

# PCFACE - PCIE16 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-PCIE16 PC Interface Extension Protector has two main functions:

### **A. Extensible:**

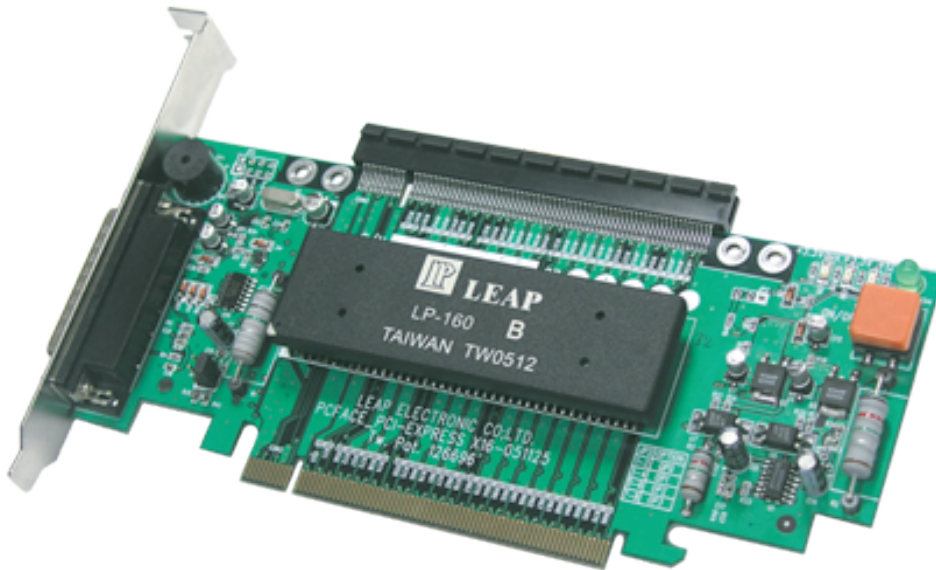
DUT could be hot swap under Windows process after testing. It could increase the efficient working performance of PCI-Express interface products in the design, testing, quality control and maintenance.

### **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-PCIE16 Interface card as shown:



### Figure Description

- **LED1~ LED3:DC Power Indicator**

+3.3V AUX, +3.3V, +12V: The DC Power SMD indicators includes LED1, LED2 and LED3 to indicate DC Power process.

- **LED4:Power Source Indicator**

Show the power source (motherboard) of PCFACE-PCIE16 if it is in the normal process.

LED4 Illuminated when the power source is "ON". PCFACE-PCIE16 could not be changed or removed.

LED4 Darkened when the power source is "OFF". PCFACE-PCIE16 could be changed or removed.

## INTERFACE

- **S1:A Manual Power Switch**

Turn on/off the power

LED1~3 illuminated when PCFACE-PCIE16 is powered up.

- **CON1:Print-Port Connector**

Use 25Pin Cable to connect PC and PCFACE-PCIE16 by the Power control software to turn on/off the power of the PCI-Express instead of S1.

- **CON2:PCI-Express Gold Finger**

Use it to plug in the PCI-Express slot on the motherboard

- **CON3:PCI-Express Slot**

Offer extensible PCI-Express slot which could overlap all kinds of PCI-Express test cards and support the x1, x4, x8 and x16 lane. When it is worn off, it could be replaced.

- **JP1:Adjust the load current limit of the DC12V Power**

The default position is 2 , 4(3.0Amp)

JP1	+12V CURRENT LIMIT
1 , 3	3.0Amp
2 , 4	5.0Amp

## FEATURES & SPECIFICATIONS

### FEATURES:

- Extend the 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 change 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.
- Available to purchase PCIE-SLOT for increase usage expiration

### SPECIFICATIONS:

- DC Power Supply the maximum load current Specifications:
  - +3.3V: 3.5Amp  $\pm 5\%$
  - +3.3VAUX: 740mA  $\pm 5\%$
  - +12V: 3Amp/5Amp  $\pm 5\%$
- Support the PCI-Express interface card of the x 1, x 4, x 8 and x 16 lane
- For PCI-Express Version 1.1

## INSTALLATION

You could exchange the interface card without turning off the PC power, which is the PCFACE-PCIE16 main advantage. To make this function on work, you have to insert the PCFACE-PCIE16 into PC first, installs the DUT drive in order for PC to identify your new DUT. Please follow the installation steps as shown:

※ If you are using the extension protection slot, it could screw onto the PCFACE-PCIE16 as shown. (The brackets and screws are included in the package.)



