

Cisco IPICS Push-to-Talk Management Center

The Cisco® IP Interoperability and Collaboration System (Cisco IPICS) portfolio of products and applications streamlines daily operations and allows organizations to rapidly respond to incidents or emergencies. It dissolves communications silos between disparate Land Mobile Radio systems and devices such as mobile phones, landline phones, IP phones, and PC clients—users can communicate with whatever device they have, from wherever they are. Users can be paged or emailed with the status of an event, and can be automatically called and invited to join a virtual conference, further improving situation awareness and reducing response time. Cisco IPICS provides flexible and scalable communications interoperability, enhancing the value of existing and new radio, telephony, and IP communications networks.

The Cisco® IP Interoperability and Collaboration System (IPICS) Push-to-Talk Management Center (PMC) client (Figure 1) is a Microsoft Windows-based application that enables push-to-talk (PTT) functionality for PC users. It allows users to communicate over and monitor broadcasts of multiple channels of communications at the office or from a remote site.

Figure 1. Cisco IPICS PMC Client



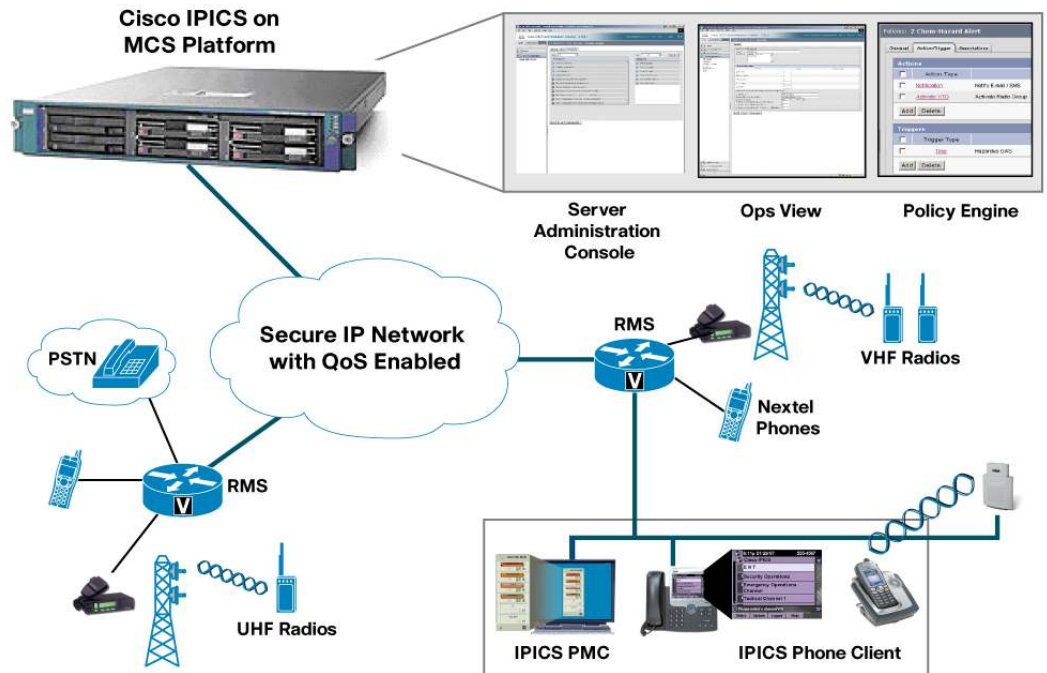
The Cisco IPICS PMC client extends communications of existing PTT radio channels or broadcast networks. With the Cisco IPICS PMC, users can participate in multiple channels of communication. The ability for users to also respond to incidents or emergencies by using a Cisco IPICS PMC on their PCs, boosts organizational responsiveness as well as operational efficiency and effectiveness.

Cisco IPICS PMC users can be added to new communication channels as incidents or needs arise. Users have communication access not only to PTT radio channels, but also other online Cisco IPICS PMC users, phones users, or virtual talk groups (VTGs) made up of multiple channels and communication device types, such as mobile phones and IP phones. An operations manager or dispatcher remotely manages the availability of these channels, allowing for quick and efficient response to escalating events.

