

Contents

- 1 About the Cisco Unified MeetingPlace Audio Server System
- 2 Hardware Characteristics of the Cisco Unified MeetingPlace 8106
 - ◆ 2.1 Figure: Cisco Unified MeetingPlace 8106 Features (Front View)
- 3 Hardware Characteristics of the Cisco Unified MeetingPlace 8112
 - ◆ 3.1 Figure: Cisco Unified MeetingPlace 8112 Features (Front View)
- 4 Cisco Unified MeetingPlace 8100 Series Hardware Components
 - ◆ 4.1 Table: Cisco Unified MeetingPlace Audio Server Hardware Components
- 5 LED Panels for the Cisco Unified MeetingPlace 8106
 - ◆ 5.1 Table: Descriptions of Cisco Unified MeetingPlace 8106 LEDs
 - ◆ 5.2 Figure: Locations of Cisco Unified MeetingPlace 8106 LEDs
- 6 Alarm Panels for the Cisco Unified MeetingPlace 8112
 - ◆ 6.1 Table: Descriptions of Cisco Unified MeetingPlace 8112 LEDs
 - ◆ 6.2 Figure: Locations of Cisco Unified MeetingPlace 8112 LEDs
- 7 About Cisco Unified MeetingPlace Audio Server System Configurations
 - ◆ 7.1 Table: Supported Access Ports
 - ◆ 7.2 Configuration Information and Examples for the Cisco Unified MeetingPlace 8106
 - ◇ 7.2.1 Table: Supported Blade Configurations for the Cisco Unified MeetingPlace 8106
 - ◇ 7.2.2 Example: T1 CAS Configuration
 - ◇ 7.2.3 Table: Pure T1 CAS Configuration, 576 T1 CAS Ports
 - ◇ 7.2.4 Example: T1 PRI Configuration
 - ◇ 7.2.5 Table: Pure T1 PRI Configuration, 368 T1 CAS Ports
 - ◇ 7.2.6 Example: Pure IP Configuration
 - ◇ 7.2.7 Table: Pure IP Configuration, 480 IP Ports
 - ◇ 7.2.8 Examples: T1 CAS and IP Mixed Configurations
 - ◇ 7.2.9 Table: 120 IP Ports, 360 T1 CAS Ports, 480 Total Ports
 - ◇ 7.2.10 Table: 96 IP Ports, 384 T1 CAS Ports, 480 Total Ports
 - ◇ 7.2.11 Table: 240 IP Ports, 240 T1 CAS Ports, 480 Total Ports
 - ◇ 7.2.12 Table: 360 IP Ports, 120 T1 CAS Ports, 480 Total Ports
 - ◇ 7.2.13 Examples: T1 PRI and IP Mixed Configurations
 - ◇ 7.2.14 Table: 120 IP Ports, 92 T1 PRI Ports, 212 Total Ports
 - ◇ 7.2.15 Table: 120 IP Ports, 253 T1 PRI Ports, 373 Total Ports
 - ◇ 7.2.16 Table: 240 IP Ports, 92 T1 PRI Ports, 332 Total Ports
 - ◇ 7.2.17 Table: 180 IP Ports, 92 T1 PRI Ports, 272 Total Ports
 - ◇ 7.2.18 Example: E1 Configuration
 - ◇ 7.2.19 Table: Pure E1 Configuration, 480 E1 Ports
 - ◇ 7.2.20 Examples: E1 and IP Mixed Configurations
 - ◇ 7.2.21 Table: 120 IP Ports, 120 E1 Ports, 240 Total Ports
 - ◇ 7.2.22 Table: 120 IP Ports, 240 E1 Ports, 360 Total Ports
 - ◇ 7.2.23 Table: 240 IP Ports, 120 E1 Ports, 360 Total Ports
 - ◆ 7.3 Configuration Information and Examples for the Cisco Unified MeetingPlace 8112

- ◇ [7.3.1 Table: Supported Blade Configurations for the Cisco Unified MeetingPlace 8112](#)
- ◇ [7.3.2 Example: T1 CAS Configuration](#)
- ◇ [7.3.3 Table: Pure T1 CAS Configuration, 1152 T1 CAS Ports](#)
- ◇ [7.3.4 Example: T1 PRI Configuration](#)
- ◇ [7.3.5 Table: Pure T1 PRI Configuration, 736 T1 PRI Ports](#)
- ◇ [7.3.6 Example: Pure IP Configuration](#)
- ◇ [7.3.7 Table: Pure IP Configuration, 960 IP Ports](#)
- ◇ [7.3.8 Examples: T1 CAS and IP Mixed Configurations](#)
- ◇ [7.3.9 Table: 120 IP Ports, 936 T1 CAS Ports, 1056 Total Ports](#)
- ◇ [7.3.10 Table: 480 IP Ports, 576 T1 CAS Ports, 1056 Total Ports](#)
- ◇ [7.3.11 Table: 240 IP Ports, 720 T1 CAS Ports, 960 Total Ports](#)
- ◇ [7.3.12 Table: 600 IP Ports, 360 T1 CAS Ports, 960 Total Ports](#)
- ◇ [7.3.13 Examples: T1 PRI and IP Mixed Configurations](#)
- ◇ [7.3.14 Table: 480 IP Ports, 92 T1 PRI Ports, 572 Total Ports](#)
- ◇ [7.3.15 Table: 480 IP Ports, 368 T1 PRI Ports, 848 Total Ports](#)
- ◇ [7.3.16 Example: Pure E1 Configuration](#)
- ◇ [7.3.17 Table: Pure E1 Configuration, 960 E1 Ports](#)
- ◇ [7.3.18 Examples: E1 and IP Mixed Slot Configurations](#)
- ◇ [7.3.19 Table: 120 IP Ports, 480 E1 Ports, 600 Total Ports](#)
- ◇ [7.3.20 Table: 480 IP Ports, 480 E1 Ports, 960 Total Ports](#)
- ◇ [7.3.21 Table: 480 IP Ports, 120 E1 Ports, 600 Total Ports](#)
- ◇ [7.3.22 Table: 120 IP Ports, 120 E1 Ports, 240 Total Ports](#)
- [8 Cisco Unified MeetingPlace Audio Server Software](#)
 - ◆ [8.1 Table: Cisco Unified MeetingPlace Voice-Only Configuration](#)
- [9 Performance Rating](#)

About the Cisco Unified MeetingPlace Audio Server System

Cisco Unified MeetingPlace Audio Server system configurations include Cisco Unified MeetingPlace 8100 series hardware, Audio Server software, and Cisco Unified MeetingPlace desktop software components with additional software options.

