Live Insertion in High Speed Data Communications Using 3.3V Bus Switches

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Introduction

Standard high-speed communications over normal telephone lines has been eclipsed by Asynchronous Digital Subscriber Line (ADSL) technology. This technology is proving to be faster than either ISDN or 56K modems and is rapidly growing in popularity. With the increased demand for ADSL connections there will be more central office switches, which will connect the these lines (through ADSL modem cards) to a variety of digital communication services. The central office switches are designed for 24 hours of continuous operation and are rarely put out of service. With such stringent requirements, the ADSL modem cards must be capable of live insertion so as not to have any significant effect on the system's runtime.

Application Description

Pericom's PI3B3125 3.3V 4 bit 2 port Hot Insertion bus switches can isolate a card without having any significant impact on system performance. The devices are typically arranged on a board as shown in Figure 1. They provide isolation at the time of insertion, by being activated or deactivated through external control signals. For further information on Hot Plug Switches and connector design please refer to Pericom's Application Brief 26 (AB26) and/or Application Note 3.

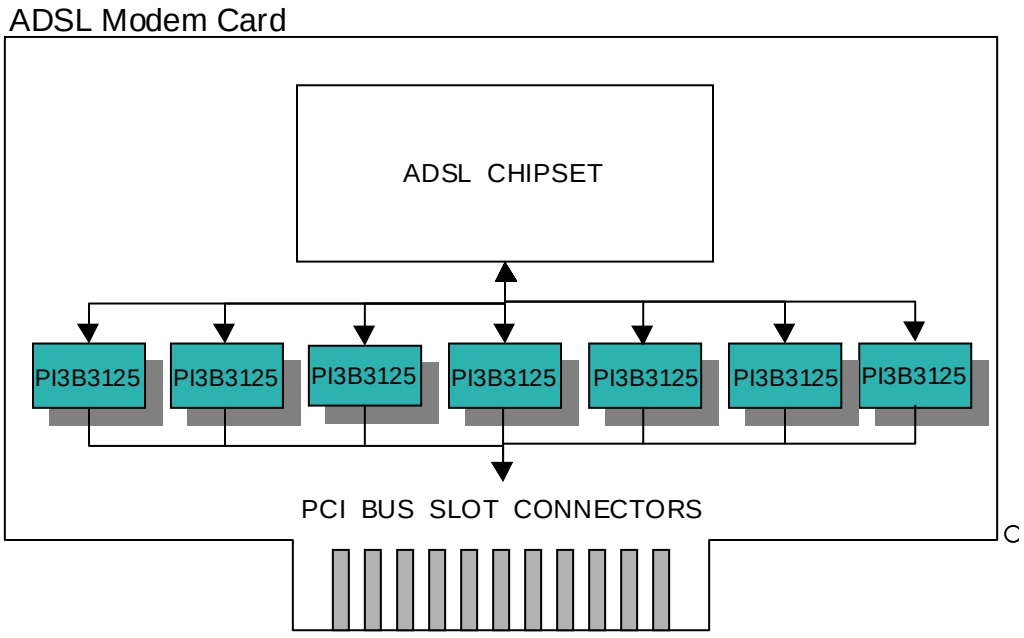

Figure 1. Using 3.3V Bus Switch for Add-in Card Hot Plugging