

FEDERAL SYSTEMS DIVISION



www.compunetix.com

Compunetix, an ISO 9001:2008 company, is a small business with over 45 years of experience in designing and manufacturing communications equipment that is located 15 miles east of Pittsburgh in Monroeville, Pennsylvania.

The Federal Systems Division of Compunetix specializes in the design, manufacture, installation and lifetime support of its mission-critical voice communications systems for the aerospace, military, civilian government, emergency response, and other markets where reliable mission-critical communication is a necessity.

For assistance in determining the best solution for your application, contact sales at the Federal Systems Division:

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NEXT GENERATION MISSION VOICE



Your Portal to all Mission Communications

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Mission Voice

Mission Voice is the use of specialized audio teleconferencing equipment to interconnect all those people who have a role in the implementation and execution of a mission. The mission may involve launching a rocket, downloading data from a satellite, supervising a training mission, or any other activity intended to accomplish a mission-related goal. The mission voice parties may be supervisors, coordinators, technicians, specialists, or support personnel.

There are three basic components of a mission voice system:

- Voice Switch
- Mission Instruments
- Instrument Connectivity

Mission Voice Conferencing Switch

The conferences associated with a mission voice system are created by combining the audio from selected sources. This is done within the central voice switch. For this task, Compunetix offers the fully digital **CONTEX® MVP**, an extremely flexible mission voice switch that has powerful configuration and diagnostic capabilities. With the **CONTEX MVP**, you can create conferences of various types to interconnect telephones, mission instruments, and radios in virtually any combination. You can compartmentalize voice by assigning security levels and domains to resources such as conferences, ports, administrators, and end users. You can also grant or deny access to instrument functions such as conference join and conference broadcast.

Mission Instruments

End users access mission voice at a mission instrument. Compunetix offers a wide range of full-featured mission instruments, including rack mount, desktop, and PC-based models. These mission instruments feature the **GT** touchscreen user interface, which displays multiple pages of soft line keys, soft function buttons, a conference detail panel, and a call queue with a dial pad and phone book. Compunetix also offers the **HAI-12**, a hazardous area instrument with a traditional user interface. The user simply taps a line key to select its assigned conference. If granted permission, a mission instrument user can join conferences together and break them apart again or broadcast to a number of selected conferences. Mission instruments can be independently configured as either fixed or follow-me positions.

Mission Instrument Connectivity

Within the local **CONTEX MVP** mission voice system, mission instruments interface with the central switch via a copper or fiber-optic cable. However, the **CONTEX MVP** also interfaces with T1 lines and IP/Ethernet. To transport mission voice to a remote location via T1, Compunetix offers the **KTMX**. To transport mission voice via VoIP, Compunetix offers the **iKTMX**. These products make it possible to locate a **CONTEX MVP** system’s mission instruments at virtually any remote location.

Mission Voice Applications

The mission voice equipment described above is interconnected in a custom configuration to support mission-related activities. For example, mission voice systems are used by various branches of the military to coordinate shipboard activities, supervise training exercises, and launch missiles. Various departments of the U.S. Federal government use mission voice to interconnect offices and administer departments. Private companies use mission voice to support their customers during missions and coordinate tests associated with research and development projects.

CONTEX® GT Touchscreen Interface

Compunetix mission instruments employ the GT user interface, a touchscreen GUI that is intuitive and efficient. Because the same user interface is common across all GT mission instruments, end users don’t have to relearn a new user interface when their mission instrument is upgraded. The GT user interface can be configured for different styles of mission instruments with different size screens. The figure below depicts the GT 4x48. The GT user interface supports multiple pages of line keys and includes a full range of mission voice features, including:

Monitor

Simultaneously monitor audio from any conference with the headset/handset or the front panel loudspeaker.

Join/Unjoin

Join conferences and calls together to create a large talk group, then **Unjoin** the talk group to recreate the original conferences and calls.

Broadcast

Start **Broadcast** mode, then select multiple conferences in talk-listen mode. All conferences can hear you, but they can’t hear one another.

