



A+SAMP SPECIFICATIONS

- Server-Class Platform Management
- 266 MHz PowerQUICC[®] II Processor
- 128 MB of Main Memory
- Up to 4 GB of Removable Storage
- PCIe (32) Interface
- 2 MB of Boot Storage and Diagnostic Firmware
- Dual 10/100 External Ethernet
- Operating System Agnostic Ethernet-Based Interface to Host
- USB 1.1 I/O for Modem and other USB Devices
- External Power for Continued Operation Even if Server Power Fails
- Separate Instrumentation Processor
- Temperature Monitoring of Up to Eight Points
- Fan Speed Monitoring and Control
- Server Power Monitoring
- Server Power and Reset Control
- I2C Connection to System Management Bus (SMBus) or IPMI Native Implementations
- Multiple Watchdog Timers
- Control for Front Panel Display 16 x 3 Line Graphics and Text Display, and LED indicators
- Fully-Featured Embedded A+Linux
- Security: NAT Firewall, Secure HTTP, SSL, SSH
- Real-Time Configuration of PXE Boot to Boot the Server to the A+SAMP
- Support for Custom User Applications on the A+SAMP
- Standards Based Secure Programmatic Interfaces: SA Forum HPI B.01.01 and SNMP v3
- Flexible and Secure User Interfaces: Web-based, Command Line

The Augmentix[®] Server Availability Management Processor™ (A+SAMP™) card is a self-contained, independent management card that significantly enhances the availability and manageability of server class PCI systems.

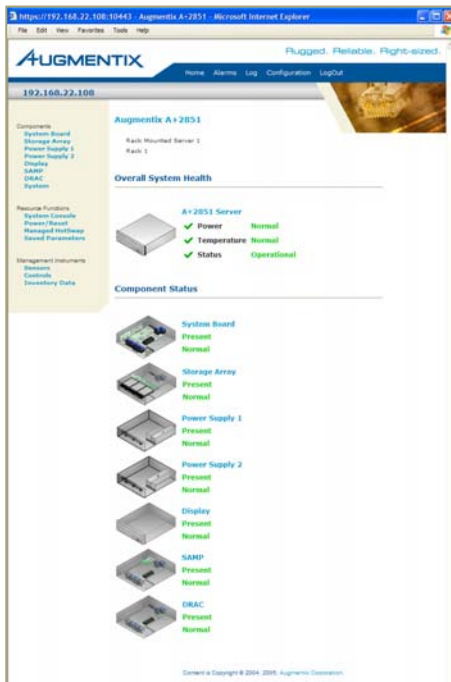
Your mission-critical applied computing platform is at the heart of business operations. So ensuring the reliability and availability of servers and applications is vital for business success. The Augmentix Server Availability Management Processor (A+SAMP) maximizes uptime of your mission-critical applications.

Ideal for remotely located servers, the A+SAMP consists of a patent-pending independent single-board computer and software suite that monitors and controls a server without assistance from the host processor or local operator. It provides extensive availability management and remote management services without requiring the server's operating system to be booted or operational, enabling independent corrective action to minimize application outages.

The A+SAMP continuously monitors the environment and hardware, and has the potential to be programmed to manage the operating system and applications, and proactively addresses impending failures. If a fault occurs that the A+SAMP is unable to autonomously correct, it can be programmed to alert a remote location. A technician can remotely access and control the server through the A+SAMP to diagnose and correct errors quickly, dispatching a service technician only when hardware replacement is required. On the Augmentix A+1950 2U Server, the A+SAMP includes a secure IP KVM (keyboard, video, mouse and virtual floppy/CD) function that provides the technician with total access to monitor or reconfigure the remote server.

The A+SAMP's fault detection includes both hardware and software failure detection. With software statistically being the root cause of the vast majority of server outages, A+SAMP's ability to detect software faults and take corrective action significantly improves overall application availability.

TYPICAL A+SAMP INTERFACE PAGES



A+SAMP Web Interface Home Page



A+SAMP Web Interface System Board Page

FLEXIBLE HARDWARE INSTRUMENTATION

The A+SAMP card is highly adaptable to a wide range of standard servers due to its flexible approach to machine instrumentation. The A+SAMP also includes telco-style alarming allowing for integration of the server into rack-based management infrastructures.

STANDARDS-BASED SOFTWARE

While the A+SAMP includes unprecedented flexibility in interfacing with server platforms, it also includes a consistent, open standards-based interface to user applications or high-availability middleware, based on the Service Availability™ Forum's Hardware Platform Interface (HPI) specifications – the A+HPI Availability Management Software Suite.

The HPI interface is an ideal API for high-availability application software and middleware that needs to actively monitor and control a single server or multiple redundant platform modules. The A+HPI software includes a distributed API so management of an entire multi-node system can be accomplished from any one node or multiple nodes in the system.

Alternatively, management applications accessing the A+HPI interface can be located on any management station that can reach the managed nodes over an IP network.

In addition to the native HPI application program interface, the A+SAMP provides three additional interfaces to all platform management data and control capabilities. These allow non-HPI compatible applications or technicians to have the same management control that is available via the distributed HP interface:

- SNMP v3 - using the standard SA Forum HPI MIB, SNMP-based management applications have full, secured access to management data and functions.
- Embedded web server - using SSL and secure http, a user-friendly interface is accessible via standard web browsers.
- Secure shell - using SSH, a full Linux shell is available for scripting queries and actions through a set of HPI Command Line Interface (CLI) programs.

INTEGRATED SERVER SOLUTIONS

The A+SAMP and A+HPI Management Software integrate with features on the Augmentix Front Panel Display (A+Display™) to provide unmatched serviceability features to an otherwise standard server platform. The A+Display includes alarm LEDs, a graphics and text display, audible alarms, and a server hot-swap request switch. Through standard HPI function calls, application software or high-availability middleware can directly access all of the A+Display's features for application-specific alerts. In addition, the A+Display can be used to notify system technicians of alarm conditions detected by the A+SAMP.

PXE BOOT

The A+SAMP provides a patent-pending internal PXE Boot service that allows the server to boot locally from the A+SAMP. Using internal PXE Boot, a remote administrator can boot the server from the A+SAMP for extended diagnostics, automatic imaging or custom configuration. Since the PXE Boot service is provided internally to the server, the service is secured and manageable at the system level and does not require additional infrastructure.

REMOTE MANAGEMENT

The PXE Boot capability, when combined with the Augmentix highly-secure IP KVM technology available on the Augmentix A+ 1950 2U Server, provides unprecedented remote management capabilities allowing the remote operator to do anything a local operator can do with the exception of swapping out or upgrading hardware.

These features provide a powerful set of remote diagnostic, configuration and recovery tools. BIOS settings, disk partitioning and operating system installations are supported remotely using the CompactFlash on the A+SAMP card, or the remote operator's local CD-ROM or floppy disk.