protector for many years and it is also the main distributor in PC interface Extension Protector products. Leap Electronics' PCFACE series include the ISA-BUS, PCI, AGP-BUS and the latest PCI-Express, which are your best and most efficient solution.

PCFACE-mPCIE PC Interface Extension Protector has two main functions:

A. Extensible:
DUT could be hot swap under Windows process after testing. It could increase the efficient working performance of PCI-Express interface products in the design, testing, quality control and maintenance.

B. Protection:
To protect the power and signal of PCI-Express BUS could avoid being damaged the mother board in the production line. It is able to apply the PC test and experiment tool and it would be the best choice in PCI interface extension and protection.

INTERFACE

PCFACE-mPCIE Interface card as shown:

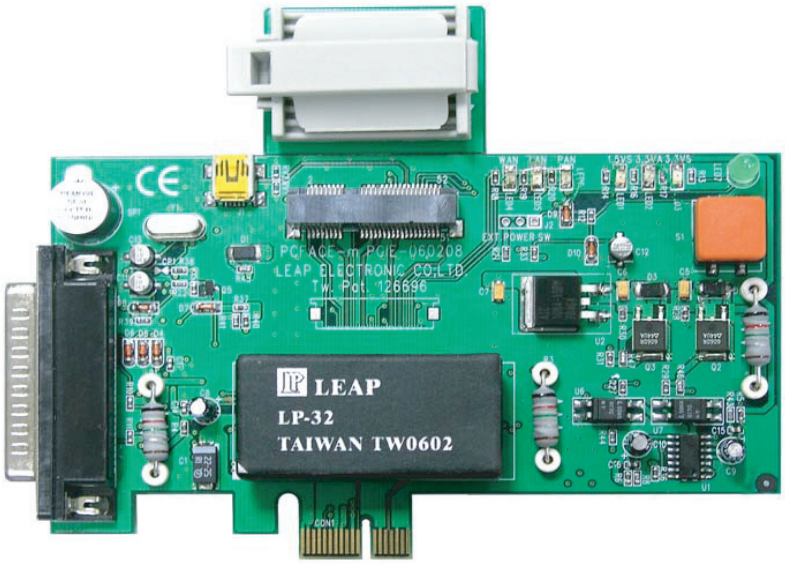


Figure Description

- **LED1~ LED3:DC Power Indicator**
  LED1:+1.5VS ; LED:+3.3VA ; LED:+3.3VS
  The DC Power SMD indicators includes LED1, LED2 and LED3 to indicate DC Power process.
- **LED4~LED6:Network connecting situation**
  LED4 is to indicate WAN state
  LED5 is to indicate LAN state
  LED6 is to indicate PAN state
- **LED7:Power source indicator (Green color)**
  Indicate the power source of PCFACE-mPCIE (M/B), if M/B is in power supply state.

INTERFACE

- **S1:A Manual Power Switch**
  Turn on/off the power
  LED1~3 illuminated when PCFACE-mPCIE is powered up.
- **CON1:PCI-Express Gold Finger**
  Use it to plug in the PCI-Express x 1 slot on the M/B
- **CON2:mini PCI-Express Slot**
  Offer extensible PCI-Express slot which could meet all kinds of mini PCI-Express test cards. When it is worn off, it sould be replaced.
- **CON3:Print Port Connector**
  Offer 25 Pin cable to connect between PC and PCFACE-mPCIE. It could though using Power on/off software to control PCFACE-mPCIE DC Power instead S1.
- **SP1:Buzzer**

FEATURES & SPECIFICATIONS

FEATURES:

- Extend the mini PCI-Express slot on PC motherboard to protect PC against the damage causing the DUT failure or short circuit.
- Provide convenient and safety PCI-EXPRESS interface in experiment，testing and design environment and increase the efficiency by 2~5 times.
- Offer the hot swap function which could save the booting time. You do not have to turn off the PC Power, when you want to exchange to next DUT
- Over current can be supervised by the indicators and Buzzer will buzz to warn user, make trouble shoot easily.
- Provide extend power switch and indicator for automation usage.
- ASIC designed with excellent stability and easy maintenance.

