

Toshiba IP5000-Series IP Telephones

This bulletin is a re-issue, it supersedes PBCIX-0070 dated May 15, 2008.

Product Summary

Toshiba's next generation IP telephones are here. The IP5000 product line offers a sleek, low-profile design with a stylish tilt stand, an integrated headset interface and a full set of display and call handling features making Toshiba the obvious choice in leading-edge IP telephones. Toshiba continues to be proud of its backward compatibility allowing customers a new look on their desktop while maintaining much of their initial telephone system investment.

The most noticeable enhancements are the backlit displays, updated button placement and a high-end model with LCD key strips.

Each model in this portfolio comes with a built-in Gigabit Ethernet switch supporting high speed network connections directly to desktop.

The telephone models are referenced by the total number of keys that are on the telephone (excluding the dial pad); the number of programmable keys have been specified in the descriptions and throughout the document. With this release of IP5000-series telephones the Toshiba telephone portfolio is once again united with a uniform look to both the digital and IP telephone sets.

The IP5122-SD model offers full feature functionality with a backlit display, making this phone a strong contender with a 4-line display, 10 programmable buttons and our standard Gigabit Ethernet switch; it will meet the needs of the largest number of users.

The IP5122-SDC is a great option for those locations that require local CO dial tone, with an option to connect a CO-line (Central Office Line) directly to the telephone set. This telephone offers 4 lines of backlit display and our standard Gigabit Ethernet switch.

Note A trunk can be shared between an IP5122-SDC and another analog device like a fax machine or modem. In this application the IP5122-SDC will neither be able to show the status of the shared trunk nor detect when it is in use. A single analog trunk shared between two or more IP5122-SDCs can be setup with Privacy “on” to control trunk access one station at a time.

The IP5022-SD is Toshiba's answer for a lower-cost telephone set in our IP5000-series portfolio. The IP5022-SD has all the same characteristics as our IP5122-SD except the backlight for the display. This telephone still has full feature functionality as well as Gigabit Ethernet and with its 4-line display and 10 programmable buttons it is sure to be a popular addition to the family. The IP5022-SD supports all three add-on modules (LM5110, KM5020 and IDM5060).

The IP5132-SD with 20 programmable keys and backlight will be a natural choice for super-users and receptionists, with 4 lines of backlit display and our standard Gigabit Ethernet switch.

IP5022-SD
IP5122-SD
IP5122-SDC



IP5132-SD

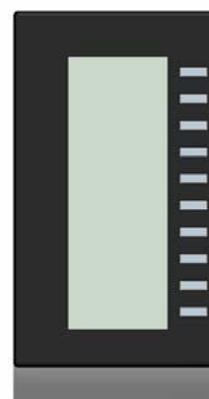


The high-end user will enjoy the IP5131-SDL. The IP5131-SDL telephone has 10 programmable keys, a backlit, 9 line display, and uses LCD keystrips to allow easy, dynamic changes of button labels. This telephone also comes with a navigation key, on-board browser, and HTML support. The blue button allows the user to toggle the station between Call Processing mode and Browser Mode, and between Call Processing and Programming Mode. The purple button will be functional in phase two. Along with the rest of the portfolio, the IP5131-SDL comes with our standard Gigabit Ethernet switch.

IP5131-SDL

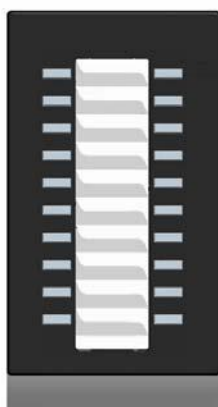


LM5110



The LM5110 add-on-module (ADM) with 10 programmable LCD keys supports LCD keystrips and is a natural choice for additional programmable keys on any of the IP series telephones. The KM and IDM modules, with 20 and 60 programmable keys respectively, are excellent choices for adding additional programmable buttons to a telephone or outfitting a receptionist console, and support paper keystrips.

KM5020



IDM5060



Toshiba's IP5000-series telephones come with built-in off-hook-call-announce, although it does require an additional IP port for full functionality. Off Hook Call Announce through the handset is a standard feature.

Positioning

The IP5000 family of telephones provides a substantial selection to meet the wide variety of user needs across an organization. From an elite group of executives to call center agents or multiple receptionists; there is a solution for every user across the office or across an enterprise.

Existing Strata CIX system customers can begin using the new IP5000-series telephone immediately, integrating them into their existing systems. When they are ready to upgrade their systems they can utilize all the enhanced capabilities of these telephones. Even without an upgrade, existing customers can connect the new IP5000-series telephones to their system and begin enjoying the new telephones right away.

New system sales will benefit from the updated look and feel of the IP5000 telephones and the visual unification of the Digital and IP telephone portfolio.

The IP5000-series telephones will be distributed in the USA, Canada, Mexico, UK, China, Singapore, Australia and other Asian countries; making it's debut in the North American market in the first half of 2008.

Minimum requirements for full functionality: Strata CIX systems with Release 5.2 software, eManager R5.10A14, Network eManager R5.10A18, and MyPhoneManager R5.10A03. Note that if the system software is not R5.10A14 or later the IP5000-series telephones will operate in IPT2000-series mode (two-line displays).

Value Propositions

The IP5000 product family addresses the industry's demand for an enhanced look with added functionality to the Toshiba brand of telephones. Toshiba listened to the voice of the customer (both dealers and end-users) to come up with the following enhancements:

Gigabit Ethernet Switch

- Each IP5000-series telephone has a built-in gigabit ethernet switch.
- Auto-sensing network speed for 10, 100 and, 1000 Mbps

LCD Key-Strip

- Available on the IP5131-SDL with it's 10 programmable buttons, users can dynamically change the labels on this LCD display telephone.
- Integrated in the LM5110 add-on module, this module is supported on all of the IP5000 series telephones
- Key labels are programmable via eManager R5.10A14 or later, Network eManager R5.10A18, and MyPhoneManager R5.10A03 (both local and remote), or user programming mode
- User programmable line and trunk labels
- Feature labels – user selectable
- Ease of deployment and dynamic changes

Modern New Look

- Sleek low profile — less than 1-inch thick
- Black body with dark gray keys

- Metallic silver curved tilt stand with eight adjustable positions
- Key pad retained the traditional Toshiba layout, maintaining continuity and operability in mixed handset deployments

Large Display Area for Call Information

- All IP5000 telephone LCDs are 24 characters wide, the LM5110 ADM display is 12 characters wide
- Four lines of LCD to display call information (on the IP5122-SD, IP5122-SDC, and IP5132-SD telephones)
- Nine lines of LCD on the IP5131-SDL telephone

Backlight LCD

- Available on: IP5122-SD, IP5122-SDC, IP5132-SD, IP5131-SDL, and LM5110
- Place the telephones anywhere: regular office, reception area, high-end home studio, hotel lounge, low-light environments, etc.
- LCD backlight can be set to always on, always off or synchronized which turns backlight on anytime activity is sensed on the telephone and will automatically shut off after a period of time to conserve energy.