Phone Directory

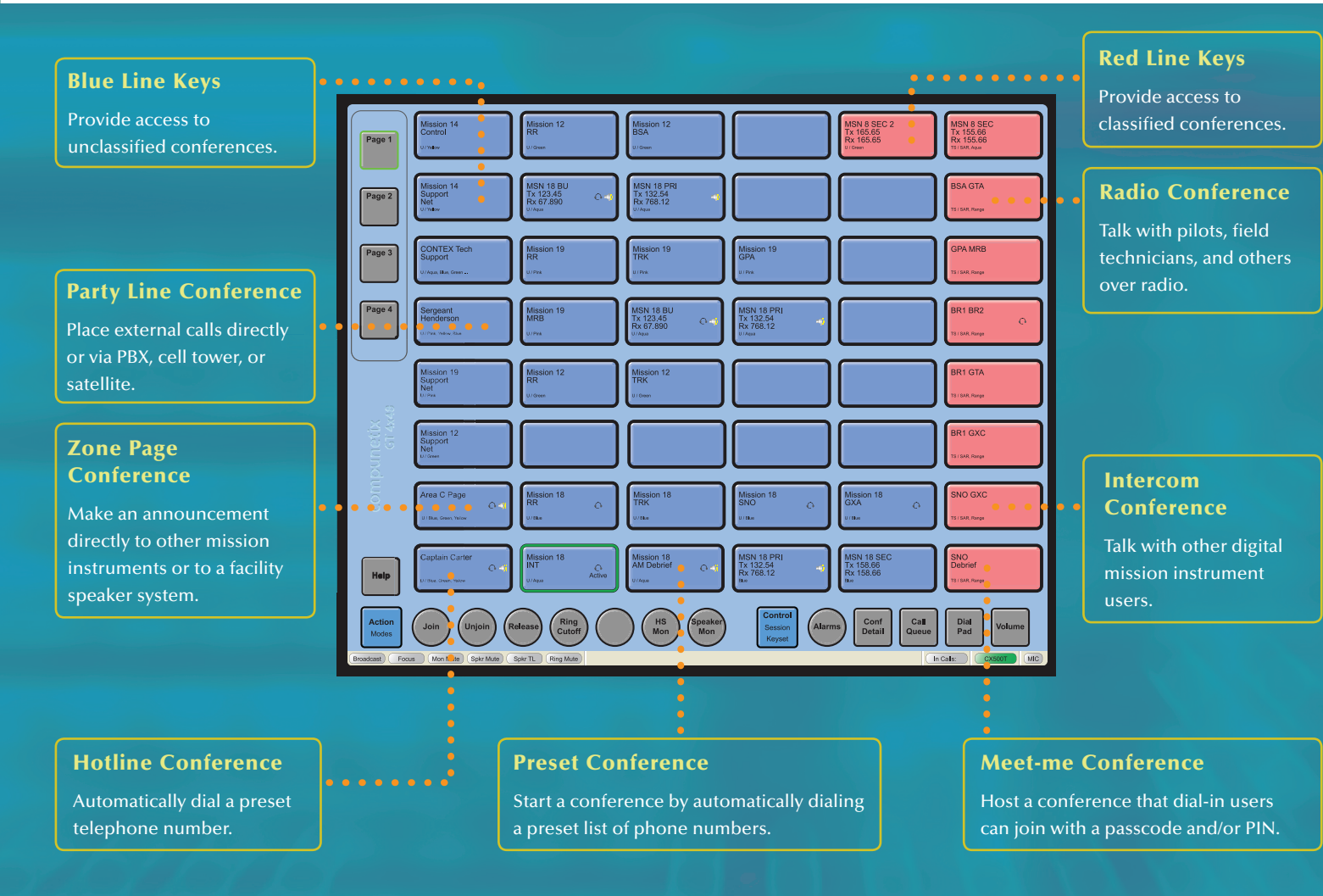
Display the phone directory and place calls by using the **Dial Pad** or by selecting parties from the **Phone Book**.

Conference Detail

Display all the parties in a conference. Disconnect parties or change their audio mode between talk/listen, talk only, monitor only, and mute.

Status Bar

Review the status of your mission instrument by glancing at the status bar. The status bar indicates when special functions such as Broadcast, Speaker Mute, Monitor Mute, and Focus are turned on.