※ **Attention:** You will need to use corresponding lane bus of PCIE-SLOT (x1, x4, x8, x16)

- (1) Turn off the PC power then open the cover.
- (2) Plug the PCFACE-PCIE16 into the PCI-Express Slot on the M/B.
- (3) Screw the PCI-E16 onto the PC rack

※ **Attention:** Do not plug any DUT into the slot of the PCFACE-PCIE16 protector at this moment.

- (4) Turn on PC Power and finish the PC power up steps. When PC powers up, also the PCFACE-PCIE16 at "ON" state and LED1~LED4 will be illuminated.

## INSTALLATION

- (5) By pushing "S1" on the PCFACE-PCIE16, it will turn off and three DC power indicators will be off.
- (6) Turn off PC power
- (7) Insert the DUT into the PCFACE-PCIE16 slot and then turn on PC.
- (8) Push "S1" button again to power up then the three LED indicators on the PCFACE-PCIE16 should be illuminated
- (9) 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-PCIE16 driver. If the external DUT needs to install driver, the installation steps will be same without PCI-E.**

- (10) Go to the system hardware manager to ensure the installation completely after that it can execute the testing, experiment and analysis.
- (11) 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-PCIE16 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-PCIE16 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-PCIE16 will turn off the power automatically with off LED. After recovery, push "S1" again then it becomes normal process.**