This section contains the following hardware information for the Cisco Unified MeetingPlace 8100 series:

- [Hardware Characteristics of the Cisco Unified MeetingPlace 8106](#)
- [Hardware Characteristics of the Cisco Unified MeetingPlace 8112](#)
- [Cisco Unified MeetingPlace 8100 Series Hardware Components](#)
- [LED Panels for the Cisco Unified MeetingPlace 8106](#)
- [Alarm Panels for the Cisco Unified MeetingPlace 8112](#)
- [About Cisco Unified MeetingPlace Audio Server System Configurations](#)
- [Cisco Unified MeetingPlace Audio Server Software Components](#)
- [Performance Rating](#)

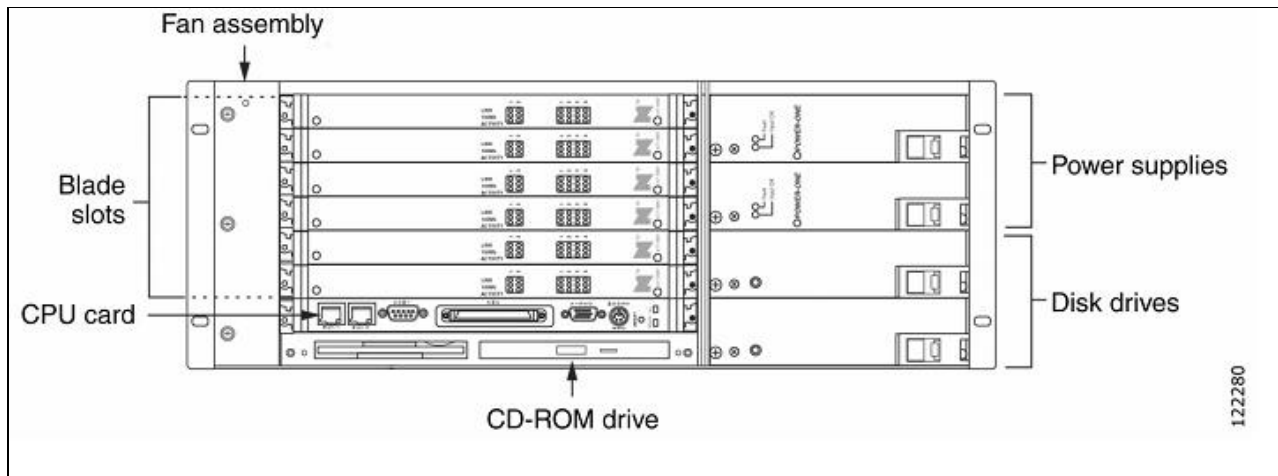
Hardware Characteristics of the Cisco Unified MeetingPlace 8106

The Cisco Unified MeetingPlace 8106 is a rack-mountable box that is 7 inches tall, 18.9 inches wide, and 14.5 inches deep. Fully loaded, it weighs up to 40 pounds.

The Cisco Unified MeetingPlace 8106 has the capacity for a CPU card, six slots for Smart Blades or Multi Access Blades to provide physical connectivity to the phone network, and four drives: two disk drives, a floppy drive, and a CD-ROM drive. The front of the chassis allows access to the CPU, Smart Blades, and redundant power supplies. LAN cables, and telephony and IP cables plug into the back.

Figure: Cisco Unified MeetingPlace 8106 Features (Front View) shows the Cisco Unified MeetingPlace 8106.

Figure: Cisco Unified MeetingPlace 8106 Features (Front View)



[View larger image](#)

Hardware Characteristics of the Cisco Unified MeetingPlace 8112

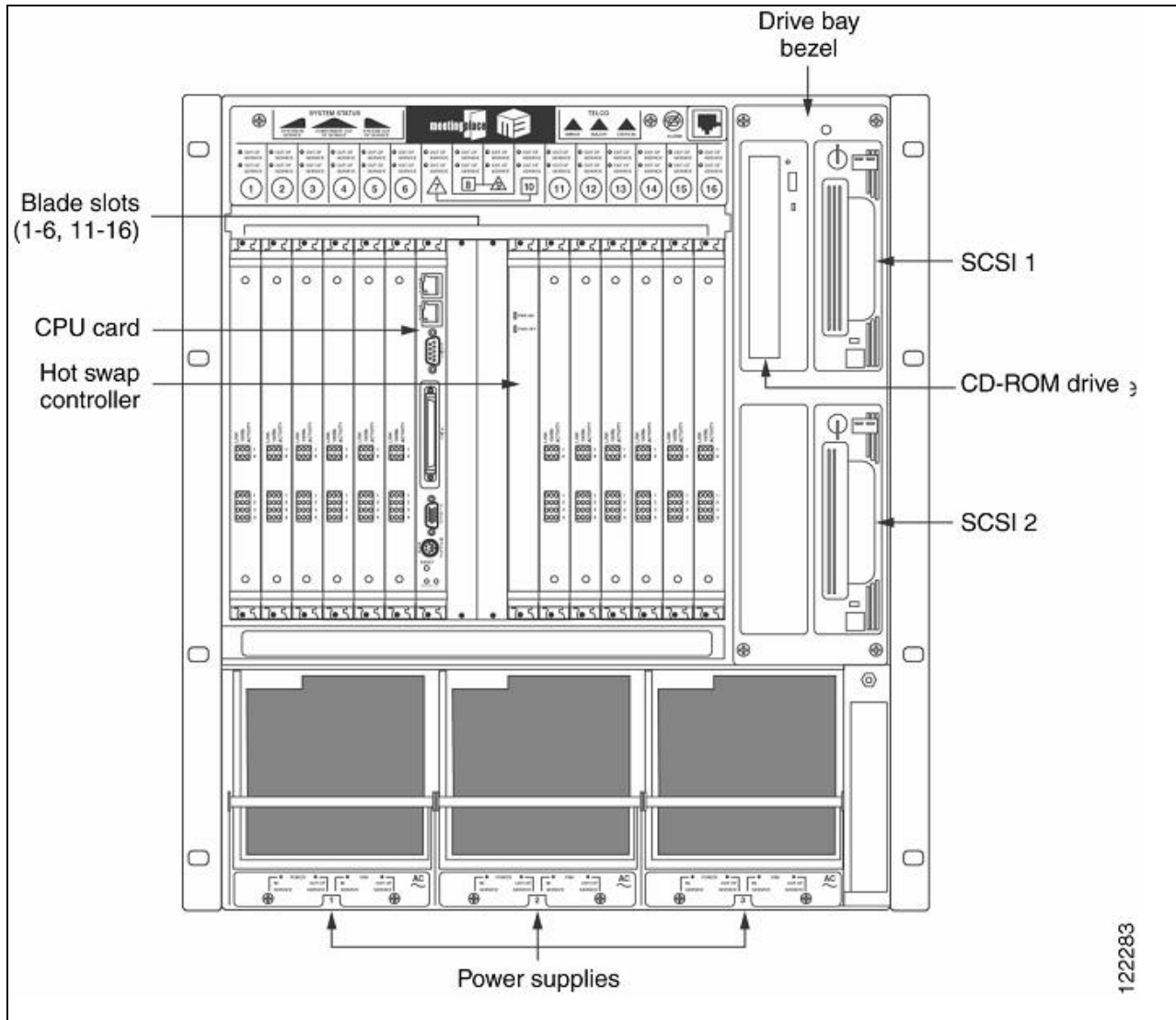
The Cisco Unified MeetingPlace 8112 is a rack-mountable box, 21 inches tall and 18.9 inches wide. Fully loaded, it weighs up to 110 pounds.

The Cisco Unified MeetingPlace 8112 has the capacity for a CPU card, a hot swap controller (HSC), 12 slots for Smart Blades or Multi Access Blades to provide physical connectivity to the phone network, and four drives: two disk drives, a floppy drive, and a CD-ROM drive. The front of the chassis allows access to the CPU, Smart Blades, and redundant power supplies. LAN cables, and telephony and IP cables plug into the back.

An alarm panel, located on the top portion of the chassis front, indicates major alarms, minor alarms, and system status. For more information on the alarm panel, see the [Alarm Panels for the Cisco Unified MeetingPlace 8112](#).

Figure: Cisco Unified MeetingPlace 8112 Features (Front View) shows the Cisco Unified MeetingPlace 8112.

