Troubleshooting Guide

- **UUT works when plugged directly on the motherboard, but does not work when plugged on top of a PCI Extender.**

  Assuming the PCI extender is in good condition and has not been damaged, this condition occurs on motherboards where the IDSEL line is connected to an address line through a resistor larger than ~ 51 ohms. To verify this move the extender and UUT to another machine with a different type of motherboard, if the UUT works on the second system, the problem is the IDSEL line on the first system. You can also find the resistor for the IDSEL and measure it by an Ohmmeter. This resistor is usually right next to the IDSEL pin next to each connector.

- **UUT stops working after cycling the power switch of the extender, but when the PC is booted with the UUT on top of the extender, the UUT works fine.**

  The reason the UUT stopped working, is that the UUT has lost the configuration data when the PCI Extender was powered down. To solve this problem you must use the PCIUD or PCIUW software to read, save and reload the configuration data.

  Note: In addition to reloading the configuration space data, some devices require the driver to be stopped and restarted before the device will work properly.

- **Computer crashes when the extender power switch is cycled OFF and then ON, with UUT installed in top connector of extender.**

  This condition can occur if any of the following conditions exist:

  A. Devices on the UUT require a special timing sequence at the time of power up,

  Check the devices on the UUT to determine if it contains a PCI Controller or other Bridge Chips. If it does, install a 22 uF Capacitor between Pin 3 of U9 (PCI532, PCIX6432 and PMC2PCI) or U13 (PCIAX532 and PCIAX564), and GND. This capacitor will slow down the time between when the +5V goes high and the time the Chip enable is driven low.

  B. Some of the control signals of the PCI device on the UUT may be noisy or have glitches during power up. This may be corrected in most cases by providing pull up on these signals. PCIAX564 has these pull ups but other extenders do not.

  With the UUT installed on top of the extender use a scope to check the signals SERR#, DEVSEL#, LOCK#, FRAME#, TRDY# and STOP#, as the extender power switch is cycled, see if any of these signals spike below 2V and then return to 5v, if this occurs, install a 10K pull up resistor to +5V on the signal which caused the spike. After all the required signals have pulled up, test to verify the extender can now be cycled without causing a system crash.

  C. The extender is damaged.

  Several different UUT cards may be tested on an extender to see if all cards cause a system crash (which points to the extender) or the problem is depended on any specific type of UUT.

- **Computer crashes when the extender power switch is turned OFF.**

    A. This can occur if the ICs on the extender card have been damaged and have internal leakage, This leakage can cause some of the signals to be shorted to ground, VCC, or to each other.

    B. The UUT is being used, by the system software, at the time the extender power switch is turned off the software is looking for the board and system hangs when it can not find the UUT board.

- **Computer crashes when the extender power switch is in the OFF position and a new UUT is inserted.**

    This can occur if the extender card is damaged