Handset/Mic Mute

- All models have microphone and speaker capability
- Enhanced Mute - now the handset and microphone are muted simultaneously
- The MIC key on the telephones toggles between Mic and Mute. When the Mic key is lit, hands free communication is supported, when the Mic key is pressed and light is off, Mute is enabled.

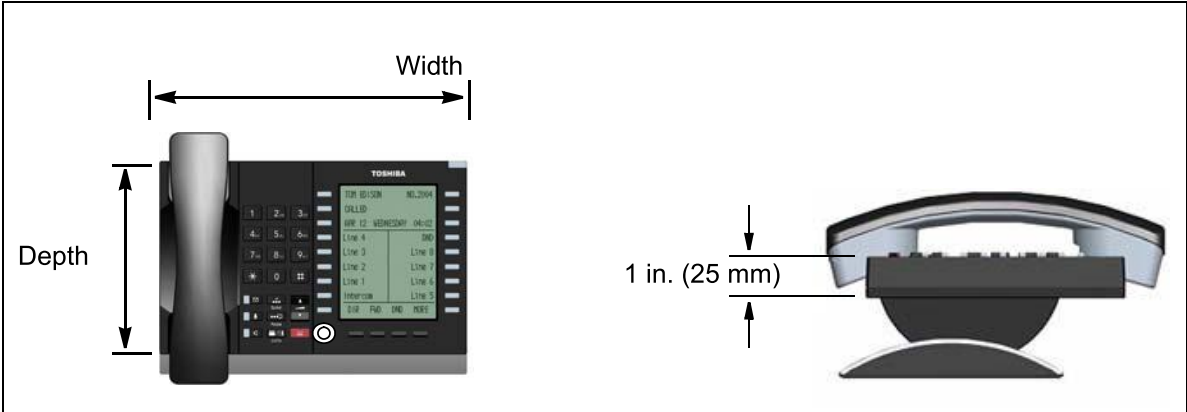
Note Mute is supported on IP5122-SDC while functioning as an IP telephone. Mute is not supported when using the analog trunk directly connected to the telephone, in this case, the phone functions like a basic analog telephone set.

Features and Capabilities

The IP5000-series telephones:

- Support on-hook dialing
- Speaker Off-hook Call announce (OCA)
- Full-duplex speakerphone capability
- Built-in headset interface
- Carbon handset support
- Up to two ADMs (LM5110, KM5020)
- Up to three IDM5060
- External Speaker Control Box (BESCB1A) connection

Physical Specifications



IP5000-Series Telephones and ADMs Physical Dimensions

Device	Width	Depth Without Tilt
IP5000 series telephones	10.16 in. (258 mm)	6.10 in. (155 mm)
IDM5060	10.16 in. (258 mm)	
KM5020, LM5110	3.54 in. (90 mm)	

IP5000-Series Telephone Tilt Angles

The IP5000-series telephones have three tilt positions built into the base. There is also a tilt stand extension that adds an additional 20 degrees of tilt. When the telephone is sitting on a desk or table there are a total of six different angles of tilt available. When wall mounted there are two angles available. Refer to the figures below and the installation section for more detail.

IP5000-Series Tilt Angles

Model	Tilt Without Stand	Tilt with Stand
IP5000 series telephones and ADMs	15°, 27.5°, 40°	35°, 47.5°, 60°