Figure: Cisco Unified MeetingPlace 8112 Features (Front View)



[View larger image](#)

Cisco Unified MeetingPlace 8100 Series Hardware Components

Table: [Cisco Unified MeetingPlace Audio Server Hardware Components](#) describes the Cisco Unified MeetingPlace 8100 series hardware components for the Audio Server.

Table: Cisco Unified MeetingPlace Audio Server Hardware Components

Component	Description
Mounting kits	Mechanical components necessary to mount the Cisco Unified MeetingPlace Audio Server in one of the following configurations:

	<ul style="list-style-type: none"> • 19-inch EIA-310 rack (U.S. and Canada) • 19-inch Frame-Relay rack <p>Note: The Cisco Unified MeetingPlace 8112 can also be mounted in 23-inch racks.</p>
CD-ROM drive	The CD-ROM drive is used for software upgrades.
Smart Blades	<p>The Cisco proprietary high-performance conferencing cards required to provide physical connectivity to the phone network:</p> <ul style="list-style-type: none"> • Smart Blade. Provides digital signal processing to ensure the highest voice quality and superior conferencing functions. Provides both port resource card (PRC) and master switch controller (MSC) functionality in a single card. <p>Note: Because Multi Access Blades do not provide conferencing capability, every 96 ports of IP require one Smart Blade.</p> <ul style="list-style-type: none"> • T1 Smart Blade. Provides digital signal processing to ensure the highest voice quality and superior conferencing functions. Provides both PRC and MSC control functionality along with the necessary trunk interface functionality for digital T1 phone lines. This Smart Blade also provides the ability to connect up to four T1 spans (96 phone calls) by using E&M wink-start, loop-start, and ground-start call supervision.
Multi Access Blades	<p>Components that enhance the Smart Blade by including the necessary Ethernet interface for IP-based telephony. The Cisco Unified MeetingPlace H.323/SIP IPGW is required for full functionality.</p> <ul style="list-style-type: none"> • MP-MA-4. Includes the necessary trunk interface card functionality for T1 PRI, E1, and IP-based telephony. For T1 PRI, the MP-MA-4-PRI supports AT&T, Bell, and Nortel protocols. For E1, the MP-MA-4-PRI supports Euro ISDN and QSIG protocols. For IP, the MP-MA-4 supports G.711 and G.729a audio encoding. Each MP-MA-4 requires at least one Smart Blade. The MP-MA-4 supports up to four PSTN spans. • MP-MA-16. Includes the necessary trunk interface card functionality for T1 PRI, E1, and IP-based telephony. For T1 PRI, the MP-MA-16-PRI supports AT&T, Bell, and Nortel protocols. For E1, the MP-MA-16-PRI supports Euro ISDN and QSIG protocols. For IP, the MP-MA-16 supports G.711 and G.729a audio encoding. Each MP-MA-16 requires at least one Smart Blade. The MP-MA-16 supports up to 16 PSTN spans. <p>Note: If a Cisco Unified MeetingPlace 8106 uses only one MP-MA-4-PRI for PSTN (that is, for T1 PRI or E1) in slot 1, then slot 2 will be reserved when Cisco Systems ships the Audio Server system.</p>
Breakout box and cables	The breakout box provides a standard RJ-45 telephony interface for E1 and T1 PRI Cisco Unified MeetingPlace systems. It interfaces to a maximum of 16 cables. For each MP-MA-16-PRI shipped with the Audio Serversystem, we include 16 telephony cables and two trunk interface cables (50-pin Amphenol connectors) to connect each MP-MA-16-PRI to the breakout box; for each MP-MA-4-PRI shipped with the Audio Server system, we include four telephony cables and one trunk interface cable (50-pin Amphenol connector) to connect each MP-MA-4-PRI to the breakout box.
System database disks	The Cisco Unified MeetingPlace system has two 36 GB hard disks for the Audio Server software and the Cisco Unified MeetingPlace system database. Space is allocated equally on each drive, resulting in an extra database and system space as follows:

Table: Cisco Unified MeetingPlace Audio Server Hardware Components

	<ul style="list-style-type: none"> • System database disk 1. Supports up to 500 MB of primary system files, 800 MB of temporary work space, and 5 GB of alternative space for storing the automatic database backup from disk 2. Disk 1 also includes 22 GB of additional storage and user and meeting names. • System database disk 2. Supports up to 500 MB of alternate system files, 800 MB of temporary workspace, and 5 GB of alternative space for storing the automatic database backup from disk 1. Disk 2 also includes 22 GB of additional storage and user and meeting names.
Network interface	A pair of 10/100 Ethernet ports on the CPU transition module. The first port is used as the primary network interface. (The second network interface is not used at this time.)
External modem	The Cisco Unified MeetingPlace system includes an external modem connected to the Audio Server through a serial cable. The modem cable connects through the back of the Audio Server through a COM2 connector to the CPU transition module.

LED Panels for the Cisco Unified MeetingPlace 8106

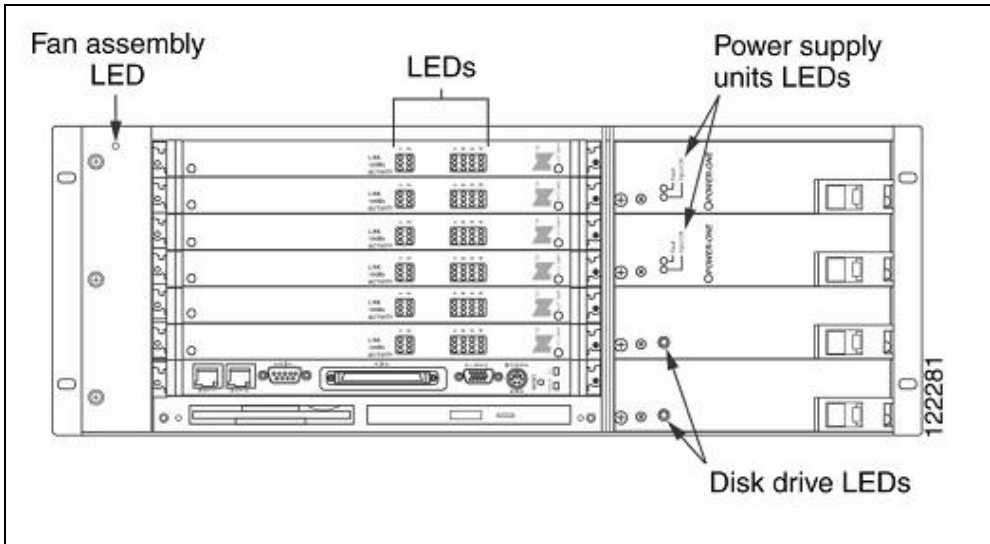
The Cisco Unified MeetingPlace 8106 has three types of LEDs as described in [Table: Descriptions of Cisco Unified MeetingPlace 8106 LEDs](#). See [Figure: Locations of Cisco Unified MeetingPlace 8106 LEDs](#) to locate the Cisco Unified MeetingPlace 8106 LEDs.