SPECIFICATIONS:

- DC Power Supply the maximum load current Specifications:
  3.3VS: 1.3Amp±5%
  3.3VA: 400mA±5%
  1.5VS: 650mA±5%
- Support the PCI-Express interface card of the x 1 lane
- For PCI-Express Version 1.1

INSTALLATION

You could exchange the interface card without turning off the PC power, which is the PCFACE-mPCIE main advantage. To make this function on work, you have to insert the PCFACE-mPCIE into PC first, installs the DUT drive in order for PC to identify your new DUT. Please follow the installation steps as shown:

(1) Turn off the PC power then open the cover.
(2) Plug the PCFACE-mPCIE into the PCI-Express x1 Slot on the M/B.
(3) Screw the mPCIE onto the PC rack

※**Notice:Do not plug any DUT into the slot of the PCFACE-mPCIE protector at this moment.**

(4) Turn on PC Power and finish the PC power up steps. When PC powers up, also the PCFACE-mPCIE at "ON" state and LED1~LED4 will be illuminated.
(5) By pushing "S1" on the PCFACE-mPCIE, it will turn off and three DC power indicators(Red) will be off.
(6) Turn off PC power
(7) Insert the DUT into the PCFACE-mPCIE slot and then turn on PC.
(8) You can follow the system steps to install the driver when the system searches a new PCI-Express card which needs to install the driver after powered up.

※**Note:There is unnecessary to install the PCFACE-mPCIE driver. If the external DUT needs to install driver, the installation steps will be same without mPCIE.**

INSTALLATION

(9) Go to the system hardware manager to ensure the installation completely after that it can execute the testing, experiment and analysis.

(10) After experiment and testing, you can enter the Hardware Wizard of the Windows to select DUT and set it into "Disable"

(12) Push "S1" on the PCFACE-mPCIE and confirm the power off then you can change DUT.

※**Attention:There are necessary to wait for your DUT running out the power when you continue testing and changing DUT if you want to remove your DUT.(The Time period depends on the DUT.)**

※**Attention:There may cause the failure if it is removed the DUT without turning off PCFACE-mPCIE power! There is no guarantee in this kind of operation.**

※**Attention:If the external experiment card overload or short current, the protection system of PCFACE-mPCIE will turn off the power automatically with off LED. After recovery, push "S1" again then it becomes normal process.**