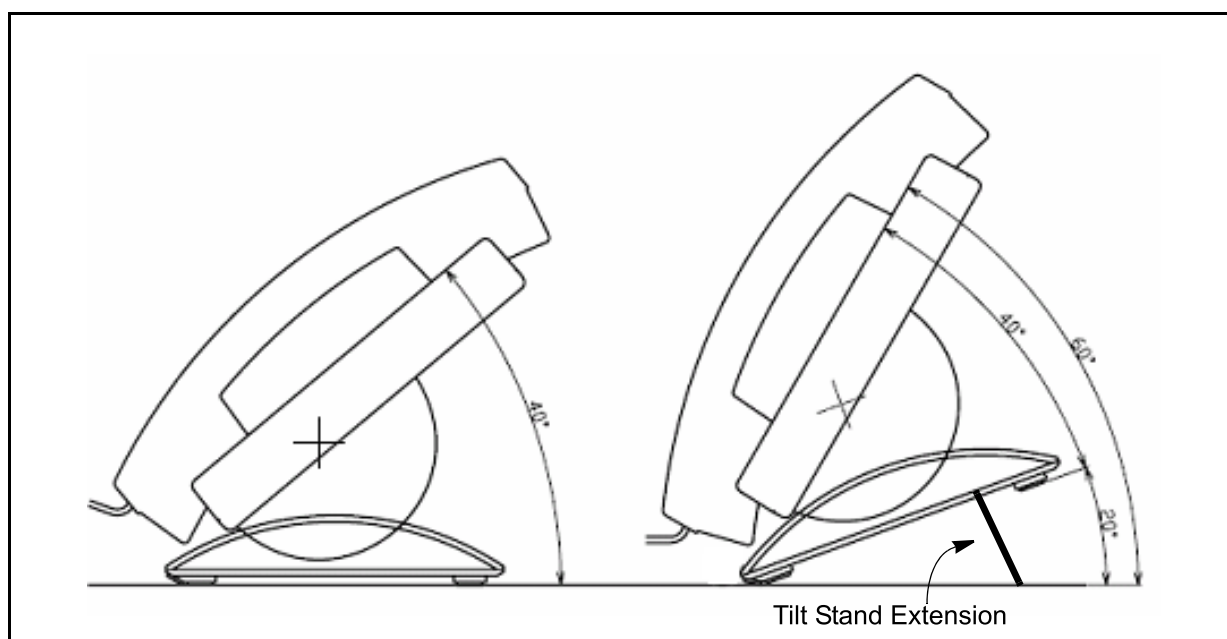


Figure 1 IP5000-Series Desk-top Tilt Angle With Tilt-Stand Extension

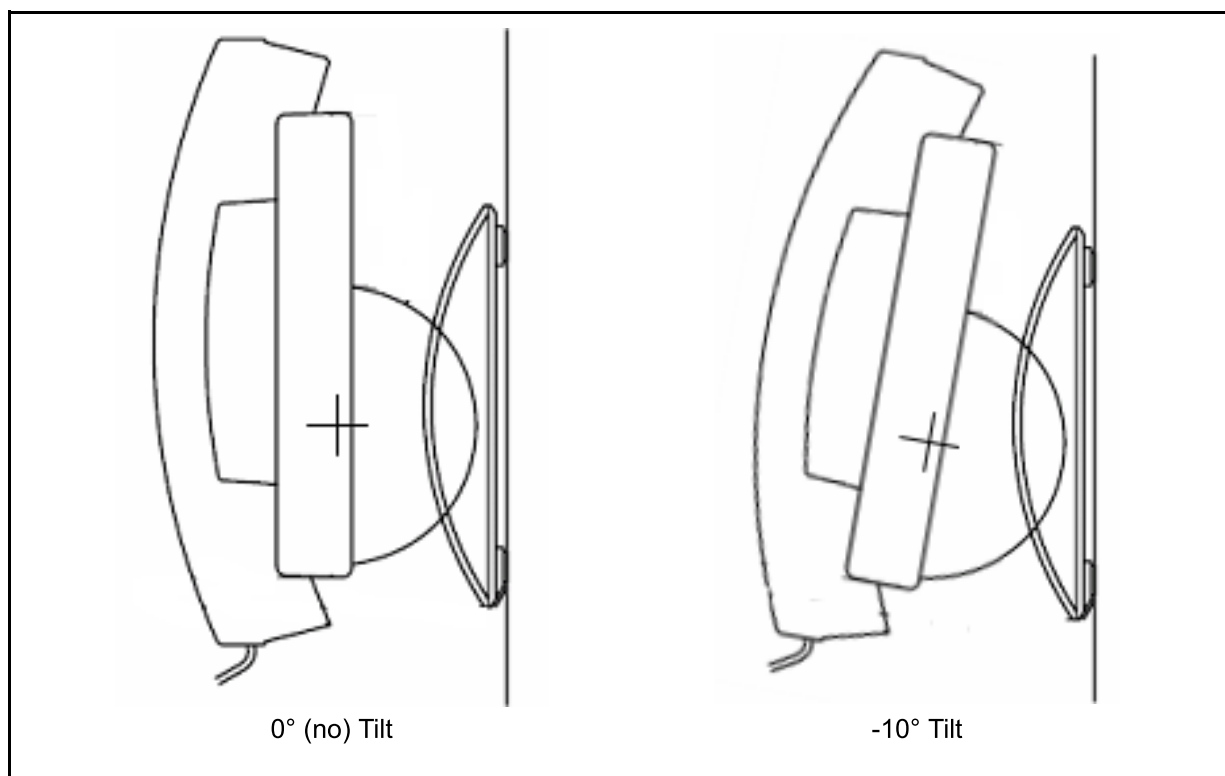


Figure 2 IP5000-Series Wall Mount Angles

Storage and Operating Temperature Range

IP5000-series telephones and add-on modules storage and operating temperature ranges:

- Storage: - 20° ~ 60° C (-4° ~ 140° F) - (20 ~ 80% non-condensing humidity)
- Operation: 0° ~ 40° C (32° ~ 104° F) - (20 ~ 80% non-condensing humidity)

Compatibility and Migration

The IP5000-series telephones replace the IPT2000-series telephones in the Toshiba product line.

IPT2000 and IP5000-series telephones can coexist with full functionality in one Strata CIX system with Release 5.2 software or above.

The IP5000 telephones have three operational modes:

- When connected to Release 5.2 CIX systems with LIPU or MIPU interface cards, they will automatically run in IP5000-series Mode.
- When connected to CIX systems with older than Release 5.1 (including Release 3) the IP5000-series telephones will automatically act as IPT2000-series telephones.
- If the interface is a BIPU-M the IP5000-series telephones will run in IPT2000-series mode.

Strata CIX40, CIX100, CIX200, and CIX670 systems running R4 and later software can be upgraded to Release 5.2 Software. Systems running R3 software must be updated to R4 processors then updated to R5.2 software.

Strata CTX28 systems do not support IP Telephones.

License Requirements

Each IP5000-series telephone requires an IP End point License: LIC-CIX-IP PORT.

IPT2000-series and IP5000-series telephone use the same LIC-CIX-IP PORT license.

Order Information

Type	Part Number	Description
Telephones	IP5022-SD	4 Line LCD (no backlight), 10 Programmable keys
	IP5122-SD	4 Line LCD (with backlight), 10 Programmable keys
	IP5122-SDC	4 Line LCD (with backlight), 10 Programmable keys, and CO Line circuit option
	IP5131-SDL	9 Line LCD (with backlight), 10 Programmable keys, and on-board browser
	IP5132-SD	4 Line LCD (with backlight), 20 Programmable keys
Add-On-Modules	LM5110	LCD Key Module with 10 programmable LCD keys and backlight
	KM5020	Key Module with 20 programmable keys
	IDM5060	IP DSS Module with 60 programmable keys
Power Supply	LADP2000-3A	IP5000-series telephone power supply. Input: 120 VAC, Output: 12 VDC/1A

Telephone Bundles

The Telephone Bundles all include, as described below, a telephone, a local power supply and an end point license.

Telephone Bundle Part Number	Description
IP5022-SD-LIC	10 Programmable keys, 4 Line LCD (no backlight), Speakerphone, Local power supply, and LIC-CIX-IP PORT license
IP5122-SD-LIC	10 Programmable keys, 4 Line LCD (with backlight), Speakerphone, Local power supply, and LIC-CIX-IP PORT license
IP5122-SDC-LIC	10 Programmable keys, 4 Line LCD (with backlight), Speakerphone, CO Line circuit option, Local power supply, and LIC-CIX-IP PORT license
IP5132-SD-LIC	20 Programmable keys, 4 Line LCD (with backlight), Speakerphone, CO Line circuit option, Local power supply, and LIC-CIX-IP PORT license
IP5131-SDL-LIC	10 Programmable keys, 9 Line LCD (with backlight), On-board browser, Speakerphone, Local power supply, and LIC-CIX-IP PORT license

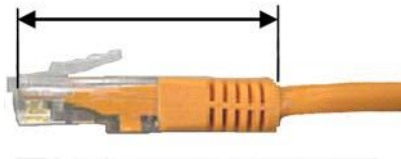
Station Wiring, Power

Connections

The IP5000-series IPTs can be powered by a local power supply at each station or from a central supply using a 802.3af standard compliant Power-Over-Ethernet (PoE) device. Toshiba recommends the SMC 24-port, 802.3af certified SMC8124PL2 PoE switch or the 8-port SMCGS8P-Smart PoE Switch available through authorized Toshiba dealers.

Use IEEE CAT5E (minimum) IP cable with a connector boot length not greater than 1.6 inches (40 mm). For Gigabit ethernet operation CAT6 cable is recommended.

Connector Boot Length
less than 1.6 in. (40 mm)



All IP5000-series telephones are packaged with a 9 ft., 10 in. (3 m) IP cable.

CAUTION! When powering up by PoE you must leave the LAN cable UNPLUGGED for a minimum of five seconds before plugging it back into the IP5000-series IPT or PoE switch. In some situations the IP5000 cannot start without this short interval.

IP5000-series telephones equipped with an ADM may require a local power supply if the PoE switch cannot provide sufficient power for both the phone and the ADM.

CAUTION! As above, when powering up by AC power adapter, you must leave the LAN cable UNPLUGGED for a minimum of five seconds before plugging it back into the IP5000-series IPT. In some situations the IP5000 cannot start without this short interval.

The IP5000-series handset connects with a two-pair modular handset cable included with the telephone.

An ADM connects to the IP5000-series station only with the modular cable included with the ADM.

