TOSHIBA

Strata® CIX™ Product Bulletin

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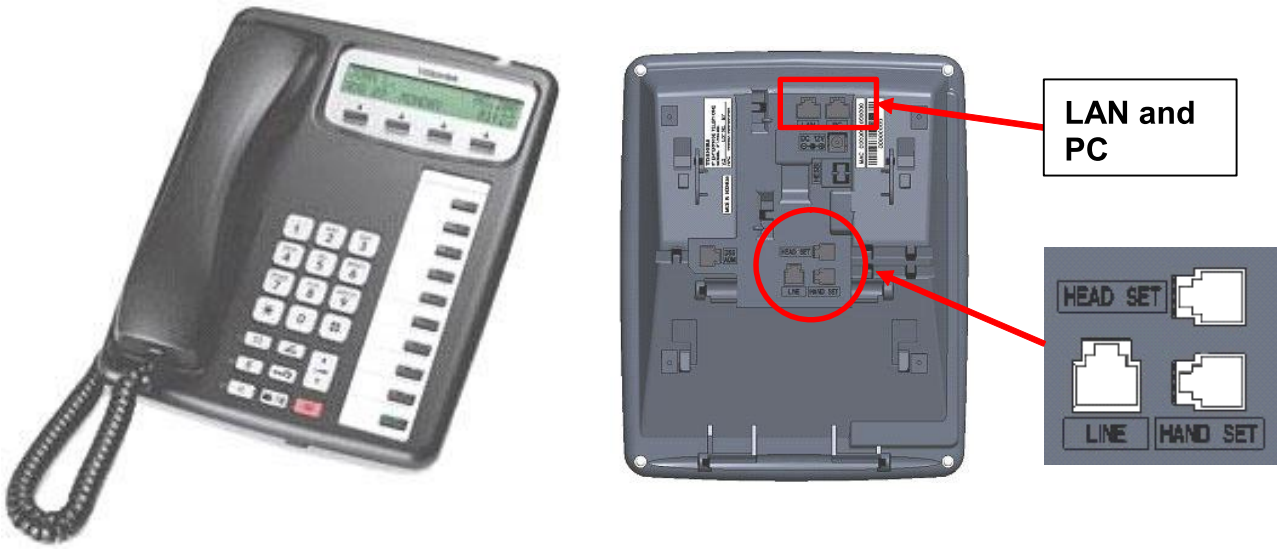
New IP Telephone Provides CO Line Interface for Local Dialing

The Strata CIX product family is once again expanding to better serve and increase your market. We are very pleased to announce the IPT2010-SDC IP telephone with analog CO Line interface. The CO line interface enables the user to directly access a local CO line for emergency calls or local calls.

Description

The IPT2010-SDC has 10 programmable, 2-line x 24-character LCD, full-duplex speakerphone, and must be powered by Power Over Ethernet (PoE) or a local AC Adapter. It looks and functions just like the IPT2010-SD IP telephone, but with the additional analog CO line interface. The IPT2010-SDC is an addition to the Toshiba IP telephone product line. It does not replace the IPT2010-SD.



