

PEM-1X

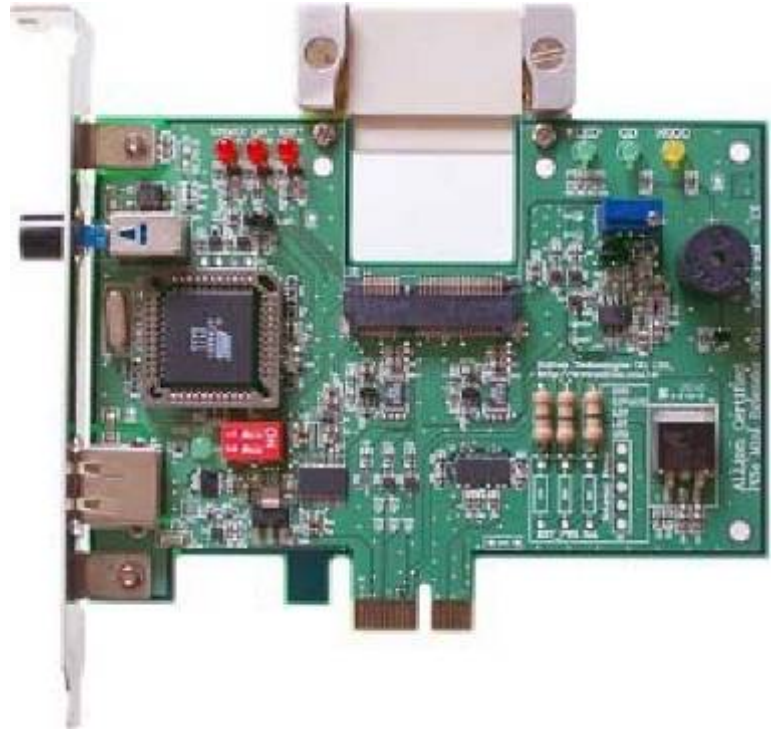
Standard PCI Express x1 and USB 2.0 signals can be transferred to PCI Express Mini connector. It supports over current and voltage protection. Cableless Remote Control makes swapping the DUT instantly without shut down the system with the software control under Windows. Easily and quickly test any PCIe mini card.

Focus on the third generation PCI Bus – PCI Express test solution, Allion designs the PCI Express Mini Extender Adapter, **PEM-1X**. PEM-1X transfers the PCIe x1 signal to PCIe mini connector and allows users to plug the PCIe Mini cards like WLAN, SATA...on the PC motherboard for testing.

PEM-1X accurate over voltage and current protection circuit can protect the PC and DUT from short and burning. You also can swap the DUT quickly without shut down the system under Windows. The optional control software and DLL (Dynamic Link Library) are for integrating the existence test application and execute the test easily, quickly and automatically. This Extender is especially useful for:

- **QA Test in Manufacturing.**
- **R&D Test and Debug**

Supports External Power Connector/Switch, Multi Cards and Buzzer Alarm new functions. Simplify operating process and enhance manufacturing.



Features

- **Over Voltage and Current Protection**
- **Hot Swap**
- **DUT Voltage and Current Measurement (NEW)**
- **Cableless Remote Control*1**
- **Remote Control Software & DLL Library (Optional)**
- **USB 2.0 Support**
- **External Power Supply Connector**
- **External Power Switch Connector**
- **3.3V, 1.5V, 3.3AUX Power LED Indicator**
- **WLAN Status LED Indicator**
- **Go / NoGo LED Indicator**
- **Buzzer Alarm**
- **15u PCIe Gold Plate**
- **Multi-Card Operation**

*1: Need SMBus support (Intel 266A and 27DA)

Power Consumption Measurement

PEM-1X build-in current measurement & ADC switch circuit. User can use software to get the accurate +3.3V、+1.5V voltage and current of DUT via PCIe Bus. Power consumption can be monitor in any time without connecting any instrument. Reduce the equipment purchase and maintenance cost.

