

PAX



MultiChannel Audio and Interoperability Controller

Overview:

The PAX is a microprocessor based multi-input, multi-output, audio controller. Because the PAX has an integrated 16x16 audio switch matrix onboard, it is capable of switching any of sixteen inputs to any of 16 outputs. Additionally, multiple inputs and outputs can be used concurrently or in a multi-zone, multi-channel and inter-agency broadcast manner. The PAX occupies only 2 units of rack-space and consumes less than 20 Watts of power.

A TYPICAL MULTI-RADIO INTEROPERABILITY INSTALLATION consists of a single PAX with sufficient radio interface cards providing cross channel rebroadcast, repeating, and agency to agency communications among two or more radio channels.

A TYPICAL EMERGENCY MANAGEMENT OR PORTABLE COMMAND CENTER INSTALLATION consists of a single PAX unit, a portable laptop computer, an operator's microphone and speakers, a dispatcher's headset, and sufficient radio interface cards to access critical emergency radio channels and/or satellite radios, sufficient telephone interface cards to allow incoming and outgoing emergency telephone calls and telephone paging, and sufficient line cards to interface to intercoms or other emergency voice channels. Additionally, multiple computer based consoles can be connected to the PAX to act as a multi-console dispatch system. Each console will have full use of all radio, telephone and other voice channels connected to the PAX Controller.

REMOTE CONTROL VIA DTMF

Audio inputs can be switched remotely via the PAX's onboard DTMF decoder. DTMF codes can be user programmed into the PAX allowing channel to channel or multiple channel connections based on digits dialed from field personnel over the radio or from digits sent from a dispatch control console. The PAX will confirm the action by sending the appropriate DTMF response.

REMOTE CONTROL VIA DATA CHANNEL

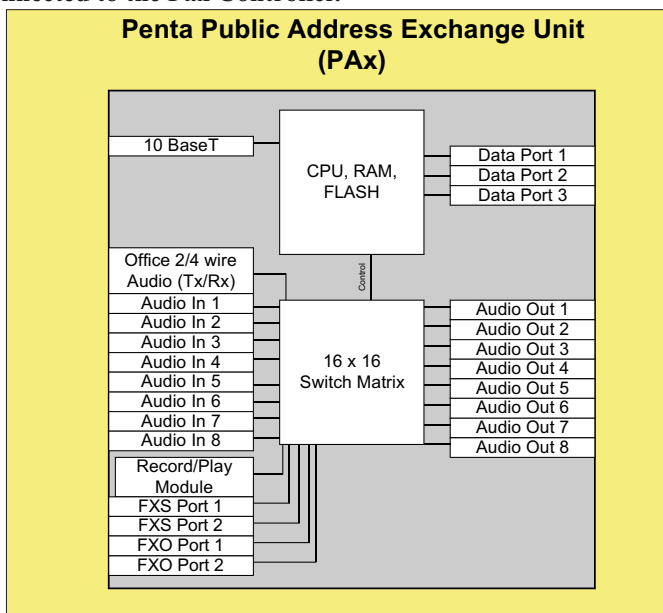
Audio inputs can be switched remotely via the PAX's onboard 10BaseT Ethernet or one of the three configurable asynchronous serial channels. The remote application sends a command to the PAX to connect an input(s) to an output(s). The PAX will confirm the action by sending the appropriate data response.

SUPERVISORY CONTROL OF AUDIO COMPONENTS

Using onboard Ethernet, serial communications, and I/O, the PAX can communicate directly with several manufacturer's audio, video and control components to provide remote supervision, device management, verification, and error reporting. The PAX will interrogate the devices and report all relevant or pre-configured data to the remote equipment.

LOCAL AND REMOTE PAX CONFIGURATION MANAGEMENT

To locally program and configure the PAX requires Penta's PAX Communicator software installed in a laptop or computer connected through the primary serial port or the Ethernet of the PAX. The PAX can be re-configured and altered remotely via Ethernet or serial port using the PAX Communicator or a control system application that uses the PAX software application interface commands (API). This allows the altering of priorities, volume settings, and default parameters of the PAX as required for the location.



Modules: *All modules are HOT Swappable

LINE MODULE (2/4 wire)

- ◆ Supports 2 or 4 wire leased or dedicated circuit with DTMF signaling

PA/RADIO MODULE

- ◆ 4 wire audio in/out for radio or Public Address use
- ◆ 600 ohm, balanced, and transformer isolated audio input/output
- ◆ Tone generation for Alert, Chime, or EIA sequential tone Radio PTT
- ◆ E&M I/O for PA local mic PTT sense, Radio PTT, and Radio COR/CAS detection

DIAL-UP MODULE (FXO)

- ◆ Standard 2-wire dial-up line support with DAA on the module
- ◆ DTMF
- ◆ Ring Detect
- ◆ Loop Start

GPIO MODULE (General Purpose Input/Output)

- ◆ 16 bit input or output (selectable bit by bit for a total of 16)
- ◆ 2-wire audio I/O

PAX Basic Unit

2 RU 19" Rack Mount
12-24VDC
User Programmable FLASH Memory
512 KB Battery backed RAM
Real Time Clock with Battery Backup

10Mbit Ethernet (10 Base T)
TCP/IP Protocol Support
3 Asynchronous serial channels
16x16 non-blocking audio matrix
16 slot mother board for PAX modules

Typical PAX Multi-site Control Application

