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## Announcing IP Telephony Solutions with Strata CTX Release 2.0

Toshiba is very pleased to announce the ability to add IP telephones to Strata CTX systems, introducing Telephony over IP capabilities, and providing powerful Internet Protocol (IP) telephony add-on solutions for remote users. The Toshiba IPT1020-SD IP telephone is compatible with both Strata CTX100 and CTX670 systems with Release 2.0 software.

The Toshiba IP telephony strategy is based upon a transitional approach. For most enterprises, the migration path to IP telephony will be a gradual process rather than an event in time. Instead of acquiring IP technology benefits through complete system replacement at higher cost and higher risk, most enterprises prefer to integrate voice and data IP traffic into their existing telephone systems as the need arises. This protects their investment in existing voice and data networks and represents a low risk migration path. To achieve this very important objective, Toshiba has transformed Strata CTX systems into IP-enabled communication systems.

The Toshiba IPT1020-SD IP telephone supports the same Strata CTX features as 3000-series digital telephones, except Speaker Off-hook Call Announce (OCA). However, it supports Handset Off-hook Call Announce over the telephone. The IPT1020-SD IP telephone also extends the functionality of the Strata CTX to any location supported over an IP network.

This represents a very powerful feature set that is head and shoulders above the competition, some of which offer a significantly reduced feature set over IP telephones. For example, many competitors' IP telephones don't support important telephone features such as:

- Busy Lamp Field (BLF) display of station status
- Background Music through telephone speakers
- Paging over telephone speakers
- Off-hook Call Announce over telephone handset

Release 2.0 will become the standard software version shipping with all Strata CTX100 and CTX670 processors. Release 2.0 will also be available for download to upgrade existing Strata CTX100 and CTX670 systems.

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# IP Telephone

The Toshiba IPT1020-SD IP telephone is a 20-button speakerphone with 2-line x 24-character display. It looks and functions just like a DKT3020-SD digital telephone.



Figure 1 Strata IPT1020-SD front view

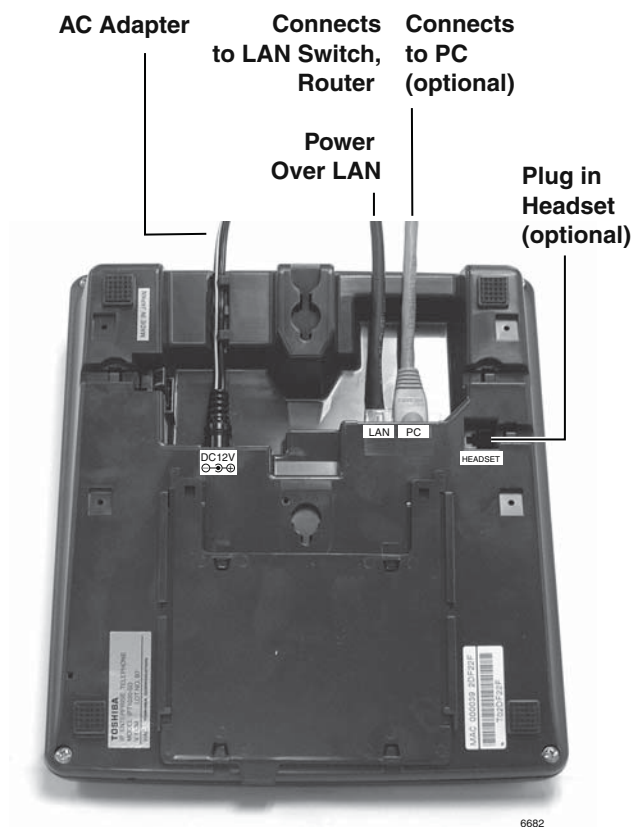


Figure 2 Strata IPT1020-SD back view

## Attributes and Capabilities

The IPT1020-SD also has the following attributes and capabilities:

- The AC adapter (model BADP120-1A supplied with the IPT1020-SD) powers the telephone.
- The RJ45 LAN jack connects the telephone to the network via the 10/100Base-T cable supplied with the IPT1020-SD.
- The RJ45 PC jack can connect the user's PC to the telephone. The IPT1020-SD can operate like a switch, as opposed to a hub, so the telephone can be connected directly to the LAN and then a PC can be connected to the telephone PC jack to make a connection to the LAN.
- The built-in Headset jack enables headsets to be connected to the telephone. No optional headset interface is required.
- The external ringer interface connector is mounted inside the telephone base. This enables connection of an HESB external speaker device to provide a loud ringer for the IP telephone.
- Existing Tilt Stands (BTSD and BTSA) are compatible with the IPT1020-SD to adjust the angle of the telephone as desired.
- There is no limit to the number of IP telephone that can be configured on Strata CTX systems up to the system's station maximum capacity.

## IP Add-on Module

A 20-button Add-on Module (DADM3120) is available for use with the IPT1020-SD IP telephone. It looks and functions just like a DADM3020 digital Add-on Module. One or two DADM3120 Add-on modules can connect to the IPT1020-SD IP or DKT3000-series telephones to provide 20 or 40 additional features or DSS/BLF buttons.

