

## Polycom SpectraLink 8002 Handset Provides SIP Wireless Mobility on Strata CIX

Toshiba is pleased to announce a new addition to the Polycom SpectraLink 8000 series of SIP wireless telephones. The new SpectraLink 8002 handset operates over an existing IEEE 802.11b/g wireless local area network using Session Initiation Protocol (SIP), registering directly to the Strata CIX system without any gateway requirements. A TFTP Server is required for handset registration and firmware upgrades, however free-of-charge versions are available in the market (see [“TFTP Server Setup” on page 7](#)).

The 8002 handset provides a wireless extension to your existing Toshiba Strata CIX system solution, providing interoperability with the CIX features and SIP line extension dialing, and is a significant cost-saving alternative to intra-office cellular communications. No separate proprietary wireless base station or equipment is required, since the 8002 handset can use an existing WLAN infrastructure.

### Product Overview

The SpectraLink 8002 SIP wireless telephone is a cost-effective, business-grade mobile telephony solution for small to medium-sized businesses. Using the Wi-Fi Alliance's WMM QoS standard, the 8002 handset interoperates with most consumer-grade and SMB access point infrastructure devices, alleviating the need to install and maintain additional hardware while still providing enterprise-level security and voice quality. In keeping with the needs of the market segment, the 8002 handset is packaged in complete, ready-to-install bundles that include a single or dual charger, a battery pack and a power supply.

This lightweight handset offers a rich set of features, including a backlit keypad and high-resolution display, menu driven functions and messaging capabilities. With its reinforced yet ergonomic design, the 8002 handset is a lightweight handset that also provides shock resistance at an affordable price. Polycom's advanced manufacturing and test processes also deliver leading-class durability ensuring that the 8002 handset withstands the rigors of daily operation, thereby protecting your investment.

The Polycom SpectraLink 8002 SIP wireless telephone provides:

- 802.11b (Wi-Fi) standard-compatibility for 802.11b/g networks
- WMM QoS (802.11e) standards-compatibility
- G.711 (A- and  $\mu$ -law) codec support
- 4-line backlit dot matrix display with icons and line-status indicators
- Four softkeys in two rocker style key buttons supporting up to 16 programmable features



- Audible and vibrating ringers
- Integrated TFTP client
- DHCP or static IP addressing
- Talk time up to three hours, standby up to 50 hours
- Backlit keypad
- MIL-STD-810F shock resistance with high impact strength ABS plastics
- 2.mm headset connection
- Volume side keys
- Multi-line support

## Value Proposition

### Convenience

- Looks and feels like a mobile phone
- Fits easily into pocket – compact and light
- Integrates the features of Toshiba's desktop IP telephones

### Affordability

- Deploys without cabling, reducing the costs of network deployment and expansion
- Integrates into an existing phone system and wireless network, with no gateway requirements
- Provides lower-cost internal and external voice communication

### Mobility

- Supports roaming, enabling movement of a user around a building or area
- Requires minimal configuration for quick deployment which makes it suitable for emergency situations like natural or human-induced disasters, military conflicts, emergency medical situations, etc.

### Productivity

- Uses standards-based wireless (IEEE 802.11b) technology that allows users to achieve excellent connections for voice communication
- Equipped with advanced Quality of Service (QoS) technologies to provide consistent superior voice quality

## Specifications

Item	Specification
Wireless LAN	Standard: IEEE 802.11b compliant Wireless Frequency Band: 2.400 to 2.4835 GHz Transmission Type: Direct Sequence Spread Spectrum Transmit Data Rates: 11, 5.5, 2, 1 Mbps; auto rate selection Transmit Power: 100 mW max (adjustable), < 10 mW avg
Call Control Protocol	Session Initiation Protocol (SIP)
Audio Codecs	G.711 (A-law / $\mu$ -Law)
Network	Internet Protocol (IP)
Management	DHCP, TFTP
QoS	WMM (802.11e EDCA)
Security	IEEE 802.11i WPA/WPA2 with Pre-Shared Key (PSK) Standard WEP 40 bit and 128 bit
Battery Capacity	Talk time: up to three (3) hours, Standby: up to 50 hours
Recharge Time	Approximately 90 minutes
Display	4-line backlit dot matrix display with top row icons and line-status indicators, two 16-character lines of text, and bottom row for softkey labels.
Buttons	0 to 9, *, #, send/power on key, end/power off key, menu key, FCN system functions key, 4 softkeys in 2 rocker-style key buttons.
Dimensions	139.7 x 50.8 x 22.9mm
Weight	119g
Headset Jack	2.5mm
Durability	MIL-STD-810F Method 516.5 Procedure IV for shock resistance Reinforced Design
Operating Temperature	0 - 50 <sup>o</sup> C