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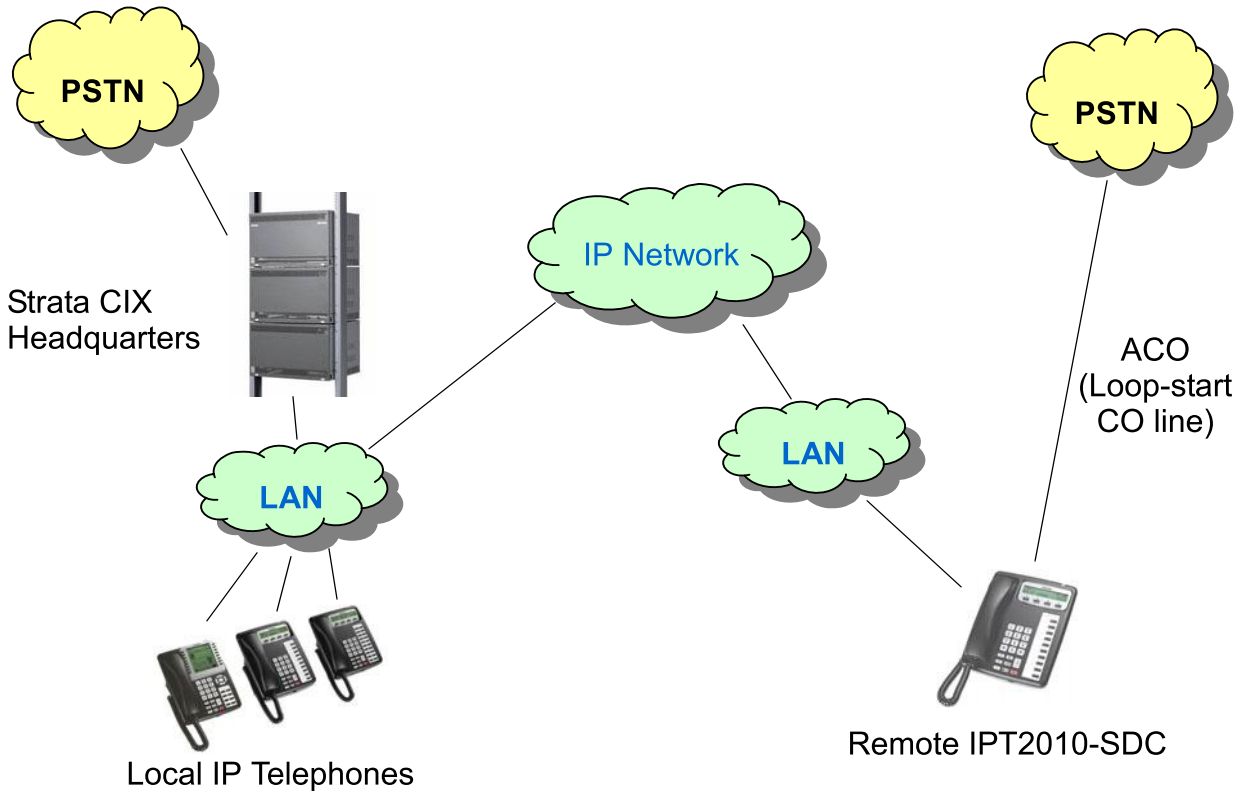
How it Works

The IPT2010-SDC supports a feature button, programmed as an Analog Central Office (ACO) button, for accessing a local analog loop-start Line (CO-Line) connected to the station. The ACO button is assigned on one of the Flexible Buttons. Only one ACO button can be assigned to a station as this button accesses the CO-line connected to that telephone directly (not switched through the Strata CIX system).

An example application is shown in the diagram below.

- An IP telephone user at a remote site can dial a trunk access or LCR access codes to dial out on the headquarters office trunks.
- If an emergency call is made from the remote telephone in this same manner, it will go to an emergency response call center in the headquarters area.
- However, if the remote IP telephone user selects the local CO line button, the call will go to the local central office.
- Also, if the IP link to the headquarters office is down, the remote telephone user can still use the local CO line to make and receive calls, provided the IPT2010-SDC has power. The CO line will not function without either PoE or AC power.



CO Line Specifications

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

- Loop-start only
- REN (Ringer Equivalence Number) is one. Note: A single CO line can usually be shared (bridged) by up to four IPT2010-SDC telephones depending upon the CO line REN.
- DTMF dialing
- No AROH (Automatic Release Of Hold)
- Caller ID not supported
- 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 IPT2010-SDC will stop ringing and the LED will stop flashing.

Note Connection to a PBX is not supported.

ACO Operating Summary

The following is a summary of operation characteristics when using the ACO service on the IPT2010-SDC telephone.

- Your LCD will not display Caller ID name and number.
- You do not get CIX tones or CIX LCD displays when you are on an ACO call or during ACO ringing.
- The buttons available on an ACO call are: Hold, Spkr, Volume ▲ and Volume ▼ buttons, the dial pad, ACO Soft keys, flexible buttons, and ADM/DSS buttons and Off/On-hook.

Note Flexible buttons (except ACO) will use CIX operation. If you press a Flexible button when you are on an ACO call, the call will disconnect or go on Auto-Hold.

- You cannot use the Mic, Msg, Speed dial, Redial, and Conf buttons.
- When using the ACO line, you cannot use CIX features such as Call Forward, Speed dial, Redial, SMDR, Toll Restriction, LCR, Account Codes, etc.
- Refer to to the Users Guide for a list of ACO and CIX Service Interactions.
- If the IPT2010-SDC has power (POE or commercial AC), the ACO line will function even when there is an IP failure. However, if there is a power failure, the IPT2010-SDC will not work.
- When you press the ACO button, the IPT sends Hold and FB11 to the CIX system. The IPT2010-SDC must be programmed, using eManager, as a 20 button station (Prog. 204). Feature Button 11 (FB11) must be programmed as a Release button. Do not assign any CIX features to the ACO button. FB12 ~ FB20 must be blank. Don’t connect Analog CO line jack in IPT2010-SDC to STU port, BSTCIU port (caller ID), BSLU port, etc. of the Toshiba system.
- If you put an ACO call on Hold, the call will continue to be on Hold even when other shared IPTs answer or release the call. In this case, the user that placed the call on hold must access the ACO line again to clear the held call.
- If there is an IP failure, the IPT will not reset if the ACO is on Hold or is in use.