An integral component of Cisco IPICS, the Cisco IPICS PMC is a licensed application hosted by the Cisco IPICS Server. The Cisco IPICS PMC works in conjunction with the Cisco IPICS Server to receive its configuration, updates and upgrades, management, authentication, and alert tone distributions. Other Cisco IPICS system components include the Cisco IPICS Policy Engine, Cisco IPICS Phone Client, Cisco IPICS Operational Views (Ops Views), Cisco Land Mobile Radio (LMR) gateways, Router Media Service (RMS) gateways, and Session Initiation Protocol (SIP) telephony gateways.

Cisco IPICS is a systems-level, network-based solution for voice interoperability. It takes full advantage of open IP standards and IP network infrastructure for greater resiliency, scaling, and security, and is part of a complete communications solution for organizations of all sizes (Figure 2).

Figure 2. Cisco IPICS Solution



Features and Benefits

Extension of Traditional PTT Network to IP Network

The Cisco IPICS PMC client application extends voice reachability from PTT radio or broadcast networks to IP networks. With Cisco IPICS PMC, users can participate in multiple channels or talk groups by using standard IP access.

Multiple Channel Types

Cisco IPICS PMC users have communication access not only to PTT radio channels, but also to broadcast channels, direct two-way channels to other online Cisco IPICS PMC users (point-to-point PTT connections), direct dial channels for dial-out to preconfigured public switched telephone network (PSTN) or IP phone numbers, or VTGs that are comprised of multiple channels and communication device types such as mobile phones and IP phones.

Easy Remote Access

With VPN, authorized users with IP access can use a Cisco IPICS PMC remotely from anywhere in the world.

Rapid Deployment

The Cisco IPICS Server simplifies the distribution and deployment of the Cisco IPICS PMC. The Cisco IPICS PMC is a network-installable application that is remotely managed by the Cisco IPICS server. Authorized users can download the Cisco IPICS PMC client as operations or incidents require. This capability allows users to quickly and easily participate in communications groups from any location.

Quick and Dynamic Access to Communications Channels

Cisco IPICS PMC users can participate and monitor multiple communication channels simultaneously, thereby replacing or reducing the number of desktop endpoints or handheld radios needed.

Uninterrupted Communications

Should the primary Cisco IPICS Server be unavailable, Cisco IPICS PMC users can continue to communicate and operate in an offline mode or log in to an alternate Cisco IPICS server.

Remote Management

The Cisco IPICS PMC client is managed securely and remotely through the Cisco IPICS Server for configuration changes and other updates, such as information, resources, and permissions. Server-managed configuration alleviates the need for time-consuming and costly onsite IT resources, improves ease of use, and facilitates service offerings.

Multiple User Interface Options

The Cisco IPICS PMC client includes numerous different easy-to-use interface options for user flexibility (Figure 3).

