

# Application Note



**Product:** Ascom FreeNET i75 VoWiFi Handsets

**Purpose:** Configuration guide for SIP endpoint integration toward Cisco CallManager

**Date:** November 6, 2007

## Introduction

This document is intended to outline the steps and guidelines necessary to configure the Cisco CallManager with the Ascom i75 VoWiFi handset.

This guide should be used in conjunction with the appropriate Cisco configuration guide(s) and is intended for someone knowledgeable on the configuration of Cisco CallManager and Ascom systems.

The steps, screen shots, and command line syntax depicted throughout this document are based upon CallManager version 5.1.1.3000-5 and the Ascom i75 software version 1.4.21.

## Product Summary and Network Topology

Manufacturer	Cisco Systems, Inc. <a href="http://www.cisco.com">www.cisco.com</a>
Products	Cisco CallManger
Product sw version	5.1.1
i75 handset sw version	1.4.21
Quality of Service	DSCP, CoS (802.1p/q)
VoIP Protocol	SIP (RFC3261)

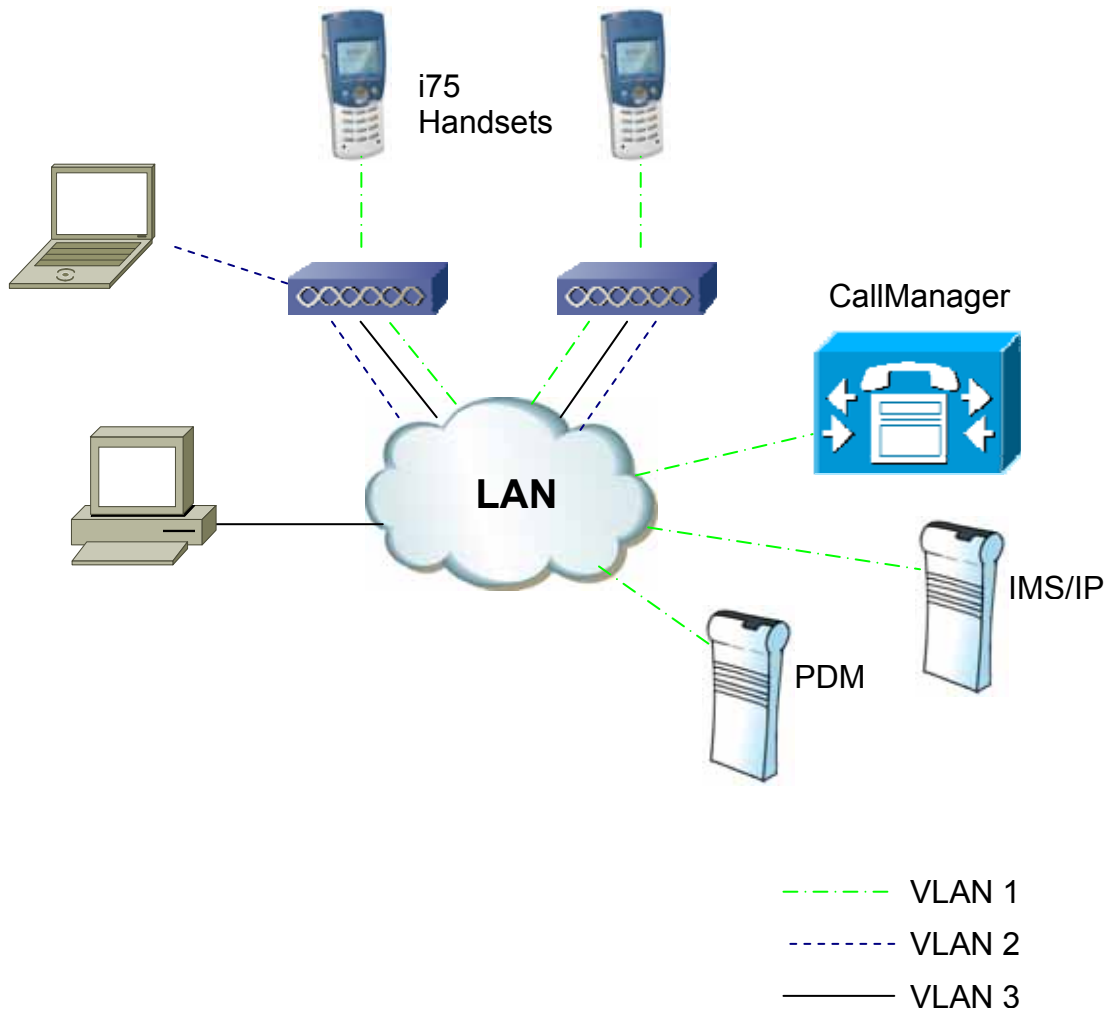
Please visit [www.ascomwireless.com/pd](http://www.ascomwireless.com/pd) to obtain the latest software or contact Ascom Technical Support at 1-877-71ASC0M and follow the software upgrade procedure outlined in the appropriate product manual.