## IP Interface Unit

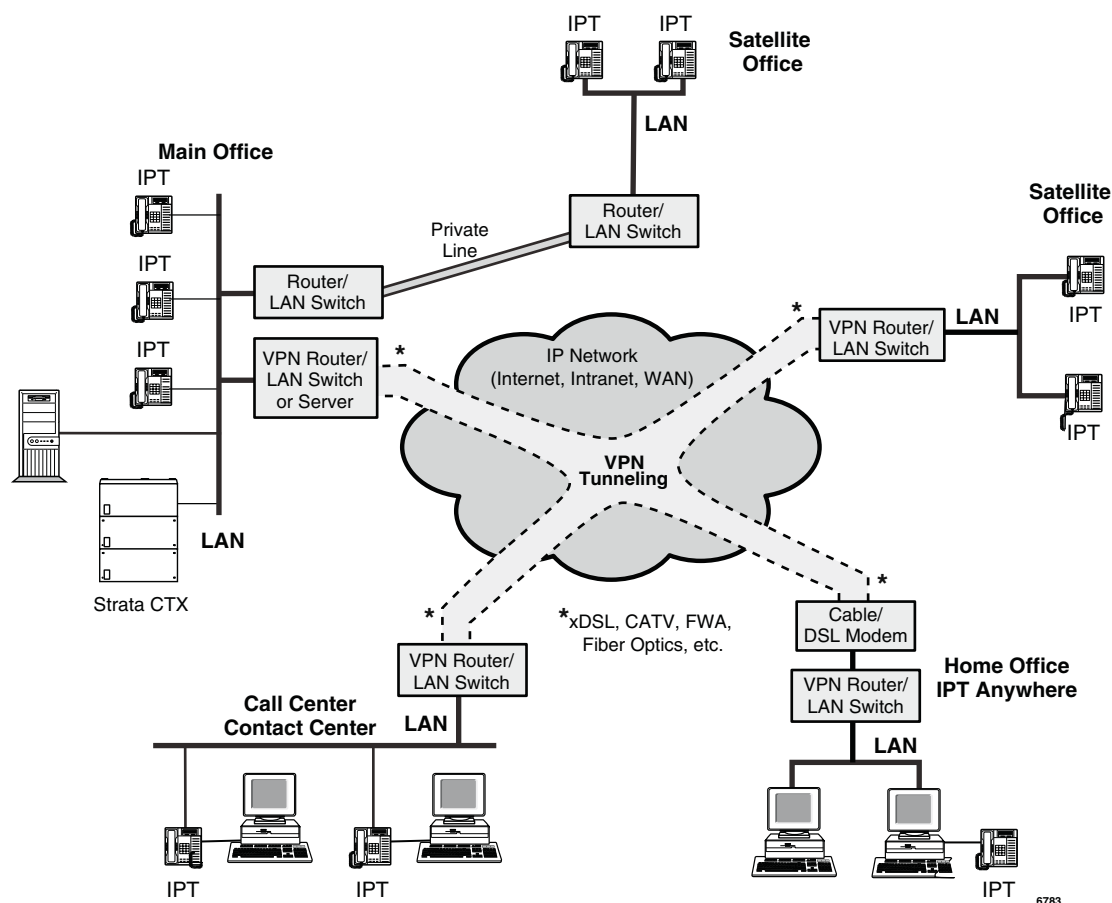
The IP interface unit (BIPU-M1A) is a 16-port PCB that installs in a slot in the Strata CTX. The BIPU-M1A has the following attributes and capabilities:

- The BIPU-M1A can be programmed in software to activate either 8 or 16 channels to interface with IPT1020-SD telephones.
- The BIPU-M1A supports both G.711 and G.729A standard codec compressions simultaneously. The type of compression used is set independently for each telephone in system programming.
- The BIPU-M1A operates on the network at 10/100 Mbps and can be connected to a fast switch router, LAN, WAN, etc. When connecting remote IP telephones to the BIPU-M1A over the Internet, a VPN router is needed to circumvent Network Access Translation (NAT) and firewall issues by tunneling.
- BIPU-M1A firmware can be updated locally or remotely using CTX WinAdmin. This enables service personnel to update IP equipment with new features and enhancements as they become available.

## Virtual Private Network (VPN)

Virtual Private Network (VPN) enables you to connect to the IP telephones throughout the Internet and use all Strata CTX telephone features (except Speaker OCA). This capability is called “IPT Anywhere.” VPN connections provide increased security and circumvent NAT and firewall issues by tunneling.

With VPN, the IPT Anywhere feature enables remote IP telephone users working in branch offices or home offices to make full use of the extension features of the Strata CTX.



## Optimum Telephony over IP Quality

To provide optimum voice quality of IP telephones on Strata CTX systems, there are some compatibility requirements that need to be followed when using analog CO line cards in the system.

- Toshiba recommends only using RCOU3A, RCOS3A, REMU2A (available soon), REMU1A (four-wire), RDDU2A (available soon), and RGLU3A (available soon) analog CO line interfaces in IP telephone applications. These PCBs provide optimum speech quality for IPT1020-SD IP telephone connections.
- Do not use RCOU1A, RCOS1A, REMU1A (two-wire), RDDU1A, RGLU1A, or RGLU2A analog CO line interfaces in IP telephone applications. These PCBs will work but will cause IP telephone users to experience unacceptable voice quality and echo return loss.