Table: Descriptions of Cisco Unified MeetingPlace 8106 LEDs

Component	LED Color and Meaning
Fan assembly	None-Fan assembly is working properly or is not properly inserted.
	Red-Fan assembly is not working properly.
Disk drives	Green-Cisco Unified MeetingPlace 8106 is accessing the disk drive.
	None-Cisco Unified MeetingPlace 8106 is not accessing the disk drive.
Power supply units	Green on both-Power supply units are working properly.
	Red on both-Neither power supply unit is working properly. Shut off the Cisco Unified MeetingPlace 8106 as soon as possible and remove all cards, the floppy drive and CD-ROM drive housing unit, and the disk drives.
	None on both-Either the Cisco Unified MeetingPlace 8106 is powered off or the power supply units are not properly inserted.
	Green on one; red on other-One power supply unit is working properly, and the other is either bad or not properly inserted.

	Green on one; none on other-One power supply unit is working properly, and the other is either bad or not properly inserted.
	Red on one; none on other-One power supply unit is bad, and the other is not properly inserted.

Figure: Locations of Cisco Unified MeetingPlace 8106 LEDs



[View larger image](#)

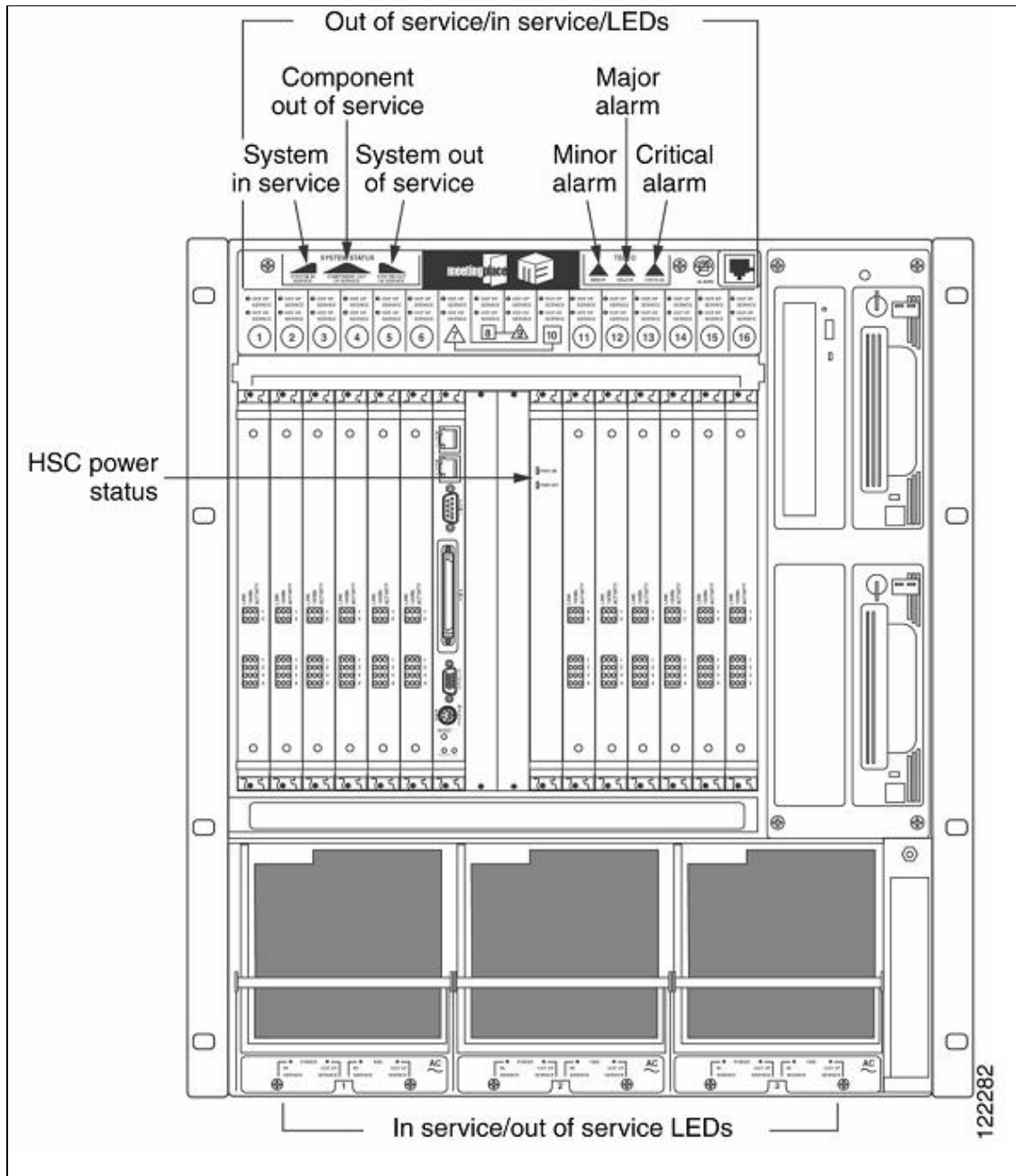
Alarm Panels for the Cisco Unified MeetingPlace 8112

The Cisco Unified MeetingPlace 8112 has system LEDs on the front top panel, as described in [Table: Descriptions of Cisco Unified MeetingPlace 8112 LEDs](#). See [Figure: Locations of Cisco Unified MeetingPlace 8112 LEDs](#) to locate the Cisco Unified MeetingPlace 8112 LEDs.

Table: Descriptions of Cisco Unified MeetingPlace 8112 LEDs

Component	Meaning
System in service	When on, indicates the Cisco Unified MeetingPlace system is in service.
Component out of service	When on, indicates there is a component out of service. Check the alarm table.
System out of service	When on, indicates the Cisco Unified MeetingPlace system is out of service.
Telco major alarm	When on, indicates a possible Telco problem that may affect service. Check the alarm table.
Telco minor alarm	When on, indicates a possible minor Telco problem that does not affect service. Check the alarm table.
Telco critical alarm	Not used. Disregard.

Figure: Locations of Cisco Unified MeetingPlace 8112 LEDs



[View larger image](#)

About Cisco Unified MeetingPlace Audio Server System Configurations

This section contains information on and examples of the different blade configurations for the Cisco Unified MeetingPlace Audio Server system. To configure the system, see [Configuring the Audio Server](#).

The Cisco Unified MeetingPlace 8106 comes equipped with six slots for Smart Blades, T1 Smart Blades, or Multi Access Blades, and the Cisco Unified MeetingPlace 8112 comes equipped with 12 slots for Smart Blades, T1 Smart Blades, or Multi Access Blades.

Table: Supported Access Ports lists the number of access ports supported per blade.

Note: E1, T1 PRI, and IP-based telephony require at least one Multi Access Blade and one Smart Blade.

Table: Supported Access Ports

Blade	Supported Access Ports
T1 Smart Blade or Smart Blade	96
MP-MA-16-PRI for E1	480
MP-MA-16-PRI for T1 PRI	368
MP-MA-16 for IP	480
MP-MA-4-PRI for E1	120
MP-MA-4-PRI for T1 PRI	92
MP-MA-4 for IP	120

Note that mixing protocols is supported only in combination with IP ports:

- T1 PRI and IP
- E1 and IP
- T1 CAS and IP

(For example, a Cisco Unified MeetingPlace system cannot have both T1 and E1 ports configured, but it can have T1-either PRI or CAS-and IP ports, or E1 and IP ports. In addition, a Cisco Unified MeetingPlace system cannot have both T1 CAS and T1 PRI ports configured.)

Note: The Cisco Unified MeetingPlace Audio Server supports only E1 PRI. We do not provide E1 CAS telephony interfaces.