- If CIX voice calling or paging occurs while using the ACO line you will not hear the page or voice announce. When not on the ACO line paging and voice calling functions as usual.

When Background Music (BGM) is activated, the ACO will ring with a muted ring-tone when a call is received. When using the ACO button, there is no BGM.

Product Line Strategy

The IPT2010-SDC is an addition to the Toshiba IP telephone product line. It does not replace the IPT2010-SD. The user chooses between these two models solely based upon the need for local CO line access.

Compatibility

The IPT2010-SDC is compatible with all Strata CIX40, CIX100, CIX200, CIX670 systems, and Strata CTX systems that support IP interface units, the same as all other 2000-series IP telephones.

Pricing

The IPT2010-SDC IP telephone is very cost effective. It is price targeted below competitors' products with similar analog CO line capabilities. See the updated Price Book on FYI for all the details.

Availability

The IPT2010-SDC IP telephone is currently available.

Installation And Programming

The following pages contain detailed information concerning the physical installation, connection and programming the IPT2010-SDC.

IPU and CO-Line Connection

The IPT2010-SDC connects to the LIPU/LIPS, BIPU-M or GIPH LAN via an IP Network (LAN, internet, etc.) and is programmed the same as a IPT2010-SD in the CIX database. There is one additional connection for the CO-Line.

Connect the CO line via an RJ-11 to the bottom of the IPT2010-SDC. Refer to Figure 1 on Page 6. Do not connect the analog CO line jack to a CIX interface card. Connection to a PBX is not supported.

Important! The IPT2010-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 IPT2010-SDC stations. The protectors must be properly connected to an earth ground.

WARNING! Avoid using a IPT2010-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 IPT2010-SDC when lighting is forecast.

