



Hot Swap Kit

Client

Pigeon Point Systems (“PPS”) is a privately held software and hardware development company founded in 1997. It focuses on products and services supporting the adoption of open modular platforms to replace proprietary architectures, with a primary focus on the telecommunications market and PICMG standards. Pigeon Point’s product portfolio includes world-class management components for modular platforms based on the AdvancedTCA® (ATCA), AdvancedMC™, and MicroTCA™ architectures, plus consulting and design services. Pigeon Point participates actively in defining the open modular architectures. An executive member of PICMG, Pigeon Point is a leader in the ATCA, AdvancedMC and MicroTCA subcommittees and is active in many other technical subcommittees. Pigeon Point is also a contributing member of the Service Availability™ Forum and active in its HPI Working Group. The company serves more than 140 customers, including 6 of the top 10 global communications OEMs. The list of its customers is headed by such industry authorities as Motorola Computer Group, Intel Corporation, Force Computers, Microsoft Corporation, Siemens Mobile, Texas Instruments, along with many others. PPS is headquartered among the redwoods in Scotts Valley, California.

In 2008 Pigeon point Systems was acquired by Actel Corporation and became a wholly owned subsidiary of Actel. Earlier this year, Actel and Pigeon Point announced a partnership to develop and market solutions based on the Actel Fusion® mixed-signal FPGAs to speed the design of AdvancedTCA blade and AdvancedMC carrier blade management controllers. By acquiring the leading provider of TCA management components, Actel now offers a comprehensive solution for proprietary and standards-based system management implementations in the industrial, military, telecommunications, and medical markets.

Solution

Hot Swap Kit (HSK) allows supporting CompactPCI hot swap under Windows 2000/Windows NT, Windows XP, and Windows XP Embedded. HSK controls the Plug and

Play (PnP) facilities of Windows to support automatic software connection and disconnection when CompactPCI boards are hot-inserted or hot-extracted. With the help of HSK, functional device drivers that fully support the PnP additions in the Windows Driver Model support hot swapping without further change.

With HSK installed on a Windows 2000 or Windows XP CompactPCI system, users can:

- Insert and extract CompactPCI peripheral boards into and from a chassis, using Windows 2000 on the system host processor to software connect and disconnect the boards without rebooting.
- Use native Windows 2000/XP application notification mechanisms to enable application monitoring of board insertions and removal requests.
- Optionally use additional APIs (augmenting the native Windows 2000/XP API set) for finer granularity CompactPCI-specific status and control.
- Set PCI-to-PCI bridge windows for CompactPCI bus segments to ensure sufficient address space for hot-insertions, even though the BIOS-allocated windows are not sufficient.
- Inform Windows 2000/XP of the physical slot numbering on your system, so that native Windows 2000/XP dialogues use intuitive physical slot numbers to communicate with an operator.
- Configure alternate Hot Swap Control/Status Register (HS_CSR) miniport drivers to enable hot swapping of Full Hot Swap boards not based on Hot Swap Friendly CompactPCI interface devices.
- Develop new platform drivers and alternate HS_CSR miniport drivers for your specific hardware.

Auriga’s Contribution

Full life-cycle development and maintenance.

Implementation

Windows 2000/NT, Windows XP, and Windows XP Embedded, C.