Configuration Information and Examples for the Cisco Unified MeetingPlace 8106

The Cisco Unified MeetingPlace 8106 supports the following:

- Up to 576 ports in a T1 CAS Cisco Unified MeetingPlace system
- Up to 368 ports in a T1 PRI Cisco Unified MeetingPlace system (U.S. and Canada)
- Up to 480 ports in an E1 Cisco Unified MeetingPlace system
- Up to 480 IP ports (supports codecs G.711 (A-law and u-law) and G.729a and signaling H.323 and SIP)

- Nonblocking N/2 simultaneous conferences
- Mix and match T1 and IP endpoints
- Mix and match E1 and IP endpoints

Table: Supported Blade Configurations for the Cisco Unified MeetingPlace 8106 lists the allowable port and blade configurations for each protocol and the hardware used to achieve them.

Table: Supported Blade Configurations for the Cisco Unified MeetingPlace 8106

Protocol	Maximum Ports	Hardware Configuration
T1 CAS	576	6 T1 Smart Blades
E1	480	5 Smart Blades and 1 MP-MA-16-PRI
T1 PRI	368	4 Smart Blades and 1 MP-MA-16-PRI
IP	480	5 Smart Blades and 1 MP-MA-16

T1 CAS Smart Blades and T1 PRI and E1 Multi Access Blades are installed starting from slot 1 on the bottom and move to the top. IP Multi Access Blades are installed starting from slot 6 on the top and move to the bottom.

Example: T1 CAS Configuration

Table: Pure T1 CAS Configuration, 576 T1 CAS Ports shows a pure T1 CAS configuration with 576 ports. Each slot has a T1 Smart Blade, denoted by SB. Each T1 Smart Blade provides 96 ports, and there are 6 T1 Smart Blades ($96 \times 6 = 576$).

Table: Pure T1 CAS Configuration, 576 T1 CAS Ports

Slot	Blade
6	SB
5	SB
4	SB
3	SB
2	SB
1	SB

Example: T1 PRI Configuration

Table: Pure T1 PRI Configuration, 368 T1 CAS Ports shows a pure T1 PRI configuration with 368 T1 PRI ports. The MP-MA-16-PRI in slot 1 provides 368 T1 PRI ports. Because Multi Access Blades do not provide conferencing capability, every 96 ports requires one Smart Blade. All of the ports in slots 2 to 4 ($3 \times 96 = 288$) and 80 of the ports in slot 5 are used for conferencing.

Table: Pure T1 PRI Configuration, 368 T1 CAS Ports

Slot	Blade
6	
5	SB
4	SB
3	SB
2	SB
1	MP-MA-16-PRI

Example: Pure IP Configuration

Table: Pure IP Configuration, 480 IP Ports shows a pure IP configuration with 480 IP ports. The MP-MA-16 in slot 6 provides 480 IP ports. Because Multi Access Blades do not provide conferencing capability, every 96 ports of IP requires one Smart Blade, so slots 1 to 5 use their 480 ports ($5 \times 96 = 480$) for IP conferencing.

Table: Pure IP Configuration, 480 IP Ports

Slot	Blade
6	MP-MA-16
5	SB
4	SB
3	SB
2	SB
1	SB

Examples: T1 CAS and IP Mixed Configurations

The following tables show examples of T1 CAS and IP mixed configurations. The T1 CAS trunks may or may not be configured, depending on the number of IP ports. In each table, SB is a T1 Smart Blade.

In **Table: 120 IP Ports, 360 T1 CAS Ports, 480 Total Ports**, the MP-MA-4 in slot 6 provides 120 IP ports. Every 96 ports of IP requires one Smart Blade, so the Smart Blade in slot 5 uses its 96 ports and the Smart Blade in slot 4 uses 24 of its 96 ports for IP conferencing ($96 + 24 = 120$). The remaining 72 ports in slot 4 ($96 - \text{the } 24 \text{ used for the IP conferencing}$) plus the ports in slots 1 to 3 ($3 \times 96 = 288$) are used for the T1 CAS portion of the configuration ($288 + 72 = 360$).

Table: 120 IP Ports, 360 T1 CAS Ports, 480 Total Ports

Slot	Blade
6	MP-MA-4
5	SB
4	SB

3	SB
2	SB
1	SB

In Table: 96 IP Ports, 384 T1 CAS Ports, 480 Total Ports, the MP-MA-4 in slot 6 provides 96 IP ports. Every 96 ports of IP requires one Smart Blade, so the Smart Blade in slot 5 uses its 96 ports for IP conferencing. The ports in slots 1 to 4 ($96 \times 4 = 384$) are used for the T1 CAS portion of the configuration.

Table: 96 IP Ports, 384 T1 CAS Ports, 480 Total Ports

Slot	Blade
6	MP-MA-4
5	SB
4	SB
3	SB
2	SB
1	SB

In Table: 240 IP Ports, 240 T1 CAS Ports, 480 Total Ports, the MP-MA-16 in slot 6 provides 240 IP ports. Every 96 ports of IP requires one Smart Blade, so the Smart Blades in slot 4 and 5 use their 96 ports and the Smart Blade in slot 3 uses 48 of its 96 ports for IP conferencing ($96 + 96 + 48 = 240$). The remaining 48 ports in slot 3 ($96 -$ the 48 used for the IP conferencing) plus the ports in slots 1 and 2 ($2 \times 96 = 192$) are used for the T1 CAS portion of the configuration ($48 + 192 = 240$).

Table: 240 IP Ports, 240 T1 CAS Ports, 480 Total Ports

Slot	Blade
6	MP-MA-16
5	SB
4	SB
3	SB
2	SB
1	SB

In Table: 360 IP Ports, 120 T1 CAS Ports, 480 Total Ports, the MP-MA-16 in slot 6 provides 360 IP ports. Every 96 ports of IP requires one Smart Blade, so the Smart Blades in slots 3 to 5 use their 96 ports and the Smart Blade in slot 2 uses 72 of its 96 ports for IP conferencing ($3 \times 96 = 288 + 72 = 360$). The remaining 24 ports in slot 2 ($96 -$ the 72 used for the IP conferencing) plus the 96 ports in slot 1 are used for the T1 CAS portion of the configuration ($24 + 96 = 120$).

Table: 360 IP Ports, 120 T1 CAS Ports, 480 Total Ports

Slot	Blade
------	-------

Table: 120 IP Ports, 360 T1 CAS Ports, 480 Total Ports

6	MP-MA-16
5	SB
4	SB
3	SB
2	SB
1	SB

Examples: T1 PRI and IP Mixed Configurations

The following tables show examples of T1 PRI and IP mixed configurations. IP Multi Access Blades are installed starting from slot 6 on the top and move to the bottom.

In Table: 120 IP Ports, 92 T1 PRI Ports, 212 Total Ports, the MP-MA-4 in slot 6 provides 120 IP ports. Every 96 ports of IP requires one Smart Blade, so the Smart Blade in slot 4 uses its 96 ports and the Smart Blade in slot 3 uses 24 of its 96 ports for IP conferencing ($96 + 24 = 120$). The MP-MA-4-PRI in slot 1 provides 92 T1 PRI ports. The Smart Blade in slot 2 uses 92 of its 96 ports for conferencing.