## Features

### SIP Phone Features

- Make Call
  - Redial Last Number [Send key > Redl softkey > Dial softkey or Send key]
  - Speed Dial / Favorites Phone Book [Send key > Favr softkey]
- Receive Call
  - Caller ID
- Hold [via softkey]
- Mute [via softkey]
- Call Waiting [via Line key]
- Do Not Disturb (8002) [Send key > FCN 2 (enable) / FCN 2 (disable)]
- Call Forward (8002) – SIP Phone Feature not supported. See SIP Line Features below.
- Call Transfer (Supervised) [FCN 1 > extension num (or Favr softkey) > Send key > FCN 1]
- Call Transfer (Blind) – SIP Phone Feature not supported
- Message Waiting Indicator
- Volume Control
- Keypad lock / unlock [FCN > Lock Keys softkey (unlock) / Unlk softkey > # (unlock)]

### SIP Line Features

- Call Extension ID
- Do Not Disturb (CIX) [#6091 enable / #6092 disable > Send key]
- Voice Mail Retrieval [#408 > Send key]
- Call Forward – All Call (CIX) [#6011 > (extension num) > Send key]
- Call Forward – Busy (CIX) [#6021 > (extension num) > Send key]
- Call Forward – No Answer (CIX) [#6031 > (extension num) > Send key]
- Call Forward – Busy, No Answer (CIX) [#6041 > (extension num) > Send key]
- Call Forward – Cancel (CIX) [#6051 > Send key]
- Call Park [FCN 1 > #33# (or #33 + extension num) > Send key]
- Call Park Retrieve [#32 + extension num (or #32#) > Send key]
- Call Pickup [#5#5 + extension num > Send key]
- Page All (Outbound) [#30 > Send key]
- Page Group (Outbound) [#31 + group num > Send key]

## Order Information and Availability

The Polycom SpectraLink 8002 SIP wireless telephone comes standard with phone unit, battery pack, single charger or dual charger option, and power supply and is available for order on the Toshiba FYI site. Replacement parts and accessories are also available.

Part Number	Description
2200-37010-020	SpectraLink 8002 Single Charger Bundle – with power supply for North America
2200-37020-020	SpectraLink 8002 Dual Charger Bundle – with power supply for North America and Taiwan. Includes 1x 8002 Wireless Telephone, 2x Battery Pack, 1x Dual Charger, 1x Power Supply
2200-37210-001	SpectraLink 8002 Wireless Telephone Battery Pack
QPS101A	Power Supply for Single, Dual and Quick Chargers and Configuration Cradle – North America (RoHS)
2200-37202-001	SpectraLink 8002 Wireless Telephone Dual Charger
DCE101	Desktop/Single Charger for SpectraLink e340/8002 (RoHS)
NCC101	SpectraLink Configuration Cradle for e340/h340/i640/8002 Wireless Telephones (RoHS). Order power supply (QPS101A) separately.
PTO501	Clothing Clip for SpectraLink e340/h340/8002 (RoHS)
PTO521	Swivel Clip for SpectraLink e340/h340/8002 (RoHS)
PTO651	Swivel Carrying Case for SpectraLink e340/h340/8002, Black Leather without Keypad Cover (RoHS)
PTO656	Swivel Carrying Case for SpectraLink e340/h340/8002, Yellow Vinyl without Keypad Cover (RoHS)
PTO661	Swivel Carrying Case for SpectraLink e340/h340/8002, Black Leather with Keypad Cover (RoHS)
PTO666	Swivel Carrying Case for SpectraLink e340/h340/8002, Yellow Vinyl with Keypad Cover (RoHS)

### Availability

The Polycom SpectraLink 8002 SIP wireless telephone is now available for ordering on the Toshiba FYI site.