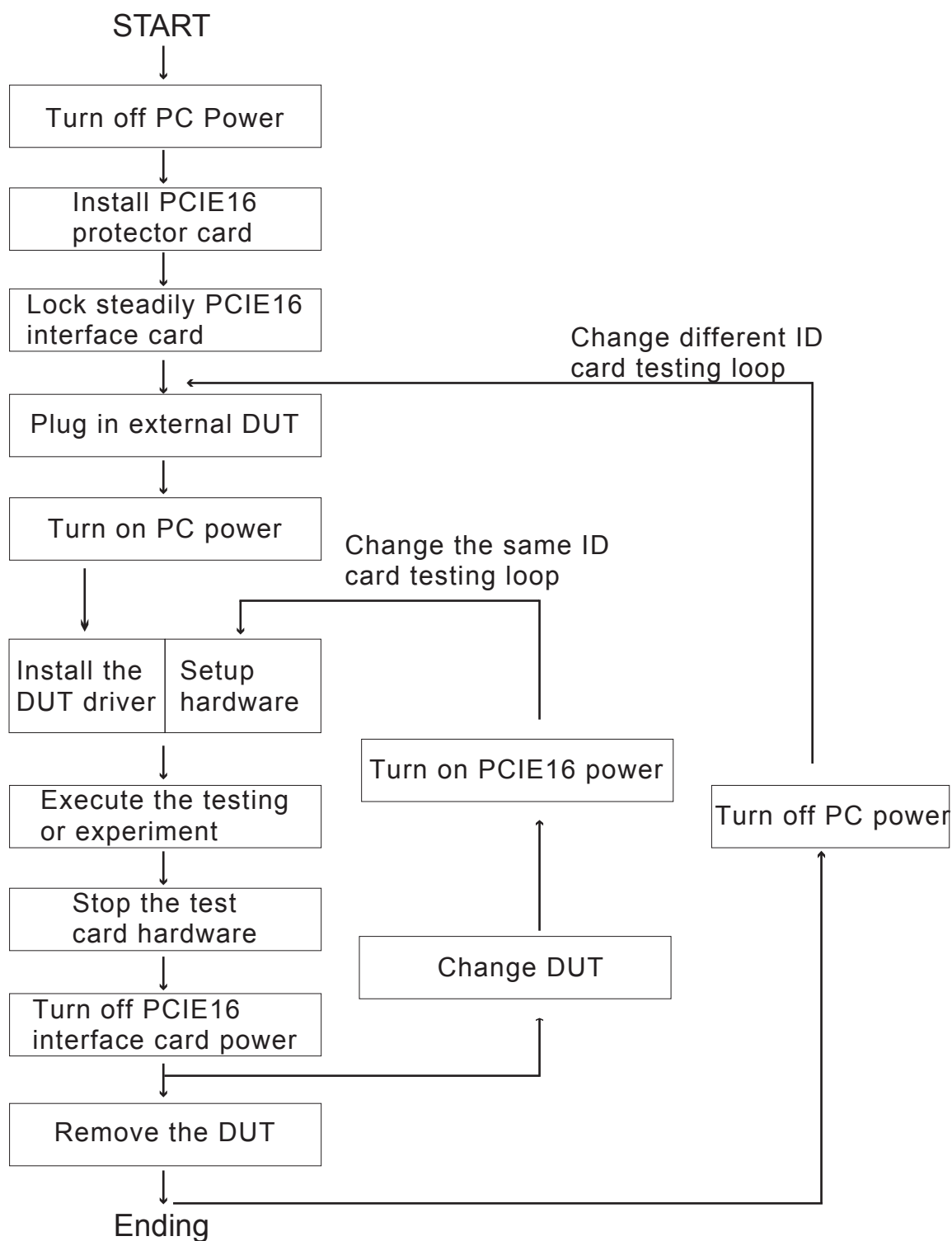
## OPERATION PROCEDURES

1. Turn off PC power
2. Insert the DUT into PCFACE-PCIE16 Slot and screw the bracket
3. Power the PC and PCFACE-PCIE16 (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-PCIE16 power.**

7. Push S1 to turn on the PCFACE-PCIE16 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-PCIE16 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-PCIE16 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 PC and PCFACE-PCIE16. The LED4 green light on PCIE16 is off when there is used the Cable.
- Insert the PCFACE-PCIE16 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 PCIE16 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 PCIE16 or has been broken.

Fig2: "PCFACE ON" is shown that PCIE16 is "ON"

Fig3: "PCFACE ON" is shown that PCIE16 is "OFF"

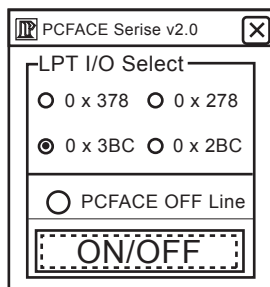


Fig1

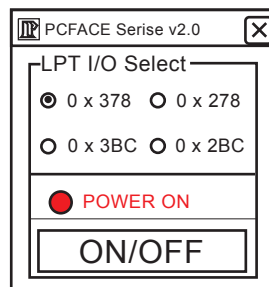


Fig2

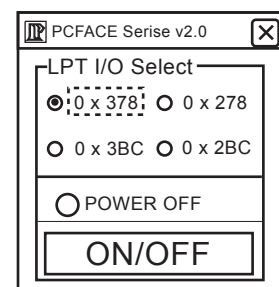


Fig3


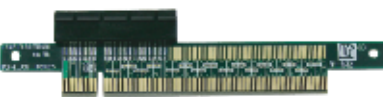

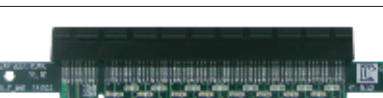


## MAINTENANCE

1. It is essential to turn off PC power if there needs to remove PCFACE-PCIE16 card in order to avoid an inevasible damaged.

※**Warning:**There is no guarantee while PC power is on and PCFACE-PCIE16 is been removing.

2. If there needs to change the position, there should be removed the DUT form PCFACE-PCIE16 Slot to avoid the slot being destroyed.
3. The slot of PCFACE-PCIE16, which is an expendable products, should be changed after using a period of time or amount to ensure the stable system.
4. It could be purchased through the sales department of Leap or our local distributors. The list as follow:

PCIE-SLOT1	
PCIE-SLOT4	
PCIE-SLOT8	
PCIE-SLOT16	

※**Note:** There has to co-work with the same lane bus slot and PCFACE-Express.

**SLOT1** is for x 1 lane card    ,    **SLOT4** is for x 4 lane card  
**SLOT8** is for x 8 lane card    ,    **SLOT16** is for x 16 lane card