Table: 120 IP Ports, 92 T1 PRI Ports, 212 Total Ports

Slot	Blade
6	MP-MA-4
5	
4	SB
3	SB
2	SB
1	MP-MA-4-PRI

In Table: 120 IP Ports, 253 T1 PRI Ports, 373 Total Ports, the MP-MA-4 in slot 6 provides 120 IP ports. Every 96 ports of IP requires one Smart Blade, so the Smart Blade in slot 5 uses its 96 ports and the Smart Blade in slot 4 uses 24 of its 96 ports for IP conferencing ($96 + 24 = 120$). The MP-MA-16-PRI in slot 1 provides 253 T1 PRI ports. The Smart Blades in slots 2 and 3 use their 96 ports and the Smart Blade in slot 4 uses 61 of its 72 ports for conferencing. (The Smart Blade in slot 4 uses 24 of its ports for the IP portion of the configuration and 61 ports for the T1 PRI portion of the configuration.)

Table: 120 IP Ports, 253 T1 PRI Ports, 373 Total Ports

Slot	Blade
6	MP-MA-4
5	SB
4	SB
3	SB
2	SB
1	MP-MA-16-PRI

Table: 360 IP Ports, 120 T1 CAS Ports, 480 Total Ports

In Table: 240 IP Ports, 92 T1 PRI Ports, 332 Total Ports, the MP-MA-16 in slot 6 provides 240 IP ports. Every 96 ports of IP requires one Smart Blade, so the Smart Blades in slots 4 and 5 use their 96 ports and the Smart Blade in slot 3 uses 48 of its 96 ports for IP conferencing ($96 + 96 + 48 = 240$). The MP-MA-4-PRI in slot 1 provides 92 T1 PRI ports. The Smart Blade in slot 2 uses 92 of its 96 ports for conferencing.

Table: 240 IP Ports, 92 T1 PRI Ports, 332 Total Ports

Slot	Blade
6	MP-MA-16
5	SB
4	SB
3	SB
2	SB
1	MP-MA-4-PRI

In Table: 180 IP Ports, 92 T1 PRI Ports, 272 Total Ports, the MP-MA-16 in slot 6 provides 180 IP ports. Every 96 ports of IP requires one Smart Blade, so the Smart Blade in slot 5 uses its 96 ports and the Smart Blade in slot 4 uses 84 of its 96 ports for IP conferencing ($96 + 84 = 180$). The MP-MA-4-PRI in slot 1 provides 92 T1 PRI ports. The Smart Blade in slot 2 uses 92 of its 96 ports for conferencing.

Table: 180 IP Ports, 92 T1 PRI Ports, 272 Total Ports

Slot	Blade
6	MP-MA-16
5	SB
4	SB
3	
2	SB
1	MP-MA-4-PRI

Example: E1 Configuration

The E1 Multi Access Blade is installed in slot 1, followed by Smart Blades. Table: Pure E1 Configuration, 480 E1 Ports shows a pure E1 configuration with 480 E1 ports. The MP-MA-16-PRI in slot 1 provides 480 E1 ports. The Smart Blades in slots 2 to 6 each have 96 ports ($96 \times 5 = 480$) which are used for conferencing. In this table, SB is a Smart Blade.

Table: Pure E1 Configuration, 480 E1 Ports

Slot	Blade
6	SB
5	SB
4	SB

Table: 120 IP Ports, 253 T1 PRI Ports, 373 Total Ports

3	SB
2	SB
1	MP-MA-16-PRI

Examples: E1 and IP Mixed Configurations

The E1 Multi Access Blade is installed in slot 1, followed by Smart Blades. The IP Multi Access Blade is installed in slot 6.

Table: 120 IP Ports, 120 E1 Ports, 240 Total Ports through Table: 240 IP Ports, 120 E1 Ports, 360 Total Ports show examples of mixed E1 and IP configurations. The E1 trunks on the Multi Access Blades may or may not be configured depending on the number of IP Multi Access Blades populated. In the following tables, SB is a Smart Blade.

In Table: 120 IP Ports, 120 E1 Ports, 240 Total Ports, the MP-MA-4 in slot 6 provides 120 IP ports. Every 96 ports of IP requires one Smart Blade, so the Smart Blade in slot 4 uses its 96 ports and the Smart Blade in slot 3 uses 24 of its 96 ports for IP conferencing ($96 + 24 = 120$). The MP-MA-4-PRI in slot 1 provides 120 E1 ports. The remaining 72 ports in slot 3 ($96 - 24$ used for the IP conferencing) plus 48 ports in slot 2 ($72 + 48 = 120$) are used for the E1 portion of the configuration.

Table: 120 IP Ports, 120 E1 Ports, 240 Total Ports

Slot	Blade
6	MP-MA-4
5	
4	SB
3	SB
2	SB
1	MP-MA-4-PRI

In Table: 120 IP Ports, 240 E1 Ports, 360 Total Ports, the MP-MA-4 in slot 6 provides 120 IP ports. Every 96 ports of IP requires one Smart Blade, so the Smart Blade in slot 5 uses its 96 ports and the Smart Blade in slot 4 uses 24 of its 96 ports for IP conferencing ($96 + 24 = 120$). The MP-MA-16-PRI in slot 1 provides 240 E1 ports. The Smart Blades in slots 2 and 3 use their 96 ports and the Smart Blade in slot 4 uses 48 of its remaining 72 ports for conferencing ($96 + 96 + 48 = 240$). (The Smart Blade in slot 4 uses 24 of its ports for the IP portion of the configuration and 48 ports for the E1 portion of the configuration.)

Table: 120 IP Ports, 240 E1 Ports, 360 Total Ports

Slot	Blade
6	MP-MA-4
5	SB
4	SB
3	SB

Table: Pure E1 Configuration, 480 E1 Ports

2	SB
1	MP-MA-16-PRI

In Table: 240 IP Ports, 120 E1 Ports, 360 Total Ports, the MP-MA-16 in slot 6 provides 240 IP ports. Every 96 ports of IP requires one Smart Blade, so the Smart Blades in slots 4 and 5 use their 96 ports and the Smart Blade in slot 3 uses 48 of its 96 ports for IP conferencing ($96 + 96 + 48 = 240$). The MP-MA-4-PRI in slot 1 provides 120 E1 ports. The Smart Blade in slot 2 uses its 96 ports and the Smart Blade in slot 3 uses 24 of its remaining 48 ports for conferencing ($96 + 24 = 120$). (The Smart Blade in slot 4 uses 48 of its ports for the IP portion of the configuration and 24 ports for the E1 portion of the configuration.)

Table: 240 IP Ports, 120 E1 Ports, 360 Total Ports

Slot	Blade
6	MP-MA-16
5	SB
4	SB
3	SB
2	SB
1	MP-MA-4-PRI

Configuration Information and Examples for the Cisco Unified MeetingPlace 8112

The Cisco Unified MeetingPlace 8112 supports the following:

- Up to 1152 ports in a T1 CAS Cisco Unified MeetingPlace system
- Up to 736 ports in a T1 PRI Cisco Unified MeetingPlace system (U.S. and Canada)
- Up to 960 ports in an E1 Cisco Unified MeetingPlace system
- Up to 960 IP ports (supports codecs G.711 (A-law and u-law) and G.729a and signaling H.323 and SIP)
- Nonblocking N/2 simultaneous conferences
- Mix and match T1 and IP endpoints
- Mix and match E1 and IP endpoints

Table: Supported Blade Configurations for the Cisco Unified MeetingPlace 8112 lists the allowable port and blade configurations for each protocol and the hardware used to achieve them.