## System Requirements

### 8002

- 8002 Release 235.008 or later

### CIX

- Strata CIX40, CIX100, CIX200, CIX670, or CIX 1200 system running Release 5.20MT014 or later
- MIPU Release MT0117 or later; MT0018 or later for Multi-line support
- 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.

### Access Point

An access point that supports WMM is required. A reference list of current WMM supported access points can be found on the WiFi Alliance website (<http://www.wi-fi.org>) under WiFi Certified™ Products.

### Windows (for TFTP Server)

- Windows XP Service Pack 2 or later
- Windows Vista Business and Ultimate Editions
- Windows Server 2000 Service Pack 4 or later
- Windows Server 2003 Service Pack 1 or later

**Note** 64-bit operating systems not currently supported

## License Requirements

### License

- Each Polycom SpectraLink 8002 SIP wireless telephone requires an IP End Point License: LIC-CIX-IP PORT.

# End-User Reference Guide

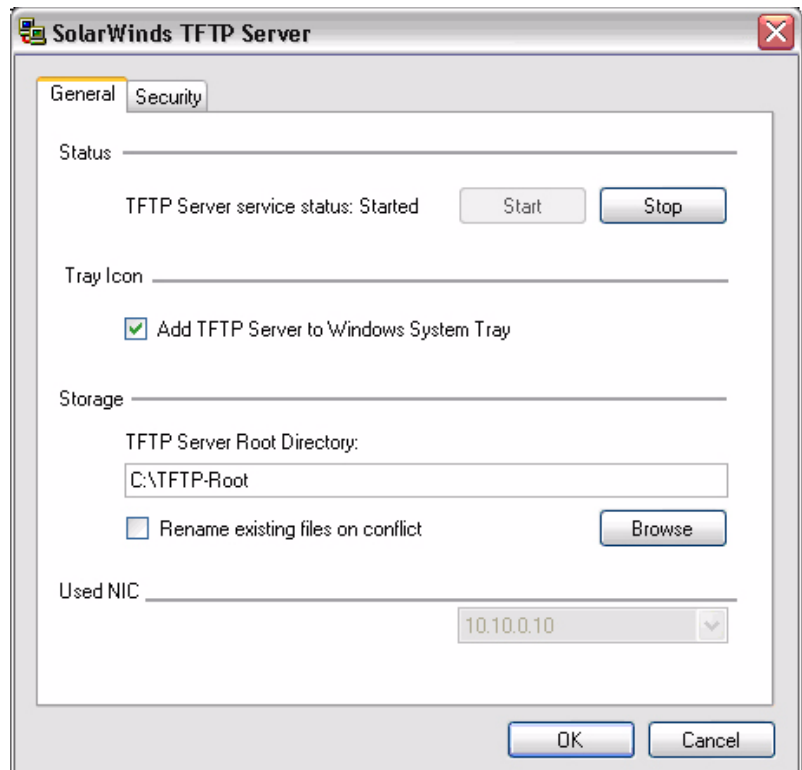
## CIX Setup

- Verify CIX program 250 FK13 = RFC2833 for DTMF [note: CIX default setting for new SIP extensions that support RFC2833 only].

## TFTP Server Setup

**Important!** The 8002 requires that a TFTP Server be running at all times for handset registration and firmware upgradability. Toshiba has approved the free-of-charge SolarWinds TFTP Server, which can be downloaded from their website ([www.solarwinds.com](http://www.solarwinds.com)). However, almost any TFTP Server can be used. The TFTP Server can be run on the Toshiba MAS or on a separate server.

1. Click File > Configure.
2. Click the General tab, and then specify whether to start the server (shown right).
3. If you want the TFTP server to appear in the task tray, check Add TFTP Server to Windows task tray
4. Specify a directory to use as the root directory of the TFTP server. Files received by the TFTP server are saved here. Files to be sent by the TFTP server must be first copied to this directory.
5. Click the Security tab, then select the actions you want to allow the TFTP server to perform. For example, click Receive files if you want to restrict the server to only receiving files.
6. If you want to restrict the TFTP server functions to a specific IP address range, click Add and then specify the beginning and ending IP addresses of the range. Then, click OK.
7. Click OK.



**Note** TFTP protocol has no innate security. There are no passwords or authentication. SolarWinds TFTP Server adds security by allowing you to limit the server's functionality and specify a range of IP addresses from which to accept requests.