## Power Over LAN

The IPT1020-SD IP telephone requires local power for operation unless connected to a LAN that has been equipped with special equipment to provide telephone power over the LAN. The AC adapter (model BADP120-1A) supplied with the IPT1020-SD powers the telephone and is included in the price.

If the customer prefers not to use local power in favor of powering the telephones over the LAN, certain PowerDsine PD-6000 Power Over LAN™ products, with software revision 6805 or later, are compatible with IPT1020-SD usage on a LAN. These products are purchased from PowerDsine, Ltd., <http://www.powerdsine.com>, and are not available from Toshiba.

The PowerDsine PD-6000 Power Over LAN products shown in the table below, with software revision 6805 or later, are compatible with the Toshiba IPT1020-SD. Both AC and AC/DC models are available.

**Table 1 Power Over LAN Specifications**

| Ports, appearance                                                                                         | Model Name       | Input                                                                                         | Output                                                                                      |
|-----------------------------------------------------------------------------------------------------------|------------------|-----------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| <b>24 port type</b><br>  | PD-PH-6024/AC/48 | AC input Voltage: 88 – 264 Vac<br>AC Frequency: 47 – 63 Hz<br>DC input Current: 10A at 48 Vdc | Output Voltage: -48Vdc<br>User Port Power:<br>16.8W(Maximum)<br><br>Data Rates: 10/100 Mbps |
|                                                                                                           | PD-PH-6024/AC/48 | AC input Voltage: 88 – 264 Vac<br>AC Frequency: 47 – 63 Hz                                    |                                                                                             |
| <b>12 port type</b><br> | PD-PH-6012/AC/48 | AC input Voltage: 88 – 264 Vac<br>AC Frequency: 47 – 63 Hz<br>DC input Current: 10A at 48 Vdc |                                                                                             |
|                                                                                                           | PD-PH-6012/AC/48 | AC input Voltage: 88 – 264 Vac<br>AC Frequency: 47 – 63 Hz                                    |                                                                                             |
| <b>6 port type</b><br> | PD-PH-6006/AC/48 | AC input Voltage: 88 – 264 Vac<br>AC Frequency: 47 – 63 Hz<br>DC input Current: 10A at 48 Vdc |                                                                                             |
|                                                                                                           | PD-PH-6006/AC/48 | AC input Voltage: 88 – 264 Vac<br>AC Frequency: 47 – 63 Hz                                    |                                                                                             |

**Important!** *Whenever ordering PowerDsine PD-6000 “Power Over LAN” products, be sure to specify they have software revision 6805 or later, and they are for use with the Toshiba IPT1020-SD IP telephone. You can tell the software version by looking at the serial number of the PowerDsine unit. The four-digit software version number is imbedded in the middle of the 15-digit serial number.*

## MEGACO Protocol

Toshiba chose the MEGACO protocol because it provides a better stimulus response that makes the telephone work efficiently over the IP network (LAN or WAN). In fact, Toshiba uses an enhanced version of MEGACO that enables the Strata CTX to provide all the feature functionality of 3000-series digital telephones to IP telephone users much better than could be done using other protocols.

# Release 2.0 Software Upgrades

Strata CTX100 and CTX670 processors are upgradeable to Release 2.0 software with a simple upgrade procedure. Release 2.0 software will be available on the Toshiba Internet FYI site for download by authorized Toshiba dealers.

## CTX WinAdmin Requirements

Prior to upgrading the Strata CTX software, upgrade your CTX WinAdmin to version 2.1D or higher. This will give you the ability to program the new features and enhancements of Strata CTX Release 2.0 software.

## Pricing

There is no cost to authorized Toshiba dealers for upgrading Strata CTX systems to Release 2.0 software or upgrading CTX WinAdmin software to 2.1D. These software upgrades can be downloaded free of charge from the Toshiba Internet FYI site.

## Training and Certification Requirements

IP-CTX Certification is not required to purchase BIPU-M Boards and /or IP Telephones.

**Important!**      *Certification is required to receive Technical Support.*

### Certification Requirements

- CTX Basic Certification
- Passing score on Toshiba PC Fundamentals Exam
- Passing score on Toshiba Networking Basics Exam
- Passing score on Toshiba Telephony over IP Basics Exam
- Completion of the "IP-CTX Online" course

All five requirements can be met online in TOTAL. There will be no training offered to prepare for the exams. There are many sources of information training available in the public domain on these topics. All five requirements will be available on TOTAL by product release.

## Availability

The IPT1020-SD IP telephone, DADM3120 Add-on Module, and BIPU-M1A IP Interface Unit are scheduled to become available for shipping on April 21, 2003.

The Strata CTX Release 2.0 software upgrade is scheduled to become available for download on April 21, 2003. All new Strata CTX100 and CTX670 processors are scheduled to begin shipping with Release 2.0 software beginning at the same time.

The CTX WinAdmin version 2.1D software upgrade is currently available for download.