Figure 3. Cisco IPICS PMC User Interface Options

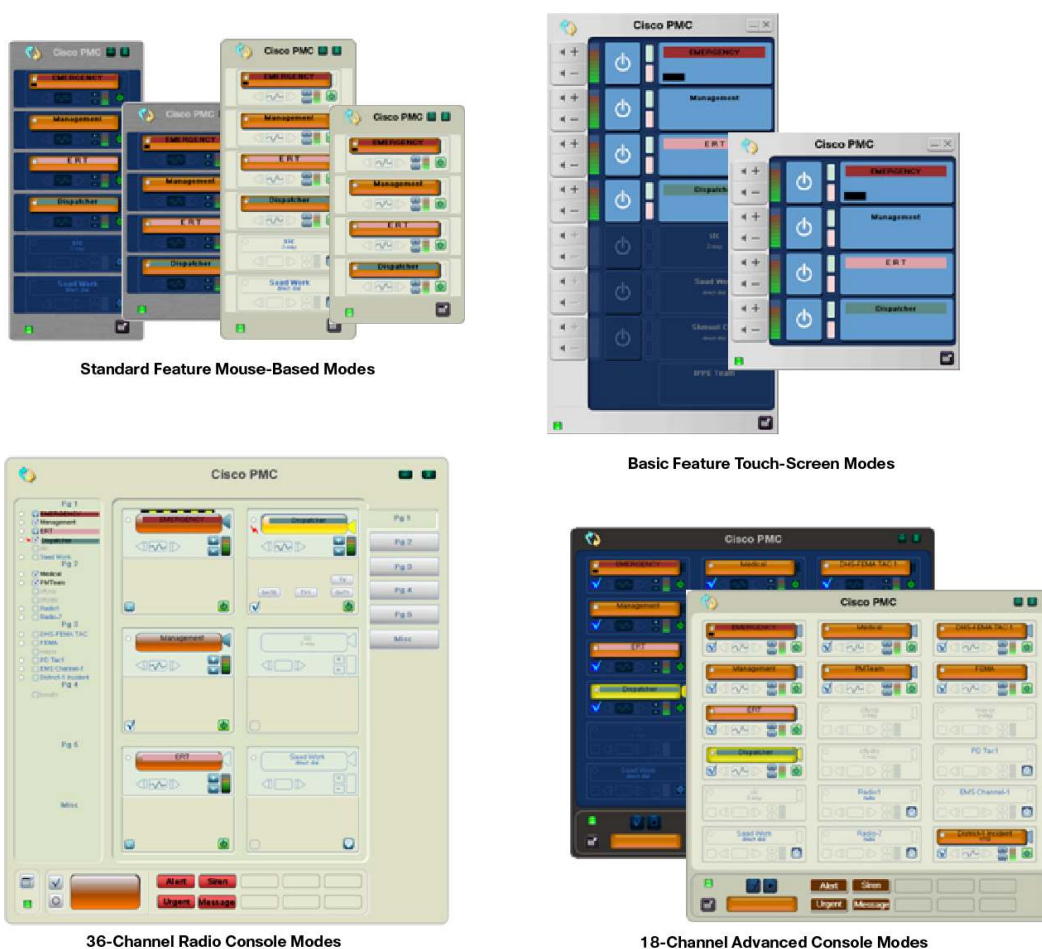


Table 1 describes additional features and benefits.

Table 1. Features and Benefits

Feature	Benefit
Tone Remote Control*	Provides the ability to dynamically control functions of devices inline with the audio path or radios at remote sites, thereby reducing radio hardware and installation expenses while increasing system flexibility
Tone Signaling*	Users can initiate preconfigured, in-band audio sequences that radio users can hear
Voice Replay*	Allows users who missed conversations to replay buffered voice communications on a per-channel basis
Alert Tones*	Provides ability to broadcast alert tones over specified channels
Keyboard Mapping	Allows specific key assignments for quick access to PTT features for each of the channels
Application Logs	Provides detailed activity and event information for subsequent audit and training purposes
Multicast	Multicast allows scalability and improves network performance
SIP-Based Unicast Connectivity	Supports connections for remote users
Configurable Audio Output (Spatial Position)	Enables the user to choose the speaker (left, right, or stereo) that the selected channel uses
Location	Determines the reachability and type of channel communication, either multicast or SIP, that is appropriate for the location of the user
Optimize for Low-Bandwidth Option	Optimizes audio quality, on a per-channel basis, when users are connected using a low-bandwidth or high-latency link

All Talk*	Allows users to simultaneously transmit audio or alert tones on one or more selected channels
Channel Select*	Allows users to select one or more channels to simultaneously transmit audio, dual tone multi-frequency (DTMF) tones, or alert tones
Channel State	Allows users to determine which channels are online and can be activated
Channel Reorder	Provides users the ability to reposition channels that are displayed
Listen-Only Channels	Enables users to monitor channels in listen-only mode even if permissions to talk are not provided
Volume Control	Allows users to control the volume for every channel individually
Channel Activation	Enables users to turn channels on and off
Receive and Transmit Indicators	Informs users about recent incoming and outgoing audio traffic activity on a channel
Channel Latch*	Allows the user to lock the PTT button for audio transmission if the option is made available through the Cisco IPICS Server
Channel Names	Allows specific channel names/labels to be displayed in the channel area, as configured in the Cisco IPICS Server
Channel Colors	Allows specific channels to be uniquely identified by using predefined colors, as configured in the Cisco IPICS Server
Secure Channel Indicator	Provides a visual indication of a secure (privileged) channel, as configured in the Cisco IPICS Server

* Available only on select user interface modes

Product Specifications

Table 2 describes product specifications.