## SIP Configuration File Setup

The 8002 configuration files sip\_allusers.cfg and sip\_XXXXXX.cfg template can be downloaded from the Toshiba FYI site under 3rd Party > Polycom.

1. Copy 8002 sip\_XXXXXX.cfg template file and rename to sip\_(extension num).cfg file name (e.g. sip\_3700.cfg)
2. Edit sip\_(extension num).cfg file
  - Set PROXY1\_ADDR = (MIPU IP address):5060
  - Set PROXY1\_KEYPRESS\_2833 = enable
  - Set PROXY1\_KEYPRESS\_INFO = disable
  - Set PROXYn\_HOLD\_IP0 = enable
  - Set AUTH = (username); (password) [note: same as phone Username and Password for SIP registration]
  - Set LINE1 = (extension num)
  - Set LINE1\_PROXY = 1
  - Set LINE1\_CALLID = (display name)
  - Delete # comment. Set FAVORITE = "(extension num)"; "(display name)" [note: up to 8 favorite line items allowed]
3. Copy both sip\_allusers.cfg and sip\_(extension num).cfg file into C:\TFTP-Root directory

## Network Setup

- If network is DHCP, add Option 66 to DHCP Server to point to TFTP Server IP Address
- If network is static, enter TFTP Server IP Address into 8002 Setup

## Access Point Setup

- Turn on WMM option

## 8002 Setup

- **To get into Setup mode** – Turn off handset, press Send key + End key simultaneously, release Send key first while still holding End key. Using volume keys, scroll to specific config menu item.
- Phone Config
  - Phone Config > License Option
    - Select Type 022
  - Phone Config > SIP Registration
    - Reg 1 and Login
    - Enter Username. Save.
    - Enter Password. Save.
- Network Config
  - Network Config > IP Addresses > Static IP
    - Enter phone IP Address. Save.
    - Enter TFTP Server IP Address. Save.



- Enter default gateway IP Address. Save.
- Enter subnet mask. Save.
- Enter SIP TFTP Server IP Address (note: same as TFTP Server IP Address). Save.
- Network Config > Reg. Domain
  - Press Line key
  - Enter "01" for North America. Save. [note: default setting is "None"]

## 8002 Firmware Updates

The latest firmware version can be downloaded from Toshiba's FYI site. To ensure CIX interoperability, please use only the Toshiba approved firmware versions posted on FYI. After download, copy the latest firmware version into the C:\TFTP-Root directory.

## Documentation

The following related documentation is available from the Toshiba FYI site:

- SpectraLink 8002 Quick Reference Guide
- SpectraLink 8002 Wireless Telephone and Accessories User Guide
- SpectraLink 8002 Administration Guide for SIP Protocol
- Strata CIX System and Media Application Server Installation and Maintenance Manual (Release 5 or later)

## Support

As set forth in Toshiba's warranty regarding 3rd party products, Toshiba will provide warranty support for the period of warranty. As set forth in Toshiba's Product Lifecycle Policy for 3rd party products, technical support is available throughout a product's lifecycle and for no more than twelve (12) months after the product reaches the end of its manufacture discontinuance.

## Warranty

The Polycom SpectraLink 8002 is a third-party manufactured product and carries its own warranty for a period of twelve (12) months from the date of purchase that is independent of the Toshiba manufacture limited warranty provided with our Toshiba-branded products. Dealers should check Toshiba's FYI site for complete warranty information.

**Note** All Return Authorizations (RA) must be processed by the End User or Dealer representative directly with Polycom. Toshiba will no longer process the RAs for Polycom or SpectraLink products.

## Technical Support

Toshiba Dealers are requested to provide Tier 1 basic troubleshooting for its customers. For Strata CIX related issues, Toshiba will provide Tier 1 to Tier 3 support for its Dealers as required. For Polycom SpectraLink 8002 related issues, Dealers are requested to contact Polycom directly for Tier 2 immediate troubleshooting and Tier 3 advanced troubleshooting and trace analysis support.

### Polycom Technical Support

(800) 775-5330

## Interoperability Support

Toshiba recommends that only those Polycom SpectraLink 8002 telephones distributed by Toshiba be operated with the Strata CIX systems. Toshiba distributed handsets have been approved for operation with current versions of the Strata CIX systems and fully tested to provide Toshiba's call quality and capability.

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