IP5000 Series Telephone Power Ratings

Power Consumption (IEEE802.3af 48Vdc) of IP5000-series stations and add-on modules.

Table 2-1 IP5000 Series POE Power Ratings

Telephone Model	Option		Power Rating (Watts)	Typical Watts	IEEE802.3af PD class
	Model	Qty			
IP5022-SD IP5122-SD IP5122-SDC IP5132-SD IP5131-SDL	none	--	7.4	6.2	0
IP5xx +	IDM5060	3	10.3	8.6	0
IP5xx +	IDM5060	2	9.4	7.8	0
IP5xx +	IDM5060	1	8.4	7.0	0
IP5xx +	LM5110	2	10.3	8.6	0
IP5xx +	LM5110	1	9.4	7.8	0
IP5xx +	KM5020	2	8.9	7.4	0
IP5xx +	KM5020	1	8.2	6.8	0

Installation Guidelines

The connectors on the IP5000-series telephones are identified with icons. The connector icons and their meaning are shown below.

Icon	Function
	Add-On Module (ADM) Cable Connector
	AC Power Adapter (12 VDC) Input
	Handset Cord
	Headset Cord
	External Speaker Control Box (BESCB1A) connection
	IP Network Connection
	PC Connection
	CO Line Connection (model IP5122-SDC only)

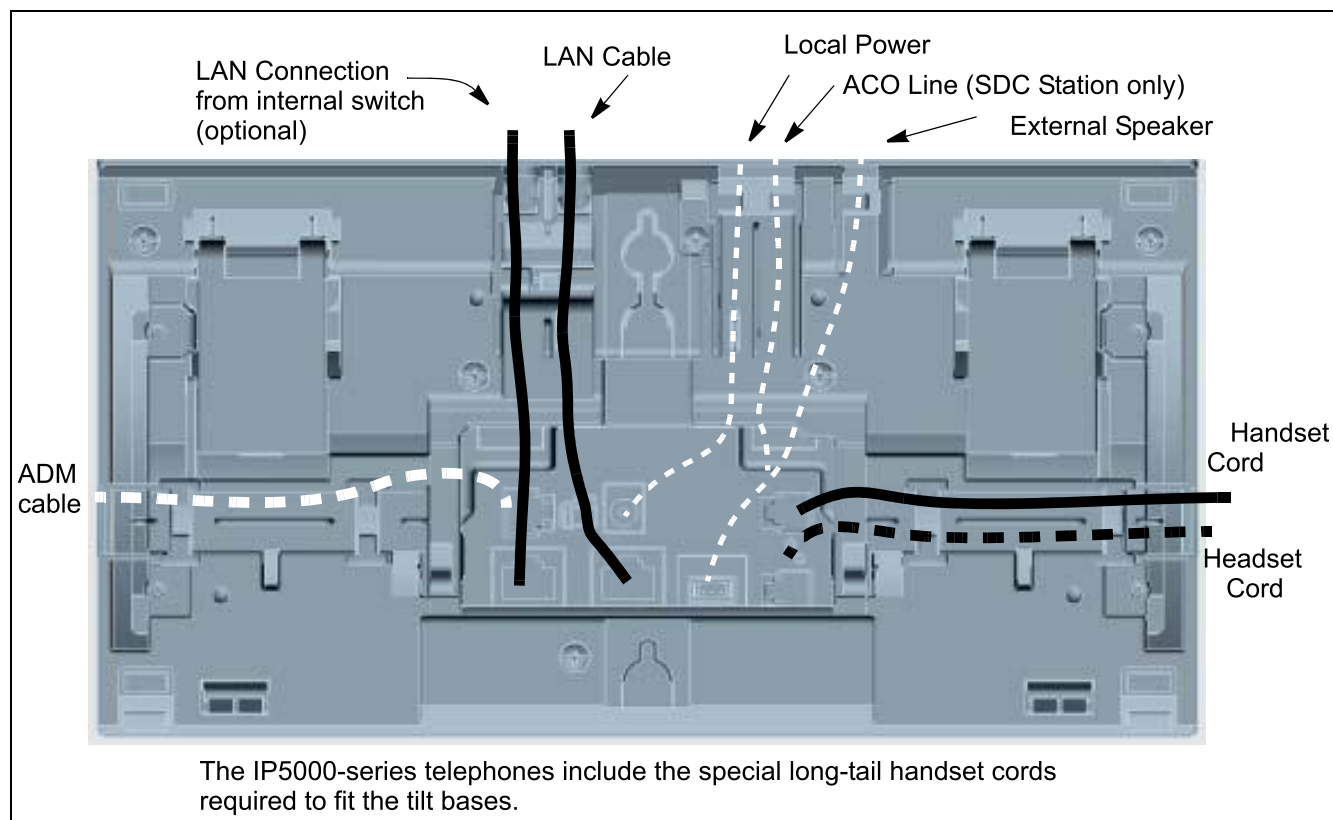
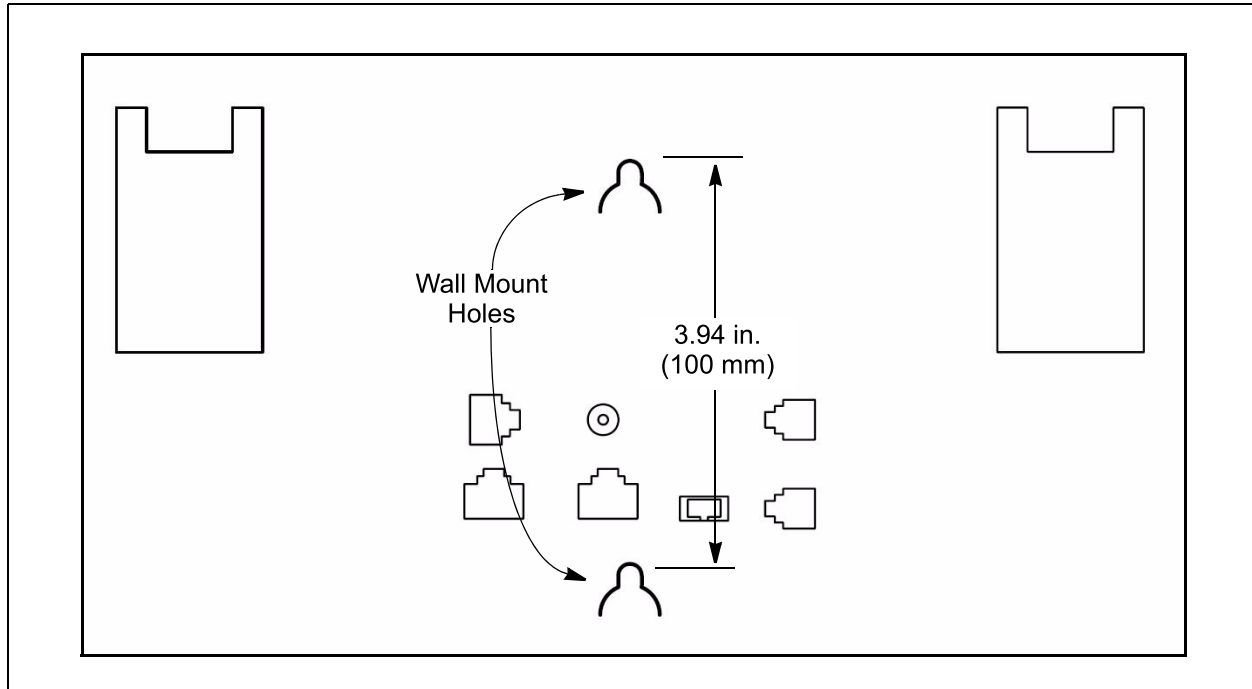


Figure 3 IP5000-series Telephone Connectors

Wall Mounting

All of the IP5000-series telephones wall mount in the same manner. Attach two screws to the wall, slide the telephone down over the screw heads to secure.