Table 2. Product Specifications

Specification	Description
Voice codecs	G.711 and G.729
Tone signaling	RFCs 2198/2833 on per channel basis (applies to administratively defined signals)
Signaling security	HTTPS over Secure Sockets Layer (SSL)
Assigned channels	Up to 50 channels
Active channels	Up to 36 channels
Connectivity	Multicast and Unicast
DTMF tone generation	In-band signaling
Voice Activity Detection (VAD)	Configurable by channel
Voice streams	Maximum of 3 simultaneous multicast voice streams per channel
Quality-of-service (QoS) priority markings	<ul style="list-style-type: none"> Differentiated services code point (DSCP) = CS3 for control packets DSCP = EF for Real-Time Transport Protocol (RTP) and Real Time Control Protocol (RTCP) packets

Minimum System Requirements

- Cisco IPICS v2.1(1)
- Network-connected PC running Microsoft Windows XP Professional (Service Pack 2)

Minimum PC Requirements for Up to Four Active Channels

- Pentium III 800 MHz or equivalent
- 512 MB RAM
- 1 GB free disk space

- Non-ISA full-duplex sound card (integrated or PCI-based) or USB sound device
- 800 x 600 x 16 bit screen resolution; 1024 x 768 x 16 bit or better recommended

Minimum PC Requirements for Up to Six Active Channels

- Pentium IV 1.5 GHz or equivalent
- 512 MB RAM
- 1 GB free disk space
- Non-ISA full-duplex sound card (integrated or PCI-based) or USB sound device
- 800 x 600 x 16 bit screen resolution; 1024 x 768 x 16 bit or better recommended

Minimum PC Requirements for Up to 18 Active Channels

- Pentium IV 3.2 GHz or equivalent
- 2 GB RAM
- 1 GB free disk space
- Non-ISA full-duplex sound card (integrated or PCI-based) or USB sound device
- 1024 x 768 x 16 bit screen resolution or better recommended

Minimum PC Requirements for Up to 36 Active Channels

- Pentium IV 3.2 GHz or equivalent
- 2 GB RAM
- 1 GB free disk space
- Non-ISA full-duplex sound card (integrated or PCI-based) or USB sound device
- 1280 x 1024 x 16 bit screen resolution or better recommended

Licensing Information

The Cisco IPICS server checks the license count for concurrent Cisco IPICS PMC license usage. Each Cisco IPICS PMC client logged into the Cisco IPICS server consumes a license. If one user logs in to multiple Cisco IPICS PMC sessions from different PCs, that user will consume multiple licenses (one for each Cisco IPICS PMC session). This means that the Cisco IPICS PMC can be installed on as many PC's as needed and the licensing is based upon the Cisco IPICS PMC sessions that are in use at any given time.

Ordering Information

Organizations can broadly deploy and install Cisco IPICS PMC clients on user PCs. As organization needs evolve, additional licenses of Cisco IPICS PMC can be purchased and added, thereby allowing customers to grow and scale deployments over time.

To place an order, visit the [Cisco Ordering Homepage](#). To download software, visit the [Cisco Software Center](#).

Table 3 gives ordering information.

Table 3. Ordering Information

Product Name	Part Number
Cisco IPICS PMC Client for IPICS 2.0 or Higher	CIS-PMC-K9=
Cisco IPICS PMC Client for IPICS 2.0 or Higher, 10 Units	CIS-PMC-K9-10=
Cisco IPICS PMC Client for IPICS 2.0 or Higher, 50 Units	CIS-PMC-K9-50=
Cisco IPICS PMC Client for IPICS 2.0 or Higher, 250 Units	CIS-PMC-K9-250=

Service and Support

Using the Cisco Lifecycle Services approach, Cisco and its partners provide a broad portfolio of end-to-end services and support that can help increase your network's business value and return on investment. This approach defines the minimum set of activities needed, by technology and by network complexity, to help you successfully deploy and operate Cisco technologies and optimize their performance throughout the lifecycle of your network.

For More Information

For more information about the Cisco IPICS product and solution, visit:

<http://www.cisco.com/go/ipics> or contact your local Cisco account representative.



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