# Application Note

**Product:** Ascom FreeNET i75 VoWiFi Handsets

**Purpose:** Configuration guide for SIP endpoint integration toward Cisco CallManager

**Date:** November 6, 2007



## WLAN/LAN Preparations

1. The Cisco Call Manager should be operational and accessible on the network with applicable license support for third party SIP clients.
2. The appropriate edge and core switches and routers should be operational and configured appropriately based upon the configuration dependencies outlined in this document.
3. The routing and VLAN configurations should be operational and configured appropriately based upon the configuration dependencies outlined by both vendors' specifications.
4. The requirements for VoIP and VoWiFi outlined by the LAN/WLAN vendor and Ascom should be according to specification. See the FreeNET VoWiFi System Planning Guide for additional details.

# Application Note

**Product:** Ascom FreeNET i75 VoWiFi Handsets

**Purpose:** Configuration guide for SIP endpoint integration toward Cisco CallManager

**Date:** November 6, 2007

## Cisco CallManager Configuration

### Add End User

- 1.1 With a web browser, navigate to the CallManager administration and login with the appropriate credentials.
- 1.2 Click on User Management | End user and click the “Add New” button.

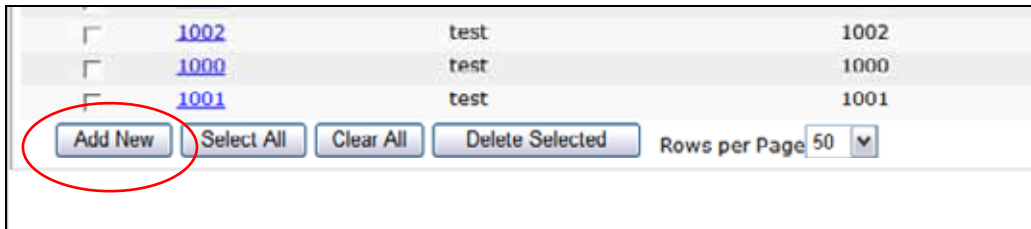


Figure 1

- 1.3 Fill in the required fields with the appropriate values. The “Digest Credentials” parameter is the SIP password used for i75 authentication for registration. The “User ID” parameter shall be set to the designated Ascom handset extension (Endpoint number parameter). When completed, press the Save button.

**End User Configuration**

Status: Ready

**User Information**

User ID\* 3111

Password\* .....

Confirm Password\* .....

PIN\* .....

Confirm PIN\* .....

Last name\* smith

Middle name

First name

Telephone Number

Mail ID

Manager User ID

Department

User Locale < None >

Associated PC

Digest Credentials 123456

Confirm Digest Credentials 123456

Figure 2

# Application Note

**Product:** Ascom FreeNET i75 VoWiFi Handsets

**Purpose:** Configuration guide for SIP endpoint integration toward Cisco CallManager

**Date:** November 6, 2007

## Add Device / Phone

- 1.1 Select Device | Phone and click the Add New Button.