Wall mounting requires two pan head screws spaced vertically 100 mm ($3\frac{15}{16}$ inches) apart.

Add-On Module Installation

Each add-on module is packaged with the metal brackets and screws used to attach the ADM to an IP5000-series telephone, or another ADM. The ADM package also includes the short line cord to connect the telephone to the ADM or the ADM to a second ADM.

The ADM and telephone bases are connected together with metal brackets to form a single unit. The ADM and telephones tilt independently.

CAUTION! Unplug the LAN cable (and power cable if equipped) from the IP5000-series telephone before attaching the ADM. Plugging the ADM cable in while the IP5000-series telephone is powered will damage the telephone, ADM or both.

ADM Installation procedure:

1. Unplug the LAN cable from the telephone. If equipped with a local power adapter unplug the power cord from the IP telephone.
2. Use the brackets and screws included in the box to attach the ADM base to the telephone base. Refer to [Figure 4](#).
3. Use the cable included with the ADM to connect from the telephone ADM connector to the ADM "IN" connector. If a second ADM is attached, that cable runs from the first ADM "OUT" connector to the second ADM "IN" connector. Refer to [Figure 4](#).
4. Plug in the IP5000-series telephone power cord if using a local power supply. Plug in the LAN cable.

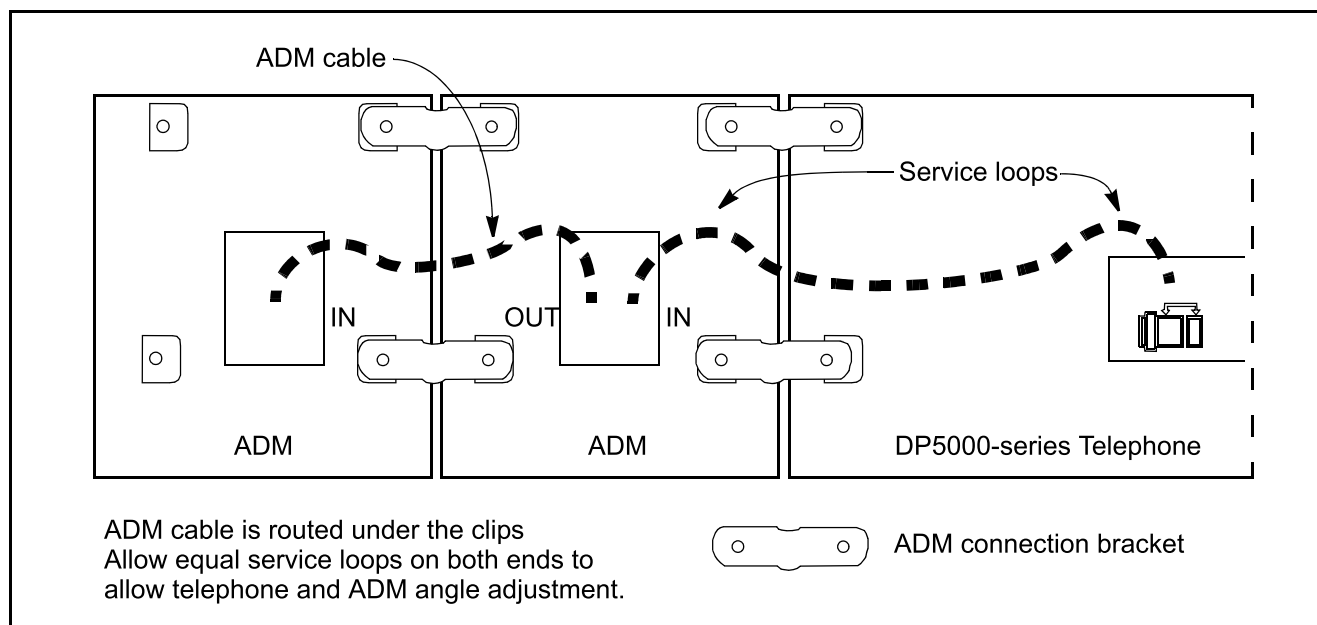


Figure 4 IP5000-Series ADM Connection

Telephone Administration Reference:

To initialize the telephone set must be Idle (no calls ring, on hold or connected) and the Handset/headset must be 'on hook.'

To Initialize an IP5000-series telephone (except IP5131-SDL)

1. Press 3+6+9+Hold (simultaneously)
2. Press the Volume Up
3. Press Hold
4. Press FB01, FB02 and FB03 to light all three keys (On the IP5122-SDC FB04 should also be lit.)
5. Press Hold
6. Go off-hook then on-hook to exit programming mode.

This will reset all the programming mode options settings back to the factory default.

The IP5000-series telephones can be programmed in the same manner as the IPT2000-series telephones with the following considerations:

IP5131-SDL LCD Keystrip Setup

eManager V5.10A14 or later or, Network eManager A5.10A18 or later is required.

Assign Keystrip Label Resources to device

1. Login to eManager
2. Select Advanced Configuration > Station > Assignments
3. From the station list on the right hand side of the screen, choose the extension number to change.
4. Click on the DKT tab
FB 03: Keystrip Button Quantity should be changed to 10
FB 39: LARGE LCD PHONE should be changed to IP5131.
5. Click on the Submit button.

Note To change this DN to another IP5000-series telephone or to a DP5000-series or DKT, with a key type other than 10 use the following steps.

1. Change FB 39 to "Not DP5130"
2. Press Submit.
3. Change FB 03 to a value other than 10.
4. Press Submit.

Program Keystrip Labels

1. Log into eManager
2. Select Advanced Configuration > Station > Assignments
3. From the station list on the right hand side of the screen, choose the extension number to change.
4. Click on the Key tab
5. Click on the button to be setup
6. Choose the feature to be applied from the feature list on the right-hand side.

7. A Webpage Dialog box pops up that allows the feature to be customized
8. Key Strip Label will be the name that appears on the LCD label, it can be setup with an easy to remember identifier.
9. Click OK
10. Click Submit.

LM5110 LCD Keystrip Setup

eManager V5.10A14 or later or, Network eManager A5.10A18 or later is required.