Conferencing Network

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Voice Management and Coordination

- Collaboration of VoIP/PSTN, Radio, Cellular, Satellite ...
- Secure/Encrypted Conferencing

Powerful User Positions

- Access to All Voice Assets
- Simultaneous Monitor of Conferences
- Red/Black Operations

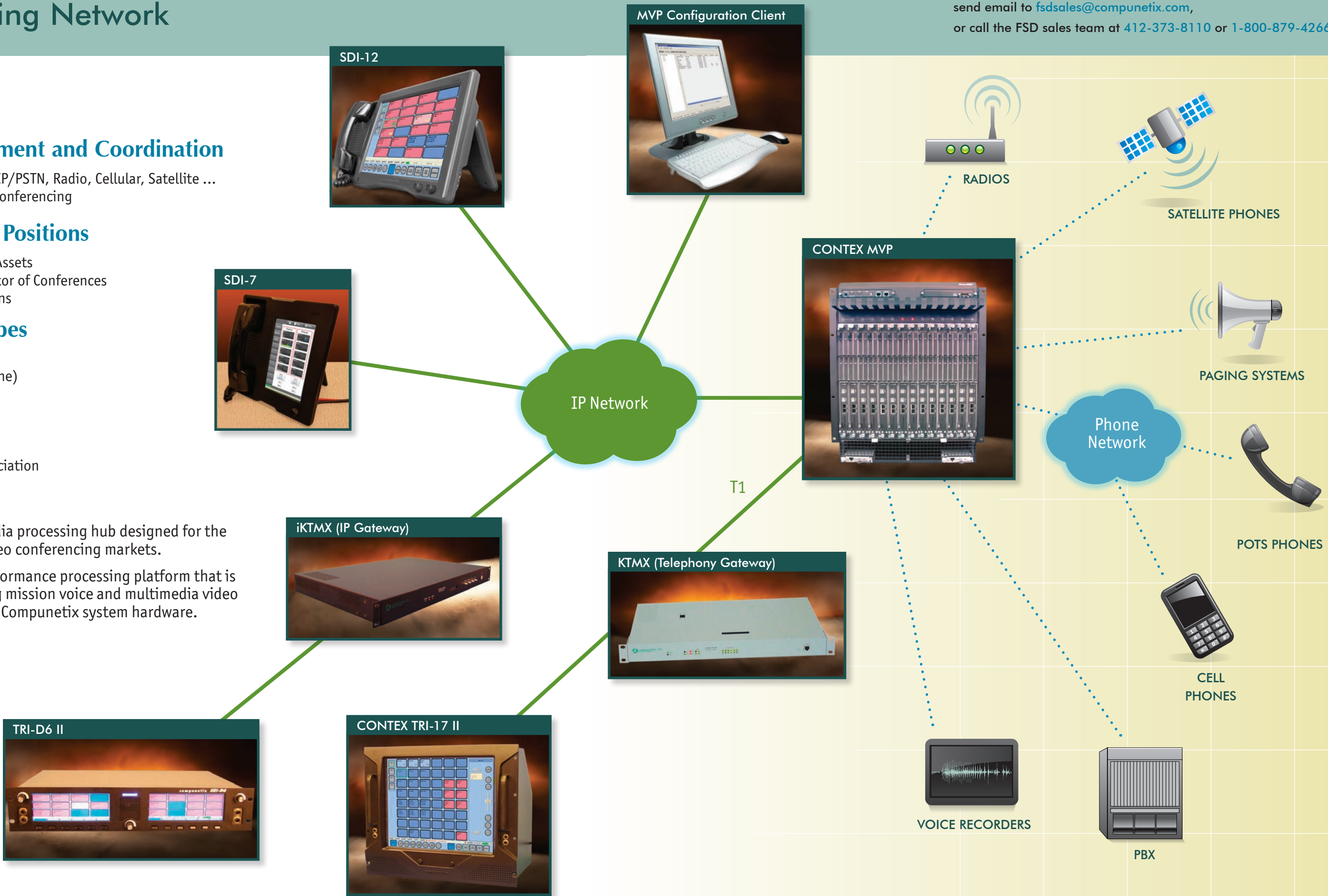
Conference Types

- Intercom
- VDL (Voice Direct Line)
- Admin
- Hotline
- Radio
- Preset
- Meet-me with Enunciation

CONTEX MVP

The MVP is a multimedia processing hub designed for the mission voice and video conferencing markets.

