Remote Kiosk Management and Support with KVM

In the last 10 years, as technology systems have advanced, scores of consumers have become accustomed to the speed and convenience of handling their own transactions electronically. This has led to the rise of self-service, interactive kiosks as a solution for companies to automate point of sale (POS) and customer service activities as well as reduces business costs.

Due to the rise of information, interactive kiosks now offer flexible and specialized services that can be found in public places such as shopping malls, airport and railroad terminals, as well as self-payment stations at retail stores and parking facilities. Other examples of interactive kiosks include ATMs, coin counting dispensers and movie rental machines at the local supermarket – all of which are powered by PC-based computing devices that will ultimately require their own troubleshooting and maintenance.

In order to easily maintain and manage self-service kiosks installations, organizations might consider an IP-ready appliance that offers BIOS-level access and remote power control. This article will highlight the benefits and applications of kiosks, as well as a unique hardware tool from ATEN that offers end-to-end kiosk management functionality.

ATEN Remote Kiosk Management Solution (KN1000 over the NET)

The**KN1000 KVM over the NET**, ATEN's flagship solution for kiosk management, combines remote "over-IP" BIOS-level access, power control, serial console management, as well as virtual media functionality in a single, all-in-one unit.

The KN1000 taps into the burgeoning interactive kiosk market, which has come to the forefront recently as a convenient and popular method for point-of-sale transactions and customer support. The KN1000 is a reliable and cost-effective product which allows organizations to remotely access and manage multiple, widely distributed computer installations and self-service kiosks. Specifically, the KN1000 is a control unit that enables operators to monitor and access computers or kiosks from remote locations utilizing a standard Web browser.

Enabling users to manage and control kiosks, servers and computers, the KN1000's built-in power outlet provides remote power management (on, off and rebooting). Through the KN1000's serial console functionality, users can configure network switches and other serial control devices. Furthermore, the KN1000's virtual media functionality allows users to perform diagnostic testing, file transfer, as well as OS and application patches from a remote console. With this technology, there is no need to dispatch a field service technician to physically load a CD directly onto the server to perform data-related tasks.

The KN1000 provides convenient and efficient troubleshooting, allowing users to resolve any problems at the BIOS level from anywhere. BIOS-level access enables IT administrators to monitor and access the kiosk server for BIOS-level troubleshooting from remote locations using a standard Internet browser, thereby eliminating the need for on-site maintenance.

By providing remote BIOS-level access and a power management capability, the KN1000 appliance enables users to access and monitor kiosk computers situated in diverse locations from a single location. The kiosk's display appears on a local monitor – either full screen or as a scaled window – allowing administrators to remotely troubleshoot the kiosk. Providing further convenience, the KN1000 allows administrators to turn the kiosk server on, off and reboot directly from a remote console.

The KN1000 supports high-resolution video up to 1600x1200 at 60Hz, and offers multi-platform support for Windows, Sun, Linux and Mac OS and VT100-based serial devices. Additionally, the KN1000 offers powerful security features including password protection, IP/MAC filtering, smart card/Common Access Card reader support and flexible encryption. The KN1000's configurable permission feature limits access to only specific kiosk computers for authorized users and groups.

KN1000 Applications and Benefits

The KN1000 is an ideal hardware tool to manage a range of kiosk environments such as:

- **Mass Transit (Airports and Train Terminals)**
    - Ticket purchase kiosks
    - Check-in kiosks
    - Flight/train schedules (including arrival/departure times; in-transit status)

- **Retail Environments**
    - Payment kiosks
    - Self-service kiosks (payments; returns)
    - Information kiosks (location of stores)
    - Movie rental kiosks

- **Public Services and Exhibition Centers**
    - Check-in kiosks
    - Local activities kiosks (concerts; exhibits; etc.)
    - Public service information kiosks (police, fire and emergency information)

Improved Manageability

Powered by computer hardware and software, many interactive kiosk systems are vulnerable to all types of system failures. Should a crash occur at the software level, IT administrators can leverage the KN1000 to connect to the kiosk at the BIOS level to troubleshoot and/or reboot the operating system. With complete access to the BIOS level of kiosk terminals, users can leverage the KN1000 to address technical issues such as the "Blue Screen of Death."

The KN1000 offers flexible power control and safe shutdown support. Leveraging the unit's built-in safe shutdown software, IT administrators can manage servers remotely and completely shut down servers before powering them off. The KN1000 also offers an auto-ping feature which, using an Internet Control Message Protocol (ICMP) ping packet, can determine if a connected device is still operating. If it is found that the IT equipment is locked up, the KN1000 can automatically reset the device.

Eliminate Costly Field Service Visits

Web-based access to the hardware has its own benefits. With the KN1000, organizations no longer are required to dispatch field technicians to off-site locations to service/troubleshoot kiosks. By performing all kiosk maintenance tasks remotely via the Internet, organizations can significantly reduce travel costs and improve kiosk uptime– this equates to improved customer satisfaction.

Reduce Energy Consumption

Since kiosks can be controlled via the Internet, organizations can reduce energy consumption by remotely powering down kiosks when they are not being used. It has been found that by powering down a computer or kiosk eight hours a day can extend its life by 30 percent. For example, supermarket POS terminals and movie rental kiosks can be shut down once the store closes for the night to reduce energy expenditures. Also, airports can minimize the number of check-in kiosks during off-peak hours. In both situations, the KN1000 can be configured to automatically power up kiosks at pre-determined, scheduled times.

To help administrators manage and control widely distributed servers from a remote console, a built-in, single-port power switch provides remote power management to turn servers on, off as well as reboot. Additionally, with the KN1000, administrators can schedule on/off/reboot for individual outlets, and power management tasks can be scheduled on a daily, weekly, monthly or user-specified time.

Conclusion

According to a report by **NextGen Research**, the global kiosk market will see continuing growth over the next few years. In the report, "*Next Generation Kiosks and Self-Service Technology: Providing the Customer a Better Experience While Increasing Efficiency, Controlling Costs*," it is noted that the kiosk market will grow to an installed base of more than 2.5 million units worldwide in 2014, up from about one million units in 2009.

To meet the rapid growth in demand of the interactive, self-service kiosk industry, ATEN's KN1000 provides users with an array of features to manage kiosks in a broad range of industries. The KN1000 has a clear advantage over software-based remote access tools by offering BIOS-level functionality, a key feature which provides time and cost reduction as well as improved customer satisfaction and productivity. Software only-based models proliferate because they offer their own benefits, but there will always be an advantage, in terms of control and recovery, to having access on the hardware level.

For more information on the ATEN KN1000, please visit **http://www.aten.com**.