Assign Keystrip Label Resources

1. Log into eManager
2. Select Advanced Configuration > Station > Assignments
3. From the station list on the right hand side of the screen, choose the extension number which corresponds to the LM module to be labeled.
4. Click on the DKT tab
5. FB 40: ADM1-LCD KEYSTRIP should be changed to LM5110.
If more than one LM module is attached change FB41 to LM5110. Up to two LM modules can be connected.
6. Click Submit.

Note To remove an LM module (ADM1 or ADM2)

1. Change FB 40 (ADM1) or FB 41 (ADM2) to "Not LM5110"
2. Click on Submit.
3. Change FB 4 to "One" or "None" as appropriate.
4. Click on Submit.

Program Keystrip Labels

1. Log into eManager
2. Select Advanced Configuration > Station > Assignments
3. From the station list on the right hand side of the screen, choose the extension number to change.
4. Click on the Key tab
5. Click on the button to be setup under LCD Key ADM1 or LCD Key ADM2 if more than one LM module is connected.
6. A Webpage Dialog box pops up that allows the button to be customized
7. Enter the Extension number to be assigned to the button.
8. Key Strip Label will be the name that appears on the LCD label, enter an easy to remember identifier.
9. Click OK
10. Click Submit.

Initial Start-up

When an IP5000-series telephone is connected to power it will initialize then attempt to connect to the Strata CIX system. The start-up sequence indicators are described below.

1. All of the Feature Buttons (FB) will light green.



2. Next, all of the FBs will go out.

3. The FBs will light, red, in sequence, one row at a time from the bottom of the telephone until all of the FBs are lit.



4. The FB will all light green, then go out.
5. The telephone status will be displayed on the LCD.



End-user Reference Guide

Programming changes can be done through the telephone or through MyPhoneManager. Following are the instructions using the telephone.

Volume Control

The following instructions apply to all IP5000-series telephones.

➤ To adjust the handset volume

- Press the **Vol ▲** to increase volume and **Vol ▼** to decrease volume during the call. When you hang up, the volume returns to the default setting.

➤ To adjust the speaker volume for internal/external calls and background music

1. Press **Spkr**.
2. Press an extension button - you hear dial tone.
3. Press the **Vol ▲** to increase volume and **Vol ▼** to decrease volume. This volume setting applies to all calls until changed.

➤ To adjust Ring Tone, Hands free Answerback and Speaker Off-hook Call Announce

- Make sure the telephone is idle and the handset is on-hook. Press the **Vol ▲** to increase volume and **Vol ▼** to decrease volume. This adjusts volume for your telephone's ring tone, Hands free Answerback and Speaker Off-hook Call Announce simultaneously.

➤ To adjust handset Beep Tone

1. With the handset off-hook, dial the Beep Tone Adjustment Code **#6101** (default code). You hear busy tone.
2. Press **Vol ▲** or **▼** to reach the desired level.

Backlight Options

Available on IP5000-series telephones and LM models. This setting adjusts when the backlight comes on and how long it stays lit.

➤ To change Backlight Settings (all except IP5131)

1. Press **Hold+3+6+9** (simultaneously).
2. Press the **Mic** button.
3. Press the **Hold** button.
4. Use the Soft Keys to set the backlight from dim to bright.
5. Press FB1, the display will LCD Backlight Setting. Press and hold:
1 for Always off
2 for Always on
3 for On Demand.
6. Press FB2 to set the On Demand timer. The display will show Backlight Timer x10sec. Press a dial pad button to select the backlight on time (e.g. 3 = 30 seconds). The timer range is 1 (10 seconds) to 30 (300 seconds).
7. Press **Hold** to save settings

➤ **To change IP5131 Backlight Settings**

1. Press **Hold+3+6+9** (simultaneously).
2. Press the **Others** soft button.
3. Use the Soft Keys to select: **BL Mode**.
4. Press a softkey to select:
Always Off
Always On
On Demand
5. Press the **Set** softkey then, press it again.
6. Press the softkey for **BL Timer**.
7. Use the dial pad to enter a value 1 (10 seconds) to 30 (300 seconds).
8. Press the **Set** softkey then, press it again.

Brightness Control

Available on IP5000-series telephones and the LM5110 ADM. Refer to the next section for IP5131 procedures.

➤ **To change the LCD back light brightness on the IP5100-models (except IP5131) and the LM5110 ADM:**

1. Press **Hold+3+6+9** (simultaneously).
2. Press **Bright** softkey on the telephone to increase brightness. On the LM5110 use the **Bright** softkey.
3. Press **Dim** softkey to decrease brightness. On the LM5110 use the **Dim** softkey.
4. Lift the handset off-hook / on-hook to save the settings.

➤ **To change the LCD back light brightness on the IP5131:**

1. Press **Hold+3+6+9** (simultaneously).
2. Press the **Others** soft key.
3. Use the Soft Keys to select: **BL Bright**.
4. Use the dial-pad to enter a value of 0 ~ 3. 0 for dim, 3 for brightest.
5. Press the **Set** softkey then, press it again.

LCD Contrast Adjustments

Available on all back-lit telephones and ADMs.

➤ **To adjust the LCD contrast on the IP5000-series telephones**

1. Press and hold down the **Mic** button.
2. Press and release **Vol ▲** or **Vol ▼** repeatedly.

Note Holding the Vol key does not continue to change the setting. The key must be pressed for each step of contrast change.

➤ **To adjust the LCD contrast on the LM5110**

1. Press **Hold+3+6+9** (simultaneously).
2. Press **Contrast +** key to increase contrast.
3. Press **Contrast -** key to decrease contrast.
4. Lift the handset off-hook / on-hook to save settings.

Note Holding the softkey does not continue to change the setting. The softkey must be pressed for each step of contrast change.

Mic/Mute Key

Mute on the IP5000-series telephones mutes not only the microphone but also the handset microphone as well. The MIC key on the telephones toggles between Mic and Mute. When Mic key is lit, hands free communication is supported, when Mic key is pressed and light is off, Mute is enabled.

- During a hands free conversation, press the Mic key, the red indicator will turn off; the microphone and handset are muted.
- Press the Mic key again to resume hands free communication, the red indicator will turn on.

Program LCD Keystrip Labels (for IP5131-SDL & LM5110)

1. Dial #9876 (or press the flexible Program key)
2. Press the speaker button.
3. Press the key you wish to label.
4. Use the dial pad to enter the label.
5. Press the key labeled in step 3 to save the setting.
6. To program another key, repeat steps 2-5.