Table: Supported Blade Configurations for the Cisco Unified MeetingPlace 8112

Protocol	Maximum Ports	Hardware Configuration
T1 CAS	1152	12 T1 Smart Blades
E1	960	10 Smart Blades and 2 MP-MA-16-PRI
T1 PRI	736	8 Smart Blades and 2 MP-MA-16-PRI

Table: 120 IP Ports, 240 E1 Ports, 360 Total Ports

IP	960	10 Smart Blades and 2 MP-MA-16s
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T1 PRI and E1 Multi Access Blades are installed on the left (with slot 2 left vacant if no MP-MA-16-PRI or MP-MA-4-PRI is needed to populate it and if the slot is not needed for Smart Blade capacity). Next, T1 Smart Blades are installed to the right of this. Last, IP Multi Access Blades are installed starting on the right (slot 16), and move to the left.

Note: In all configurations for the Cisco Unified MeetingPlace 8112, slots 7 to 10 are reserved for CPU and system controller cards.

Example: T1 CAS Configuration

Table: Pure T1 CAS Configuration, 1152 T1 CAS Ports shows a pure T1 CAS configuration with 1152 T1 CAS ports. Each slot (except for slots 7 to 10, which are reserved for CPU and system controller cards) has a T1 Smart Blade, denoted by SB. Each T1 Smart Blade has the capacity for 96 ports and there are 12 T1 Smart Blades ($96 \times 12 = 1152$).

Table: Pure T1 CAS Configuration, 1152 T1 CAS Ports

Slot	1	2	3	4	5	6	11	12	13	14	15	16
Blade	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB

Example: T1 PRI Configuration

Table: Pure T1 PRI Configuration, 736 T1 PRI Ports shows a pure T1 PRI configuration with 736 T1 PRI ports. The MP-MA-16-PRIs in slots 1 and 2 provide 368 T1 PRI ports each ($368 \times 2 = 736$). The ports in slots 3 to 13 ($7 \times 96 = 672$) and 64 of the ports in slot 14 are used for conferencing ($672 + 64 = 736$).

Table: Pure T1 PRI Configuration, 736 T1 PRI Ports

Slot	1	2	3	4	5	6	11	12	13	14	15	16
Blade	MP-MA-16- PRI	MP-MA-16- PRI	SB	SB	SB	SB	SB	SB	SB	SB		

Example: Pure IP Configuration

Table: Pure IP Configuration, 960 IP Ports shows a pure IP configuration with 960 IP ports. There are two MP-MA-16s on the right which support 480 IP ports each ($2 \times 480 = 960$). Because Multi Access Blades do not provide conferencing capability, every 96 ports of IP requires one Smart Blade, so slots 1 to 6 and slots 11 to 14 each have a Smart Blade with a capacity for 96 ports.

Table: Pure IP Configuration, 960 IP Ports

Slot	1	2	3	4	5	6	11	12	13	14	15	16
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Blade	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	MP-MA-16	MP-MA-16
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Examples: T1 CAS and IP Mixed Configurations

Table: 120 IP Ports, 936 T1 CAS Ports, 1056 Total Ports to Table: 600 IP Ports, 360 T1 CAS Ports, 960 Total Ports show examples of configurations with T1 CAS and IP. The T1 CAS trunks may or may not be configured depending on the number of IP ports. In each table, SB is a T1 Smart Blade.

In Table: 120 IP Ports, 936 T1 CAS Ports, 1056 Total Ports, the MP-MA-4 in slot 16 provides 120 IP ports. Every 96 ports of IP requires one Smart Blade, so the Smart Blade in slot 15 uses its 96 ports and the Smart Blade in slot 14 uses 24 of its 96 ports for IP conferencing ($96 + 24 = 120$). The remaining 72 ports in slot 14 ($96 - \text{the } 24 \text{ used for the IP conferencing}$) plus the ports in slots 1 to 6 and 11 to 13 ($9 \times 96 = 864$) are used for the T1 CAS portion of the configuration ($864 + 72 = 936$).

Table: 120 IP Ports, 936 T1 CAS Ports, 1056 Total Ports

Slot	1	2	3	4	5	6	11	12	13	14	15	16	
Blade	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	MP-MA-4

In Table: 480 IP Ports, 576 T1 CAS Ports, 1056 Total Ports, the MP-MA-16 in slot 16 provides 480 IP ports. Every 96 ports of IP requires one Smart Blade, so the Smart Blades in slots 11 to 15 use their 480 ports for IP conferencing ($96 \times 5 = 480$). Slots 1 to 6 have T1 Smart Blades with 96 ports each ($6 \times 96 = 576$ ports) to support the T1 CAS configuration.

Table: 480 IP Ports, 576 T1 CAS Ports, 1056 Total Ports

Slot	1	2	3	4	5	6	11	12	13	14	15	16	
Blade	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	MP-MA-16

In Table: 240 IP Ports, 720 T1 CAS Ports, 960 Total Ports, the two MP-MA-4s in slots 15 and 16 provide 120 IP ports each ($2 \times 120 = 240$). Every 96 ports of IP requires one Smart Blade, so the Smart Blades in slots 13 and 14 use their 96 ports and the Smart Blade in slot 12 uses 48 of its 96 ports for IP conferencing ($96 + 96 + 48 = 240$). The remaining 48 ports in slot 12 ($96 - \text{the } 48 \text{ used for the IP conferencing}$) plus the ports in slots 1 to 6 and 11 ($7 \times 96 = 672$) are used for the T1 CAS portion of the configuration ($672 + 48 = 720$).

Table: 240 IP Ports, 720 T1 CAS Ports, 960 Total Ports

Slot	1	2	3	4	5	6	11	12	13	14	15		16
Blade	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	MP-MA-4	MP-MA-4

In Table: 600 IP Ports, 360 T1 CAS Ports, 960 Total Ports, the MP-MA-16 in slot 16 provides 480 IP ports and the MP-MA-4 in slot 15 provides 120 IP ports, for a total of 600 IP ports. Every 96 ports of IP requires one Smart Blade, so the Smart Blades in slots 5 to 14 use their 576 ports and the Smart Blade in slot 4 uses 24 of its 96 ports for IP conferencing ($96 \times 6 = 576 + 24 = 600$). The remaining 72 ports in slot 4 ($96 - 24$ used for the IP conferencing) plus the ports in slots 1 to 3 ($3 \times 96 = 288$) are used for the T1 CAS portion of the configuration ($288 + 72 = 360$).

Table: 600 IP Ports, 360 T1 CAS Ports, 960 Total Ports

Slot	1	2	3	4	5	6	11	12	13	14	15	16
Blade	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	MP-MA-4	MP-MA-16

Examples: T1 PRI and IP Mixed Configurations

Table: 480 IP Ports, 92 T1 PRI Ports, 572 Total Ports and Table: 480 IP Ports, 368 T1 PRI Ports, 848 Total Ports show examples of mixed configurations with T1 PRI and IP. In each table, SB is a T1 Smart Blade. The Multi Access Blade used for the IP part of the configuration is on the right, in slot 16 and the Multi Access Blade used for the T1 PRI part of the configuration is on the left, in slot 1.

In Table: 480 IP Ports, 92 T1 PRI Ports, 572 Total Ports, the MP-MA-16 in slot 16 provides 480 IP ports. Every 96 ports of IP requires one Smart Blade, so the Smart Blades in slots 3 to 11 use their 480 ports for IP conferencing ($96 \times 5 = 480$). The MP-MA-4-PRI in slot 1 provides 92 T1 PRI ports and the Smart Blade in slot 2 uses 92 of its 96 ports for conferencing.