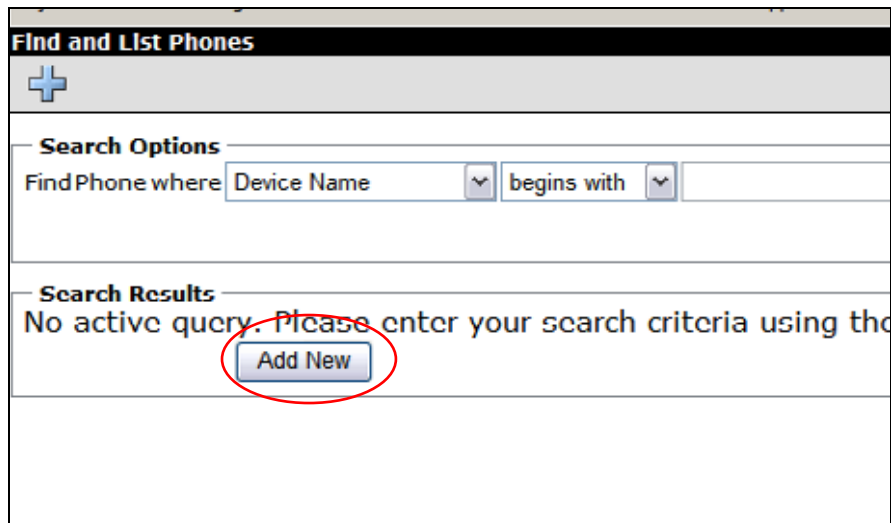


Figure 3

- 1.2 Select "Third Party SIP Device (Basic)" from the Phone Type drop down box and click Next.

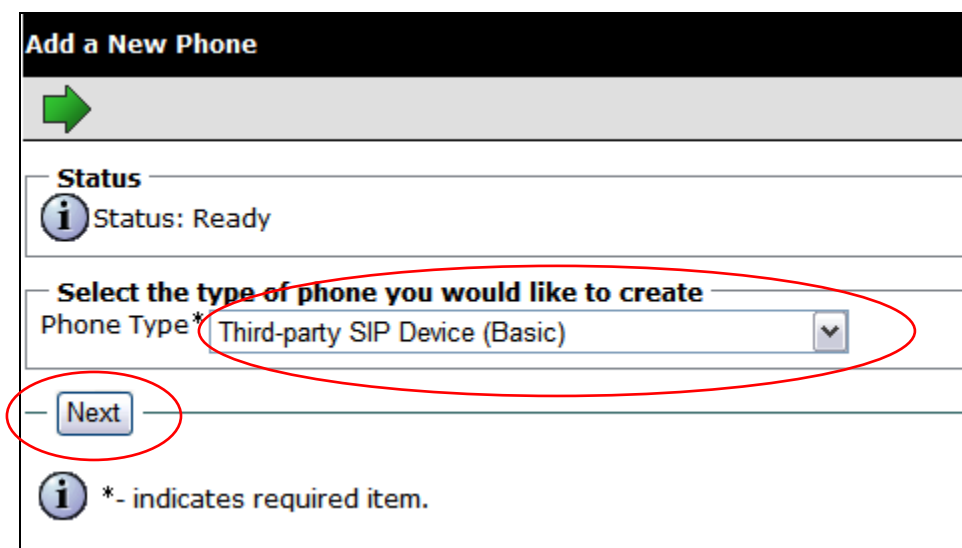


Figure 4

# Application Note

**Product:** Ascom FreeNET i75 VoWiFi Handsets

**Purpose:** Configuration guide for SIP endpoint integration toward Cisco CallManager

**Date:** November 6, 2007

- 1.3 Fill in the required fields with the appropriate values. Ensure that the “Phone Button Template” parameter is set for “Third-party SIP Device (Basic)” and the desired “Owner User ID” defined above is selected. When completed, press the Save button.

Note: To be able to transfer a phone included in a partition, the “Rerouting Calling Search Space” needs to be set to the correct space.