IP5122-SDC CO Line Connection

The IP5122-SDC supports a feature key, programmed as a Analog Central Office (ACO) key, for accessing a Local Analog Loop-Start Line (CO-Line) connected the station. The ACO key is assigned on one of the Flexible Keys. Only one ACO key can be assigned to a station as this key accesses the CO-line connected directly to that telephone (not switched through the CIX system). **By default the IP5122-SDC will have the ACO key assigned to FB10. If there is no CO-Line connected to the phone, FB10 will be solid red.**

An example application is shown in Figure 5. The station user in New York can dial a trunk access or LCR access code to dial out, through the IP network, on the Los Angeles office trunks. However, an emergency call made from the New York station, using a trunk access or LCR code, would go to a Los Angeles area emergency call center. If the New York station user selects the local CO line button the call will go through the local N.Y. central office to a local emergency call center. Also, if the link to the L.A. office is down, the N.Y. station can still use the local CO line to make and receive calls, provided the IP5122-SDC has power. The IP5122-SDC can be powered by PoE or a local AC Adapter.

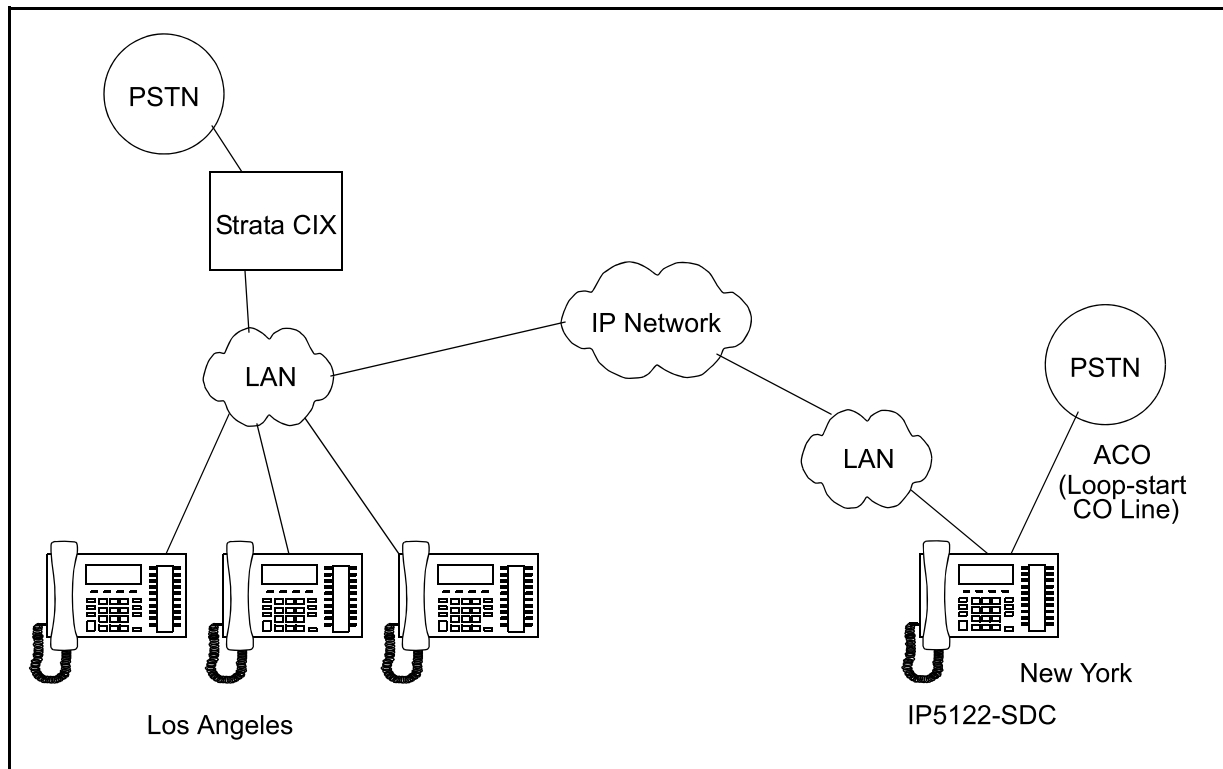


Figure 5 Remote IP5122-SDC Example

By pressing the ACO key, this IP5122-SDC connects to the Local CO Trunk connected to this IPT Telephone. The station user can select the ACO key to access the co-line or another key, to access the CIX.

IPU and CO-Line Connection

The IP5122-SDC connects to the MIPU, LIPU/LIPS, BIPU-M or GIPH LAN via an IP Network (LAN, internet, etc.) and is programmed the same as a IP5122-SDC in the CIX database. There is one additional connection for the CO-Line.

Connect the CO line via an RJ-11 to the IP5122-SDC. Refer to Figure 6. Do not connect the analog CO line jack to a CIX system interface card.

Important! The IP5122-SDC must have power, supplied by PoE or local AC Adapter to function in ACO mode.

CAUTION! Solid state secondary protectors that meet UL 497A must be installed on the analog CO line connected to IP5122-SDC stations. The protectors must be properly connected to an earth ground.

WARNING! Avoid using an IP5122-SDC connected to a CO Line during a thunderstorm. There is a slight chance of electric shock from lightning. Toshiba recommends disconnecting the CO Line cord from the IP5122-SDC when lighting is forecast.