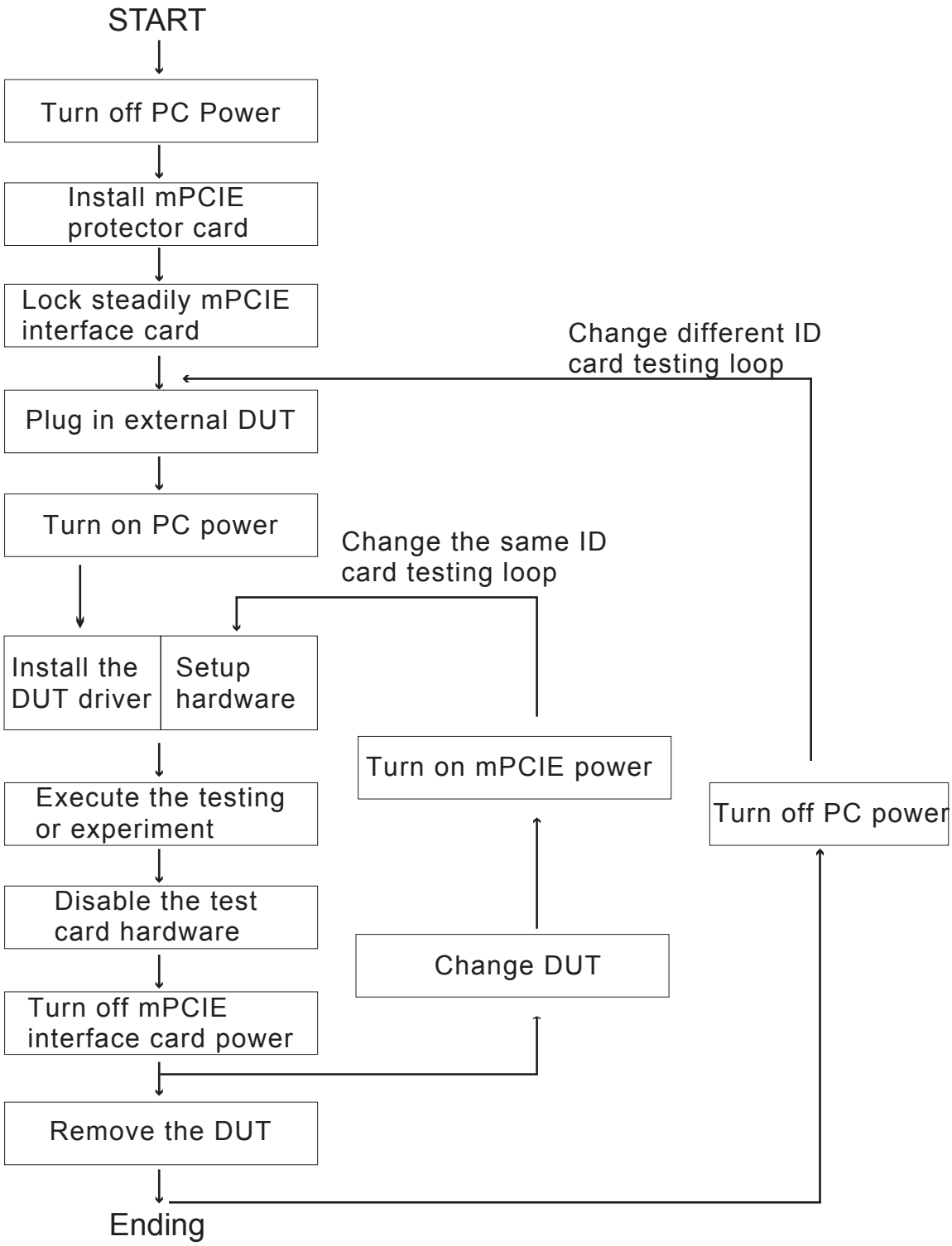
OPERATION PROCEDURES

1. Turn off PC power
2. Insert the DUT into PCFACE-mPCIE Slot and press to staady
3. Power the PC and PCFACE-mPCIE (If the system searches that there needs to install the driver, the DUT driver has to be installed.)
4. Execute the DUT testing or current testing experiment
5. After DUT finished testing, There is necessary to set the DUT into "Disable" at "Hardware Manager" when you want to test another same ID DUT again.
6. Push "S1" to turn off the DC power then change another DUT.

※**Warning:It is forbidden to remove or insert the DUT without turning off the PCFACE-mPCIE power.**

7. Push S1 to turn on the PCFACE-mPCIE power then enter the Hardware Manager to recover the testing card in the "Enable" process.
8. Execute testing
9. Repeat execute above steps without turning off the PC power to test and experiment more efficiently.

PCFACE-mPCIE Installation Flow Chat



POWER CONTROL

Introduction:

- This product includes the power control software for operation more efficient and convenient. By using this software, which could control the PCFACE-mPCIE power ON/OFF under Windows and do not need to push S1 Power Switch.
- By using the 25Pin D-type Print-Port Cable, connect between PCand PCFACE-mPCIE. The LED4 green light on PCIE16 is off when there is used the Cable.
- Insert the PCFACE-mPCIE CD-ROM, which includes the installation software, into the CD-ROM driver then click "setup" icon. When it complete install, it will display "PCFACE Series" icon which you can copy to the Windows desk for convenient operation when the software finished.
- Descriptions

  Click "PCFACE Series" icon to check mPCIE and the three process of DC-Power then open the LPT I/O Select Window as shown:

  1. Fig1: "PCFACE OFF Line" is shown that the system did not insert mPCIE or has been broken.
     Fig2: "PCFACE ON" is shown that mPCIE is "ON"
     Fig3: "PCFACE ON" is shown that mPCIE is "OFF"

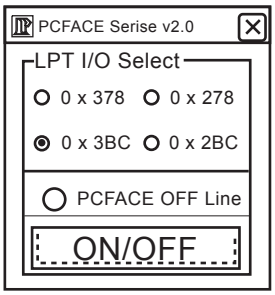


Fig1

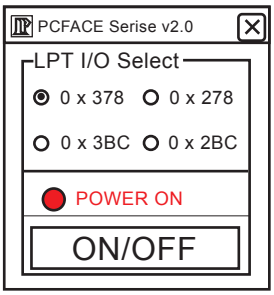


Fig2

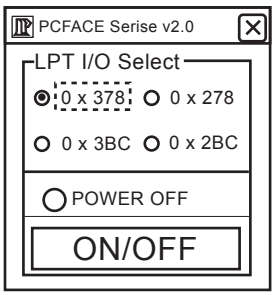


Fig3

POWER CONTROL

2. Select one of the "LPT I/O Select" options which includes 378, 278, 3BC and 2BC.
3. Click "ON/OFF" button which controls the PCFACE-mPCIE power. Three DC Power LED indicators will be OFF when PCFACE-mPCIE power is OFF.
4. Click the button again, it's will be ON and the three DC Power LED indicators will be lighted.
5. After the pervious steps could control the DC Power of mPCIE instead of the manual S1 action.
6. Click "Exit" to quit the operation window.
7. The S1 switch will be set in Disable state when you use the power control softwave.

MAINTENANCE

1. It is essential to turn off PC power if there needs to remove PCFACE-mPCIE card in order to avoid an inevasible damaged.

※**Warning:There is no guarantee while PC power is on and PCFACE-mPCIE is been removing.**

2. If there needs to change the position, there should be removed the DUT form PCFACE-mPCIE Slot to avoid the slot being destroyed.
3. The consumable of PCFACE-mPCIE should be changed after using a period of time or amount to ensure the stable system.
4. The consumable could be purchased through the sales department of Leap or our local distributors.