**Phone Configuration**

**Status**  
Status: Ready

**Phone Type**  
Product Type: Third-party SIP Device (Basic)  
Device Protocol: SIP

**Device Information**

MAC Address*	00013E10219B
Description	i75 handset
Device Pool*	Default
Phone Button Template*	Third-party SIP Device (Basic)
Common Phone Profile*	Standard Common Phone Profile
Calling Search Space	< None >
AAR Calling Search Space	< None >
Media Resource Group List	< None >
Location*	Hub_None
Owner User ID	3111

Ignore Presentation Indicators (internal calls only)

Figure 5

# Application Note

**Product:** Ascom FreeNET i75 VoWiFi Handsets

**Purpose:** Configuration guide for SIP endpoint integration toward Cisco CallManager

**Date:** November 6, 2007

**Protocol Specific Information**

Presence Group*	Standard Presence group
MTP Preferred Originating Codec*	711ulaw
Device Security Profile*	Third-party SIP Device Basic - Standard SIP Non-S
Rerouting Calling Search Space	< None >
SUBSCRIBE Calling Search Space	< None >
SIP Profile*	Standard SIP Profile
Digest User	3111

Media Termination Point Required  
 Unattended Port  
 Require DTMF Reception

**MLPP Information**

MLPP Domain	< None >
-------------	----------

Save

Figure 6

# Application Note

**Product:** Ascom FreeNET i75 VoWiFi Handsets

**Purpose:** Configuration guide for SIP endpoint integration toward Cisco CallManager

**Date:** November 6, 2007

## Adding a DN

- 1.4 Click the “Add a new DN” link, which will open the Directory Number Configuration page.

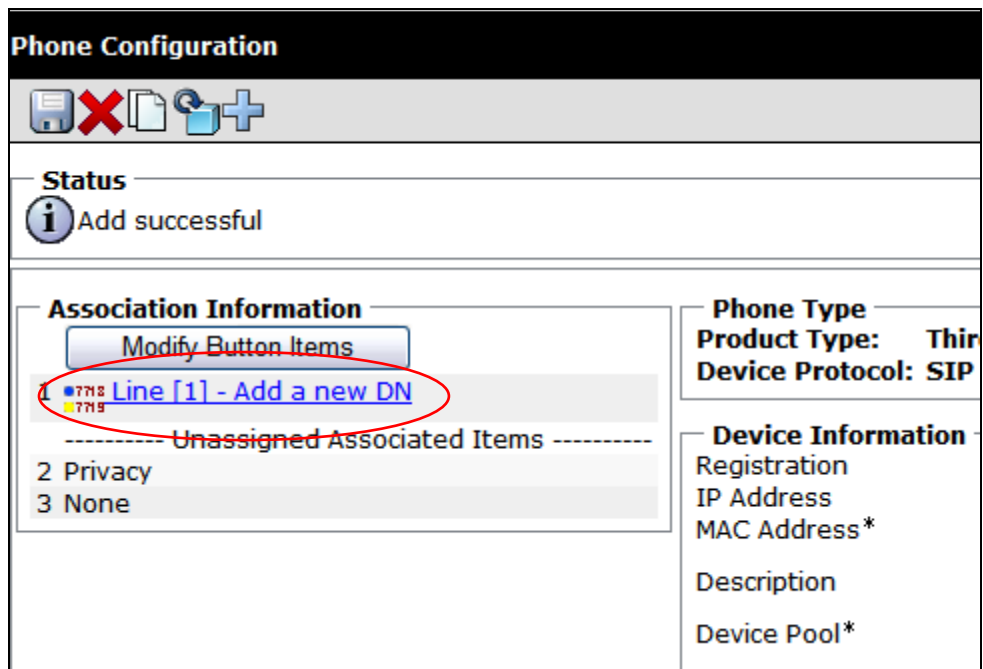


Figure 7

- 1.5 Fill in the required fields with the appropriate values. Set the extension number in the Directory Number parameter. When completed, press the Save button.

# Application Note

**Product:** Ascom FreeNET i75 VoWiFi Handsets

**Purpose:** Configuration guide for SIP endpoint integration toward Cisco CallManager

**Date:** November 6, 2007

**Directory Number Information**

Directory Number\* 3111

Route Partition < None >

Description john smith

Alerting Name john smith

ASCII Alerting Name john smith

Active

**Directory Number Settings**

Voice Mail Profile < None > (Choose)

Calling Search Space < None >

Presence Group\* Standard Presence group

AAR Group < None >

User Hold MOH Audio Source < None >

Network Hold MOH Audio Source < None >

Figure 8

**Line 1 on Device SEP00013E10219B**

Display (Internal Caller ID) john smith Display text for a directory number for internal calls. If you specify a number, the person r