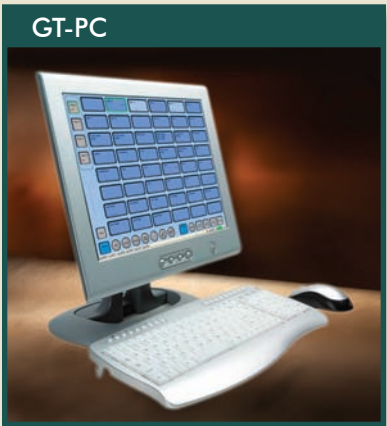
The MVP is a high performance processing platform that is capable of performing mission voice and multimedia video functions in the same Compunetix system hardware.



Mission Instruments

Mission Instrument Characteristics

DESKTOP



RACK MOUNT



	Rack Mount	Desktop	Touchscreen Interface	Line Key Pages x Line Keys*	Diagonal Screen Size	Line Key Text (rows x columns)	Red/Black	VoIP Capable	Copper Interface	Fiber Interface	Stereo Audio	Foot Switch	Built-in Speaker	LED Ring Indicator	Dimensions (H x W x D)	Comments
CDI-17		●	●	4x48	17"	3x10		●	●	●	●	●			--	External DAP,*** PC, touchscreen monitor.
CDI-17 II		●	●	4x48	17"	3x10	●	●	●	●	●	●			--	External SDAP, PC, touchscreen monitor.
GT-PC		●	●	5x36	17"	3x10		●							--	VoIP only, soft client on PC.
HAI-12	●			8x12	--	2x10			●	●	●	●			10.50" x 12.75" x 3.75"	Certified for Class I Division II use.
HAI-12 II	●			8x12	--	2x10	●		●	●	●	●			10.50" x 12.75" x 3.75"	Certified for Class I Division II use.
SDI-7		●	●	4x10	6"	3x10		●	●	●	●	●	●		9.25" x 8.75" x 2.50"	VoIP only
TRI-6	●		●	4x12	6"	3x10		●	●	●	●	●	●		3.50" x 19.00" x 6.50"	VoIP only
SDI-12		●	●	4x24	12"	3x10		●	●	●	●	●	●		10.20" x 16.40" x 3.75"	
SDI-12 II		●	●	4x24	12"	3x10	●	●	●	●	●	●	●		10.20" x 16.40" x 3.75"	External SDAP.**
SRI-12 II	●		●	6x16	12"	3x10	●	●	●	●	●	●	●		8.75" x 19.00" x 10.00"	Internal SDAP.
TDI-7		●	●	4x16	7"	3x10		●	●	●	●				7.25" x 5.00" x 1.25"	External DAP, touchscreen monitor.
TDI-7 II		●	●	4x16	7"	3x10	●	●	●	●	●				7.25" x 5.00" x 1.25"	External SDAP, touchscreen monitor.
TDI-17		●	●	4x48	17"	3x10		●	●	●	●				--	External DAP, touchscreen monitor.
TDI-17 II		●	●	4x48	17"	3x10	●	●	●	●	●				--	External SDAP, touchscreen monitor.
TRI-17	●		●	4x48	17"	3x10		●	●	●	●	●			16.00" x 19.00" x 14.00"	Internal DAP.
TRI-17 II	●		●	4x48	17"	3x10	●	●	●	●	●	●			16.00" x 19.00" x 14.00"	Internal SDAP.
TRI-D6	●		●	4x24	6" (2)	3x10		●	●	●	●	●	●		3.50" x 19.00" x 12.00"	Internal DAP.
TRI-D6 II	●		●	4x24	6" (2)	3x10	●	●	●	●	●	●	●		3.50" x 19.00" x 4.00"	External SDAP.

*Other mission instrument options are available. Contact Compunetix for details.
**SDAP=secure digital audio processor.
***DAP=digital audio processor.

Compunetix mission instruments support a wide range of voice features, including:

Monitor

Simultaneously monitor audio from any conference with the headset/handset or the front panel loudspeaker.

Join/Unjoin

Join conferences and calls together to create a large talk group, then Unjoin the talk group to recreate the original conferences and calls.

Broadcast

Start Broadcast mode, then select multiple conferences in talk-listen mode. All conferences can hear you, but they can't hear one another.

Focus

Apply Focus to a specific line key or to whichever line key is selected in talk-listen mode to increase its volume relative to other audio.

Speaker Mute

Mute the instrument's loudspeaker with a single action.