Over Current Protection

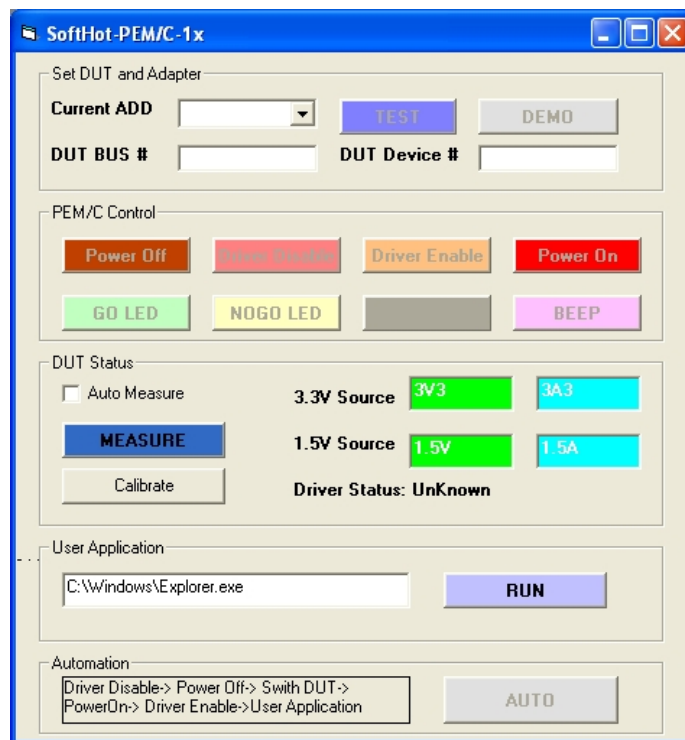
PEM-1X provide the +3.3V、+1.5V、3.3V AUX powers to DUT and monitor the power status. When any power occur the over current issue, PEM-1X will immediately and automatically power off the DUT and all signals on the Bus. Protect the system and DUT safe. Three long beeps alarm will indicate the abnormal issue.

Cable Less Remote Control

In the past, you need to connect a cable to control the adapter with software. Allion get ahead to control the adapter power with software via PCIe Bus. User can purchase this optional Windows software or library to develop the program to control the DUT power and driver enable/disable without cable.

Software Control

User can optional use the tool of PEM-1X to control the PCIe mini Bus power and DUT driver enable/disable. This tool can also lunch and execute the test application at the same time with clicking one button. DLL (Dynamic Linking Library) let user can develop or modify the current tool and test application to simplify the tester operating process in VB, VC, BC environment.



Specifications

- PCIe Mini Card Specification V1.0 Compliant
- Supports USB2.0
- 12-bit Resolutions for Power Measurement
- Current Measurement Range 0 ~ 1200mA
- +3.3V, +1.5V, +3.3AUX External Power Input
- Operating Temperature 0° ~ 55° C

Dimensions

- PEM-1X: 88 * 115.8 * 11.8 mm (W *L*H)
- Locking Clip: 11 * 43 * 8 mm (W *L*H)

Input Power Rating

- +3.3V: +3V ~ +3.6V
- +1.5V: +1.35V ~ +1.65V
- +3.3VAUX: +3V ~ +3.6V

Max Output Current Rating

- +3.3V: 1200mA
- +1.5V: 600mA
- +3.3VAUX: 275mA

Power Path Resistance

- +3.3V / +1.5V: TYP 0.055Ω
- +3.3VAUX: TYP 0.13Ω

Differential Bus

- Path Resistance: TYP 4Ω
- Input Capacitance: TYP 2pF @1MHz
- Off Capacitance: TYP 2pF @1MHz
- On Capacitance: TYP 6pF @1MHz
- Crosstalk: -50dB @10MHz
- Off Isolation: -50dB @10MHz

Optional Accessories



1. PEM-1SWD: PEM-1X Control Software

You can control the device power on/off and enable/disable quickly via this Software for PEM-1X. Your test application also can be enabled by this software. There is also an optional Dynamic Linking Library to develop the test software for improving your test process in manufacturing.



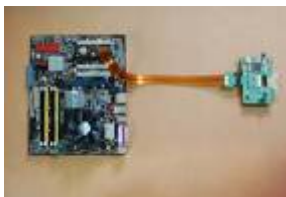
2. PEM-1BCP: Quick Swap Card Holder

Quick and safe to swap the PCIe mini card for manufacturing. Plug and press to hold the card easily and quickly. One press only to release the card quickly.



3. PEM-1CRL, PEM-1CRS: PEM-1X Bus Extender

High frequency usage will consume the PEM-1X Bus life. Bus Extender can protect and extend the PEM-1X Bus life.



4. PEM-1LC: 500mm Extend Cable

Extend the PEM-1X for 500mm and make your device can be tested out of system and set in the shielding box.

Please Contact Us

Allion Computer Inc.

TEL: +886-2-26557877 Ext: 1732

Fred Wu

fredwu@allion.com