Table: 480 IP Ports, 92 T1 PRI Ports, 572 Total Ports

Slot	1	2	3	4	5	6	11	12	13	14	15	16
Blade	MP-MA-4-PRI	SB	SB	SB	SB	SB	SB					MP-MA-16

In Table: 480 IP Ports, 368 T1 PRI Ports, 848 Total Ports, the MP-MA-16 in slot 16 provides 480 IP ports. Every 96 ports of IP requires one Smart Blade, so the Smart Blades in slots 6 to 14 use their 480 ports for IP conferencing ($96 \times 5 = 480$). The MP-MA-16-PRI in slot 1 provides 368 T1 PRI ports. The Smart Blades in slots 2 to 4 use their 96 ports and the Smart Blade in slot 5 uses 80 of its 96 ports for conferencing ($3 \times 96 = 288 + 80 = 368$).

Table: 480 IP Ports, 368 T1 PRI Ports, 848 Total Ports

Slot	1	2	3	4	5	6	11	12	13	14	15	16
Blade	MP-MA-16-PRI	SB	SB	SB	SB	SB	SB	SB	SB	SB		MP-MA-16

Example: Pure E1 Configuration

E1 Multi Access Blades are installed starting in slot 1 and move to the right, followed by Smart Blades. Table: Pure E1 Configuration, 960 E1 Ports shows a pure E1 configuration with 960 E1 ports. The two MP-MA-16-PRIs in slots 1 and 2 provide 480 E1 ports each ($480 \times 2 = 960$). The Smart Blades in slots 3 to

16 each have 96 ports (96 x 10 = 960) which are used for conferencing.

In this table, SB is a Smart Blade.

Table: Pure E1 Configuration, 960 E1 Ports

Slot	1	2	3	4	5	6	11	12	13	14	15	16
Blade	MP-MA-16-PRI	MP-MA-16-PRI	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB

Examples: E1 and IP Mixed Slot Configurations

E1 Multi Access Blades are installed starting in slot 1 and move to the right, followed by Smart Blades. IP Multi Access Blades are installed starting in slot 16 and move to the left.

Table: 120 IP Ports, 480 E1 Ports, 600 Total Ports to Table: 120 IP Ports, 120 E1 Ports, 240 Total Ports show examples of mixed E1 and IP configurations. The E1 trunks on the Multi Access Blades may or may not be configured depending on the number of IP Multi Access Blades populated. In the following tables, SB is a Smart Blade.

In Table: 120 IP Ports, 480 E1 Ports, 600 Total Ports, the MP-MA-4 in slot 16 provides 120 IP ports. Every 96 ports of IP requires one Smart Blade, so the Smart Blade in slot 12 uses its 96 ports and the Smart Blade in slot 11 uses 24 of its 96 ports for IP conferencing (96 + 24 = 120). The MP-MA-16-PRI in slot 1 provides 480 E1 ports. The remaining 72 ports in slot 11 (96 - the 24 used for the IP conferencing) plus the ports in slots 2 to 6 (5 x 96 = 480) are used for the E1 portion of the configuration (5 x 96 = 480).

Table: 120 IP Ports, 480 E1 Ports, 600 Total Ports

Slot	1	2	3	4	5	6	11	12	13	14	15	16
Blade	MP-MA-16-PRI	SB	SB	SB	SB	SB	SB	SB				MP-MA-4

In Table: 480 IP Ports, 480 E1 Ports, 960 Total Ports, the MP-MA-16 in slot 16 provides 480 IP ports. Every 96 ports of IP requires one Smart Blade, so the Smart Blades in slots 11 to 15 use their 96 ports for IP conferencing (96 x 5 = 480). The MP-MA-16-PRI in slot 1 provides 480 E1 ports. The ports in slot 2 to 6 (5 x 96 = 480) are used for the E1 portion of the configuration.

Table: 480 IP Ports, 480 E1 Ports, 960 Total Ports

Slot	1	2	3	4	5	6	11	12	13	14	15	16
Blade	MP-MA-16-PRI	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	MP-MA-16

In Table: 480 IP Ports, 120 E1 Ports, 600 Total Ports, the MP-MA-16 in slot 16 provides 480 IP ports. Every

96 ports of IP requires one Smart Blade, so the Smart Blades in slots 4 to 12 use their 96 ports for IP conferencing ($96 \times 5 = 480$). The MP-MA-4-PRI in slot 1 provides 120 E1 ports. The 96 ports in slot 2 plus 24 of the ports in slot 3 are used for the E1 portion of the configuration ($96 + 24 = 120$).

Table: 480 IP Ports, 120 E1 Ports, 600 Total Ports

Slot	1	2	3	4	5	6	11	12	13	14	15	16
Blade	MP-MA-4-PRI	SB	SB	SB	SB	SB	SB	SB				MP-MA-16

In [Table: 120 IP Ports, 120 E1 Ports, 240 Total Ports](#), the MP-MA-4 in slot 16 provides 120 IP ports. Every 96 ports of IP requires one Smart Blade, so the Smart Blade in slot 4 uses its 96 ports and the Smart Blade in slot 3 uses 24 of its 96 ports for IP conferencing ($96 + 24 = 120$). The MP-MA-4-PRI in slot 1 provides 120 E1 ports. The 96 ports in slot 2 plus 24 of the unused ports in slot 3 are used for the E1 portion of the configuration ($96 + 24 = 120$).

Table: 120 IP Ports, 120 E1 Ports, 240 Total Ports

Slot	1	2	3	4	5	6	11	12	13	14	15	16
Blade	MP-MA-4-PRI	SB	SB	SB								MP-MA-4

Cisco Unified MeetingPlace Audio Server Software

The Cisco Unified MeetingPlace Audio Server software uses a client server architecture that divides computing tasks between the server and the client. The following software resides on the Cisco Unified MeetingPlace system database disk:

- A real-time UNIX/POSIX-compatible operating system designed specifically for real-time intensive applications.
- The system software, including:
 - ◆ Cisco Unified MeetingPlace application software.
 - ◆ Relational SQL database for storing all conference and profile information.
 - ◆ Cisco Unified MeetingPlace options.

Desktop software is installed on desktop computers. This software communicates with the Cisco Unified MeetingPlace system over the LAN or WAN.

For a list of all Cisco Unified MeetingPlace Audio Server software options, see the [About Integration Applications](#).

[Table: Cisco Unified MeetingPlace Voice-Only Configuration](#) describes the components of the Cisco Unified MeetingPlace voice-only (Audio Server) configuration.

Table: Cisco Unified MeetingPlace Voice-Only Configuration

Component	Description
Cisco Unified MeetingPlace user licenses	Software license that allows callers to attend conferences. You may purchase more user licenses than you foresee for conference attendance, to provide telephony connectivity to support activities outside conferences (for example, to listen to meeting recordings).
MeetingTime	Desktop software that allows users to access and use Cisco Unified MeetingPlace functions from Cisco MCS. The Cisco Unified MeetingPlace voice-only configuration includes five MeetingTime licenses.
Cisco Unified MeetingPlace Web Conferencing (web scheduling only)	Windows-based server software that allows users to schedule conferences, share meeting materials, and listen to recorded meetings and voice comments from web browsers. Users can also link to meeting list pages for today's meetings, past meetings, and future meetings.

Performance Rating

The Cisco Unified MeetingPlace 8106 and 8112 servers both are rated as being able to process about 2.6 full incalls per second.

A full incall is defined as an incoming call that enters a conference. This translates to 160 calls per minute or 9,600 calls per hour.