ASCII Display (Internal Caller ID) john smith

External Phone Number Mask

**Multiple Call/Call Waiting Settings on Device SEP00013E10219B**

Note: The range to select the Max Number of calls is: 1-2

Maximum Number of Calls\* 2

Busy Trigger\* 2

**Forwarded Call Information Display on Device SEP00013E10219B**

Caller Name

Caller Number

Redirected Number

Dialed Number

Save

Figure 9

# Application Note

**Product:** Ascom FreeNET i75 VoWiFi Handsets

**Purpose:** Configuration guide for SIP endpoint integration toward Cisco CallManager

**Date:** November 6, 2007

## Verification of SIP device configuration

- 1.1 To verify proper configuration of the handset, navigate to Device | Phone and search for the desired Phone.
- 1.2 When the device is registered properly to the CallManager, the device status shall be “registered” and display the IP Address of the endpoint.

Search Results	Device Name(Line)	Description	Device Pool	Device Protocol	Status	IP Address
<input type="checkbox"/>	<a href="#">SEP00013E00D5D3</a>	SEP00013E00D5D3	<a href="#">Default</a>	SIP	Unknown	Unknown
<input type="checkbox"/>	<a href="#">SEP00013E00D5D5</a>	SEP00013E00D5D4	<a href="#">Default</a>	SIP	Unknown	Unknown
<input type="checkbox"/>	<a href="#">SEP00013E100CE4</a>	SEP00013E100CE4	<a href="#">Default</a>	SIP	Unknown	Unknown
<input type="checkbox"/>	<a href="#">SEP00013E101207</a>	Dan E.	<a href="#">Default</a>	SIP	Unregistered	172.20.105.221
<input type="checkbox"/>	<a href="#">SEP00013E1013E1</a>	SEP00013E1013E1	<a href="#">Default</a>	SIP	Unregistered	172.20.105.220
<input type="checkbox"/>	<a href="#">SEP00013E102198</a>	i75 handset	<a href="#">Default</a>	SIP	Registered with RTPCCM	172.20.105.221
<input type="checkbox"/>	<a href="#">SEP00013E102955</a>	SEP00013E102955	<a href="#">Default</a>	SIP	Unregistered	172.20.105.219
<input type="checkbox"/>	<a href="#">SEP00113E00D5D4</a>	SEP00113E00D5D4	<a href="#">Default</a>	SIP	Unknown	Unknown
<input type="checkbox"/>	<a href="#">SEP0014F2C874B2</a>	Auto 3104	<a href="#">Default</a>	SCCP	Registered with RTPCCM	172.20.105.187
<input type="checkbox"/>	<a href="#">SEP0017599F68E2</a>	Auto 3102	<a href="#">Default</a>	SCCP	Unknown	Unknown
<input type="checkbox"/>	<a href="#">SEP001955D85058</a>	Auto 3100	<a href="#">Default</a>	SCCP	Registered with RTPCCM	172.20.105.34
<input type="checkbox"/>	<a href="#">SEP001955D85068</a>	Auto 3101	<a href="#">Default</a>	SCCP	Registered with RTPCCM	172.20.105.35
<input type="checkbox"/>	<a href="#">SEP0019AA0D1C2C</a>	Auto 3103	<a href="#">Default</a>	SCCP	Unknown	Unknown
<input type="checkbox"/>	<a href="#">SEP001C58CD37B6</a>	Auto 3105	<a href="#">Default</a>	SCCP	Unregistered	172.20.96.139

Buttons: Add New, Select All, Clear All, Delete Selected, Reset Selected. Rows per Page: 50

Figure 10

## i75 VoWiFi Handset Configuration

From the Portable Device Manager, configure the following portable device parameters:

- 1.1 Navigate to Device | User and set the Endpoint Number to the assigned extension in the CallManager.