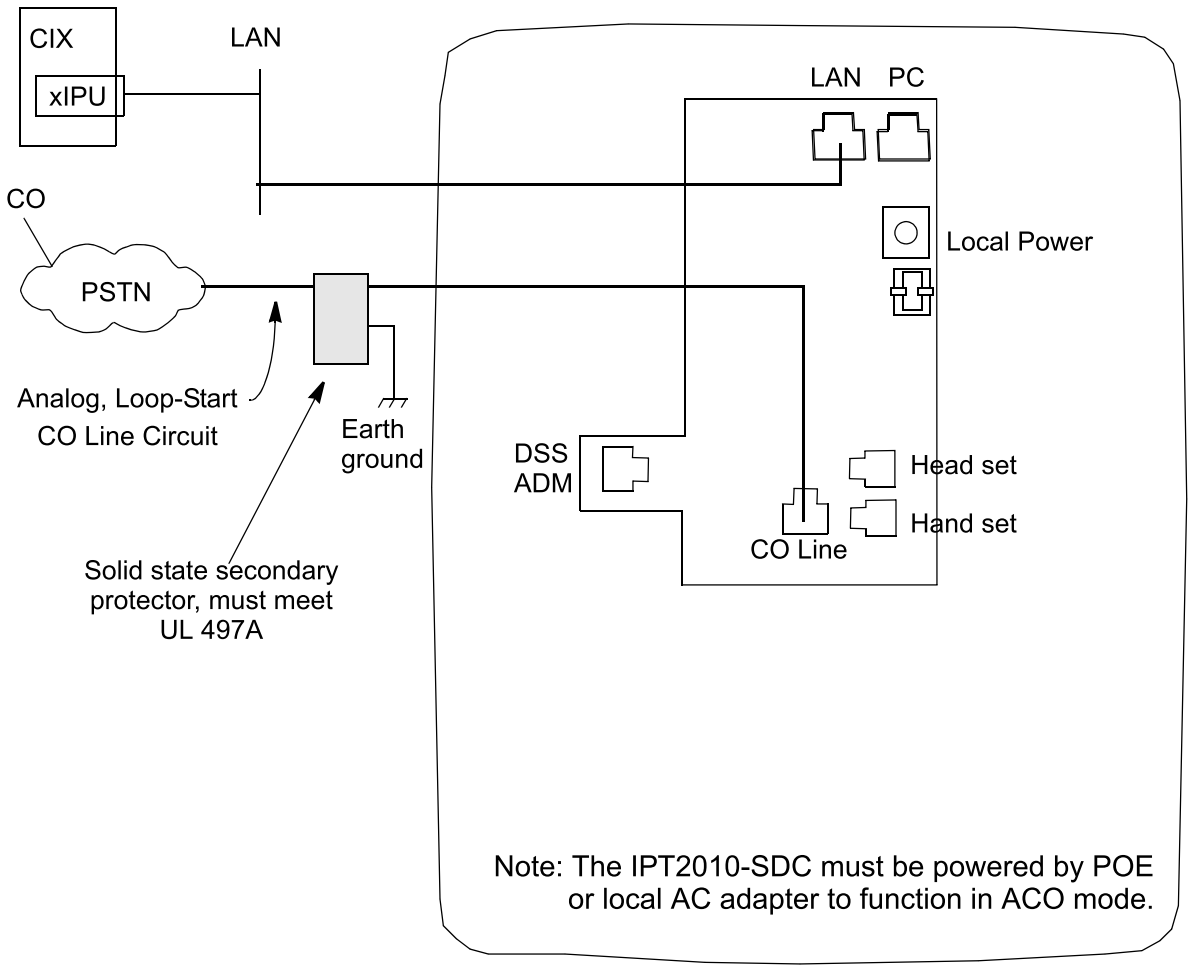


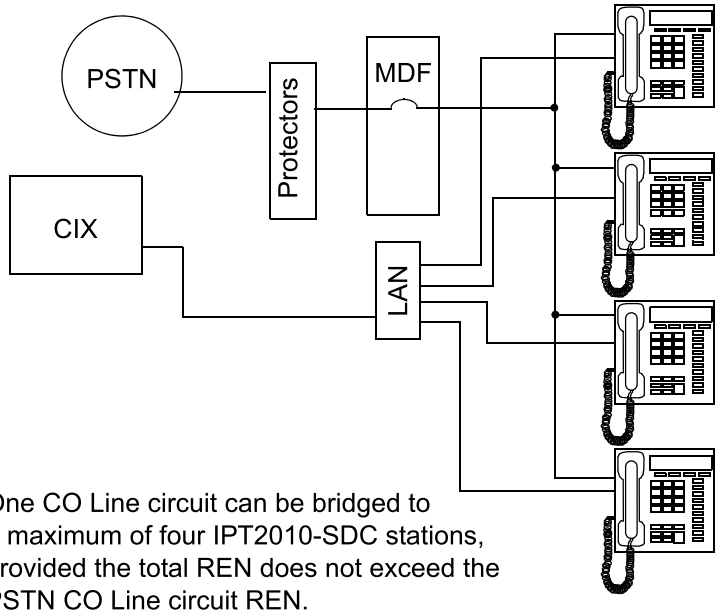
Figure 1 IPT2010-SDC Connectors

Local CO Line Circuit Quick Test

This procedure is a quick test to verify the CO Line connection and correct IPT2010-SDC ACO operation. In normal operation the ACO indicator is dark when the ACO line is not in use, red when the ACO is used by another station, and green when the ACO is in use at this station. The ACO indictor that is lit a steady red, when the ACO is not in use, indicates no CO Line connection or a faulty CO Line circuit.

Note The IPT2010-SDC does not require an LAN connection for this test.

1. Apply power to the IPT2010-SDC (POE or local AC adapter). The ACO button will LED will be red.
2. Plug in the local CO Line connection. A functional line will cause the ACO indicator to go dark.
3. Lift the handset then, press the ACO button. Verify that the ACO indicator lights green and dial tone is heard.
4. Dial a local telephone number. Verify two-way speech.
5. Place the handset in the IPT2010-SDC and verify that the ACO indicator goes dark.



Note The total REN of the devices attached to the CO Line (i.e.; Two IPT2010-SDCs and one FAX = 3 REN) must not exceed the specification from the PSTN CO.

Features and Feature Interaction

The CO Line is accessed directly when the ACO button is selected, the IPT2010-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 1 IPT2010-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

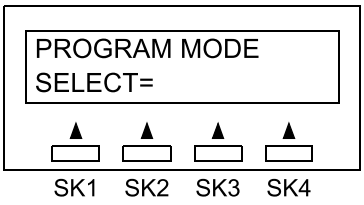
IPT2010-SDC Programming

Important! The IPT2010-SDC must be programmed, using eManager, as a 20 button station (Prog. 204). Feature Button 11 (FB11) must be programmed as a Release button. When the ACO button is pressed the IPT2010-SDC sends Hold and FB11 (Release) to the CIX system. FB12 ~ FB20 must be blank.