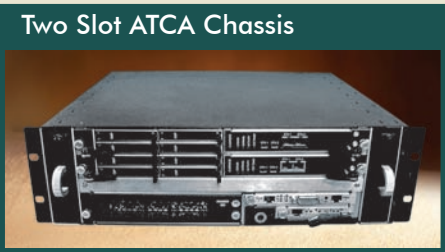
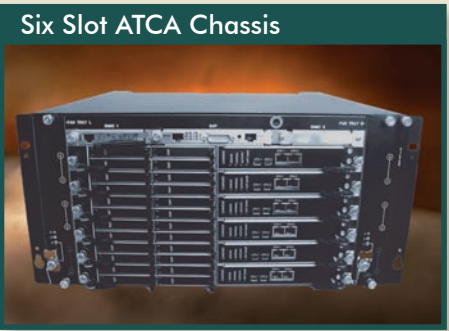
Voice Activity Indicator

Shows which line keys have voice activity.

Switching and Transport Equipment

Features and Capabilities

CONTEX MVP



Now there is one mission voice system that meets the most demanding mission critical requirements. The **CONTEX MVP** mission voice switch utilizes the latest technology to meet your mission’s requirements. It combines a huge port capacity with mission-critical reliability, rich features, and a small footprint. The MVP allows people to meet in a secure fashion at any time, from anywhere in the world, to support virtually any mission.

The **CONTEX MVP** is a new class of mission voice equipment. This new platform combines the mission critical reliability of Compunetix’ mission voice hardware with the scalability and flexibility of a media server to smooth the transition from circuit-switched to packet-switched telecom networks.



The **KTMX** provides a means of connecting up to twelve mission instruments via a T1, E1, or J1 interface. The **KTMX** can be used as a mission instrument distribution point within your facility or across the world. Up to three **KTMX** units can be located at remote sites. Each **KTMX** supports up to twelve mission instruments. The **KTMX** supports all Compunetix mission instruments.



The **iKTMX** provides a means of connecting up to twelve mission instruments at a remote location via an IP/Ethernet interface. The **iKTMX** can be used as a mission instrument distribution point within your facility or across the world. Up to three **iKTMX** units can be located at remote sites. Each remote **iKTMX** supports up to twelve mission instruments. The **iKTMX** supports all Compunetix mission instruments.

System Highlights

Reliability

- Reliable Compute Engine (RCE)
- Redundant Mission Instrument Interface
- Hot Swap Components

Security

- Security Levels and Domains
- Multi-level System Administrator Logins
- STE Interface with Go Secure Feature
- Audit Logs

Advanced Mission Management

- Mission Scripting and Scheduling
- Resource Conflict Checking
- Resource Location View
- Customizable Database Queries and Reports
- Radio Control
- Multi-system Administration

Interface Types

- VoIP
- ISDN PRI
- T1/E1/J1

Advanced Audio Processing/Management

- Spatial Audio
- Wide Band Audio
- 32 Priority Talker Levels
- System Dial Plan
- Automatic Gain Control
- Definable Ring Groups and Trunk Groups
- Admin Mission Instrument Control for User Assistance

Conference/Call Types

- Preset
- Meet-me with Enunciation
- Intercom and Dial Intercom
- Radio
- Ring Down
- Basic Dial Line
- Zone Page
- Ad Hoc
- Hotline
- Admin/PBX

Mission Instrument Highlights

Definable Configurations

- Positional or User (Follow-Me) Logins
- Individual Endpoint/End User Feature Permissions

Security

- Certified Red/Black Endpoints
- User Authentication
- Security Levels and Domains
- STE Interface with Go Secure Feature

Functions

- Multiple Pages of Soft Line Keys
- Spatial Audio
- Monitor Mute/Speaker Mute
- Call Queue with Phone Book and Dial Pad
- Conference Detail with Who’s Talking and Audio Control
- Alarm Window
- Join/Unjoin
- Broadcast
- Call Forward/Transfer
- Temporary Gain Adjust (per dial in caller)
- Talk-Listen Focus and Conference Focus

Independent Volume Controls

- Individual Line Key
- Ringer
- Left Headset Jack
- Right Headset Jack

Line Key Indications

- Circuit Name
- Talk-Listen Status
- Headset/Speaker Monitor Status
- Conference/Line Status
- Voice Activity and Voice Level
- Ring Status
- Join Group
- Security Level and Domains

Status Bar

- Mission Instrument Status
- Incoming Call Count
- Alarm Status
- Microphone Status

Application Examples

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