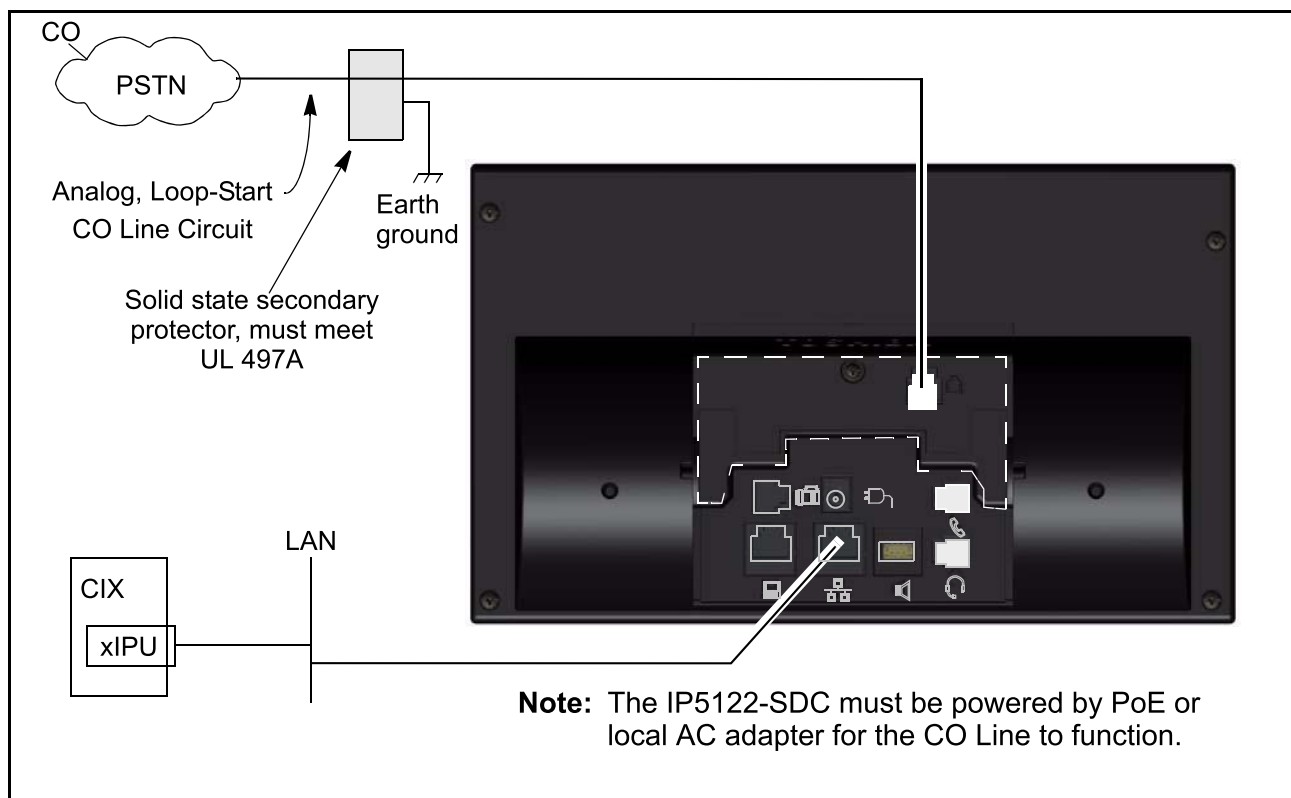


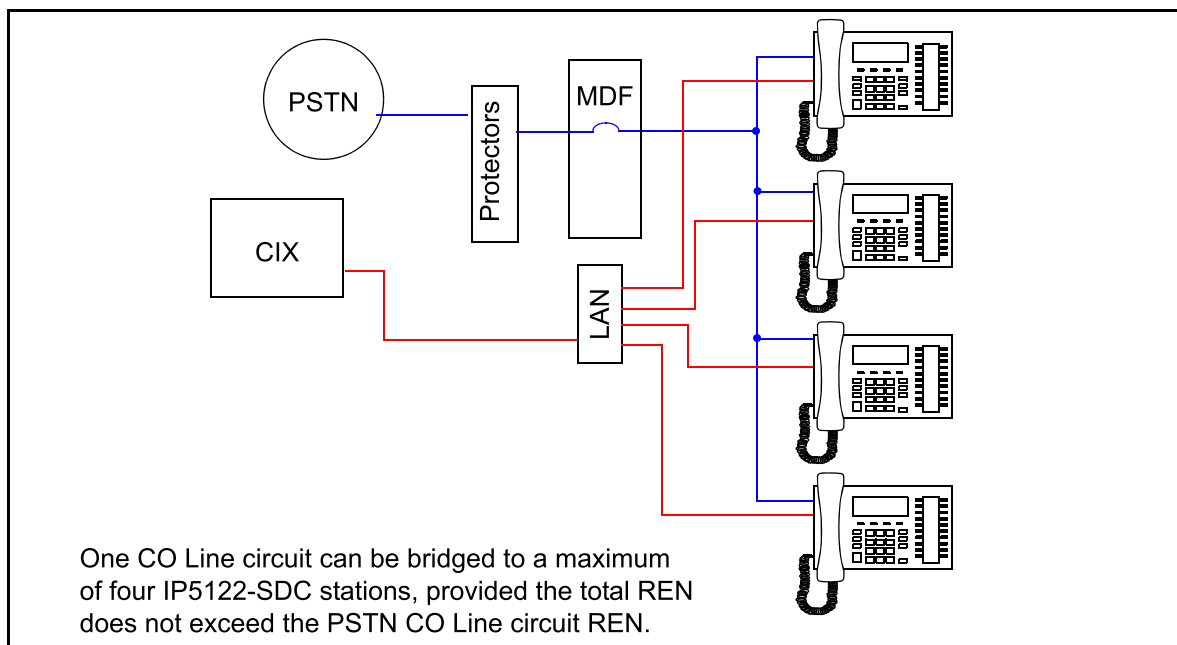
Figure 6 IP5122-SDC Connectors

CO Line Specifications

The CO Line accessed by the ACO key has the following characteristics:

- Loop start only
- REN (Ringer Equivalence Number) is one
- DTMF dialing
- No AROH (Automatic Release Of Hold)
- Ring frequency: 15.3Hz to 68 Hz
- Ring voltage: Must be greater than 30 vrms
- Ringing ON Time must be greater than 500 ms and less than six seconds. If continuous ringing for more than six seconds occurs the IP5122-SDC will stop ringing and the LED will stop flashing.

Note Connection to a PBX is not supported.



Note The total REN of the devices attached to the CO Line (i.e.; Two IP5122-SDCs and one FAX = 3 REN) must not exceed the specification from the PSTN CO.

IPT Initialization

The IP5122-SDC has a fourth initialization option (FB04). ACO Default.

1. Place the telephone in Programming Mode - Press **3+6+9+Hold** simultaneously.
2. Press **Vol ▲** then press **Hold**.
3. Press **FB04**.

FB04 ON = Revert to factory default ACO settings

FB04 OFF = Use the saved ACO settings

Features and Feature Interaction

The CO Line is accessed directly when the ACO key is selected, the IP5122-SDC then acts as a single line DTMF telephone. No CIX based features, such as transfer or conference are available. No IPT features such as speaker phone or calling number display are available.

Table 6-2 IP5122-SDC Functions in Analog CO Line Operation

Feature	Operation
Handset / Headset	Functions for both IPT and Analog CO operation
Handset mute	Not supported
Off-Hook Dialing	Functions for both IPT and Analog CO operation
Hands free	Not supported in analog CO mode. The speaker functions, allowing the station user to hear. The microphone does not function in analog CO mode
Ring tone	IPT ring and analog CO line ring are different
Volume	Ring and Speaker volume are adjustable
Analog CO Signaling	DTMF only (Dial Pulse is not available) 80 ms minimum tone duration
Hold Tone	Hold Tone and Music on Hold are not sent on the analog CO line.
Caller ID	No caller ID function
Display	Dialed digits and elapsed time are not displayed
PAD	a 3dB PAD can be added to the analog CO line

IP5122-SDC Headset Transmit Level Adjustment

The IP5122-SDC headset transmit level for ACO and IPT operation are set by programming from the station.

1. Press **3+6+9+Hold** (simultaneously).
2. Press **#** then press **Hold**.
3. Set the headset transmit level using FB1, FB2 and FB3 as shown in the table below.

Headset Transmit Levels					
Transmit Level	FB1	FB2	FB3	IPT Level	ACO Level
Max. (louder)	OFF	OFF	OFF	+12 dB	+8 dB
↑	ON	OFF	OFF	+8 dB	+8 dB
↑	OFF	ON	OFF	+4 dB	+4 dB
(Default)	ON	ON	OFF	0 dB	0 dB
↓	OFF	OFF	ON	-4 dB	-4 dB
↓	ON	OFF	ON	-8 dB	-7 dB
↓	OFF	ON	ON	-12 dB	-7 dB
Min. (softer)	ON	ON	ON	-16 dB	-7 dB

4. Press **Hold** again.