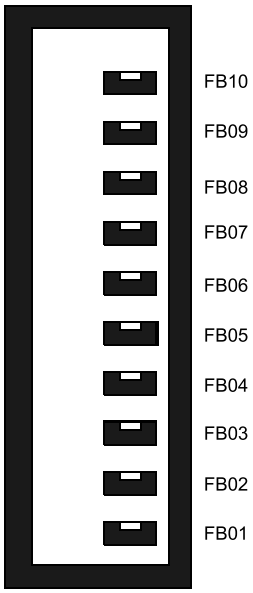
The feature button used as the ACO must be blank (no assignment) in the CIX data base (Prog. 205).

The programming, shown below, must be done at the IPT2010-SDC telephone. This procedure shows only the programming unique to the IPT2010-SDC. For all other programming functions refer to the DKT/IPT Administrator Guide.

If an instruction references SK1, this means use the first soft key (from left to right) on the IPT. SK2, SK3 and SK4 equate to the second, third and fourth soft keys on the IPT. SK3 is the Scroll (Scrl) key referred to in the follow procedure.



Soft Key and LCD Display



Feature Buttons (FB) are numbered from the bottom up as shown here.

➤ To place your telephone in Programming Mode - Press **3**+**6**+**9**+**Hold** simultaneously. The LCD displays “PROGRAM MODE” and “SELECT=”, press **4** then press **Hold**.
Your phone will not ring if it receives a call while in Programming Mode.

➤ **Place the phone into programming mode then set the following:**

Note Typically, FB20 ~ FB09 will be left at factory default. However, if necessary, use the Scroll key (SK3) to access FB11 through FB20.

1. Press **FB01 - ACO Button position**. Enter the button position, then press **Hold**. Go to the next Step or, if you are finished programming, go to **Step 9**.

   Enter 1 ~ 10 (Default = 10, FB10)

2. Press **FB02 - ACO privacy** (Privacy override is not available). Enter the ACO privacy value, then press **Hold**. Go to the next Step or, if you are finished programming, go to **Step 9**.

   1 for No privacy - other IP2010-SDC with the same ACO can access the CO line while it is in use. (Default)

   2 for Privacy - other IP2010-SDC with the same ACO cannot access the CO line while it is in use.

3. Press **FB03 - ACO Ringing assignment**. Enter the ring assignment then press **Hold**. Go to the next Step or, if you are finished programming, go to **Step 9**.

   2 = Ring (Default)

   1 = No ring

4. Press **FB04 - Flash timing (100 ms units)** (Hook Flash to the CO timing is +/- 10 ms.) Press **Hold**. Go to the next Step or, if you are finished programming, go to **Step 9**.

   1 ~ 20 (Default: 6 (600 ms) Used to answer Call Waiting and access Centrex features. Typically set to default value.)

5. Press **FB05 - ACO Pad** - This affects only the CO Line pad level. This is the same function as the pad jumper on the CO Line card. The IPT pad levels are set by the CIX system PAD Table programming. Press **Hold**. Go to the next Step or, if you are finished programming, go to **Step 9**.

   2 = 3 dB pad (Set to 3 dB pad if the handset volume is too high on ACO calls.)

   1 = No pad (Default)

Note During installation, leave ACO Transmit and Receive levels (FB20 and FB19) at default. Use FB05 to adjust ACO level. If additional adjustment is needed, then use FB20 and FB19.

6. Press **FB06 - Country Code**, set to 0 for United States and Canada. Press **Hold**. Go to the next Step or, if you are finished programming, go to **Step 9**.
7. Press **FB07 - Auto Hold ACO line only** (No Auto Hold releases the CO line). Press **Hold**. Go to the next Step or, if you are finished programming, go to **Step 9**.

   2 = Auto Hold

   1 = No auto hold

8. Press **FB08 - LCD Language for ACO**. Select the display language then, press **Hold**.

   1 = US English 3 = British English

   2 = French 4 = Spanish

9. Press **Hold** again to save the changes.
10. Lift, then replace to hand set to exit programming mode.

FB09 ~ FB20 - Do not change.

IPT Initialization

The IPT2010-SDC has a fourth initialization option (FB4). ACO Default.

1. Press **3**+**6**+**9**+**Hold** (simultaneously).
2. Press **Vol ▲** then press **Hold**.
3. Press **FB04**. Revert to factory default ACO settings or Use the saved ACO settings. (LED On = the IPT2010-SDC will revert to factory default settings, LED OFF = use the saved ACO settings).

IPT2010-SDC Headset Transmit Level Adjustment

The IPT2010-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.