# Application Note

**Product:** Ascom FreeNET i75 VoWiFi Handsets

**Purpose:** Configuration guide for SIP endpoint integration toward Cisco CallManager

**Date:** November 6, 2007

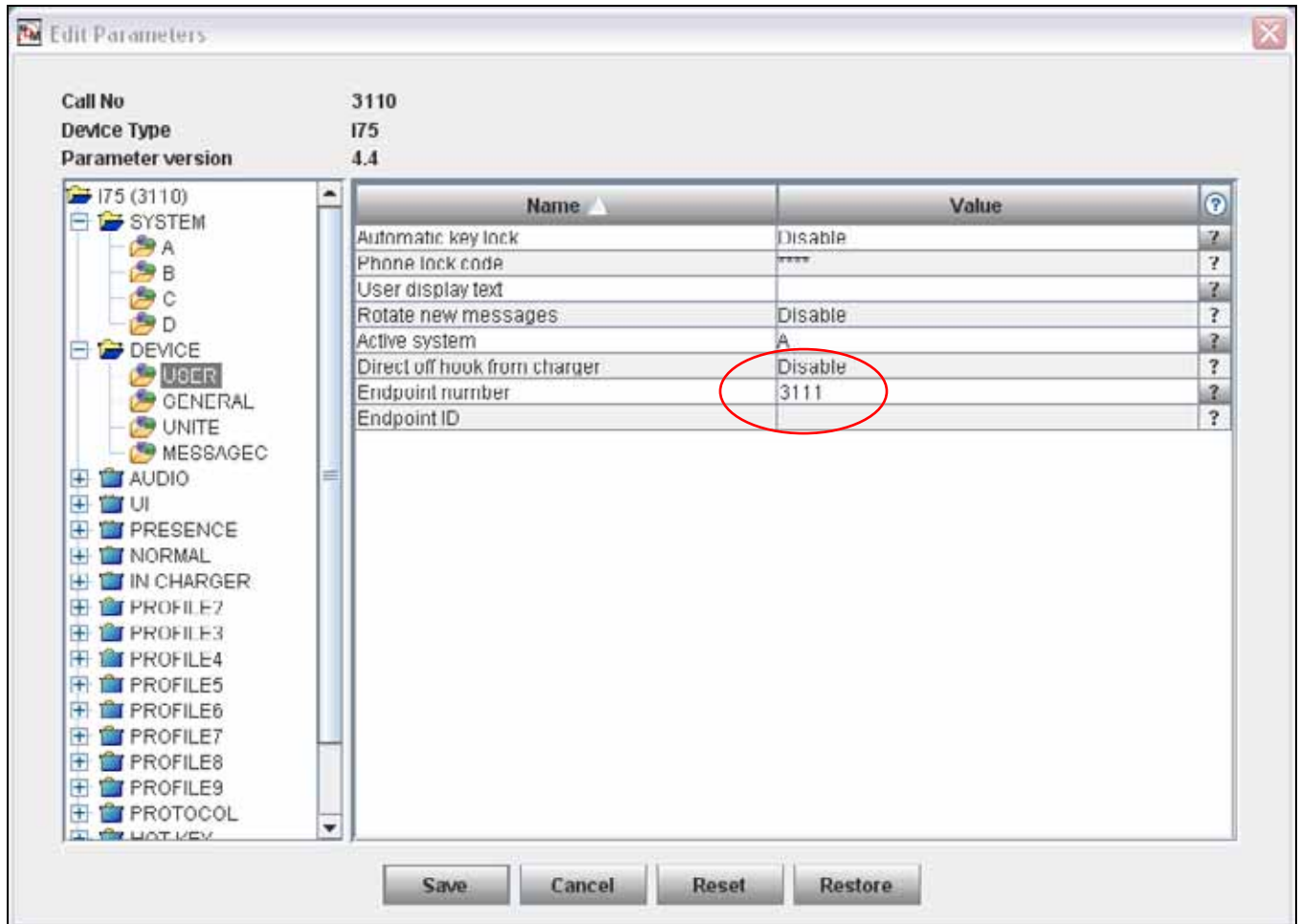


Figure 11

- 1.2 Navigate to Protocol | General and set the VoIP Protocol parameter to “SIP” and set the Codec Configuration parameter to “G.711 u-law”.

# Application Note

**Product:** Ascom FreeNET i75 VoWiFi Handsets

**Purpose:** Configuration guide for SIP endpoint integration toward Cisco CallManager

**Date:** November 6, 2007

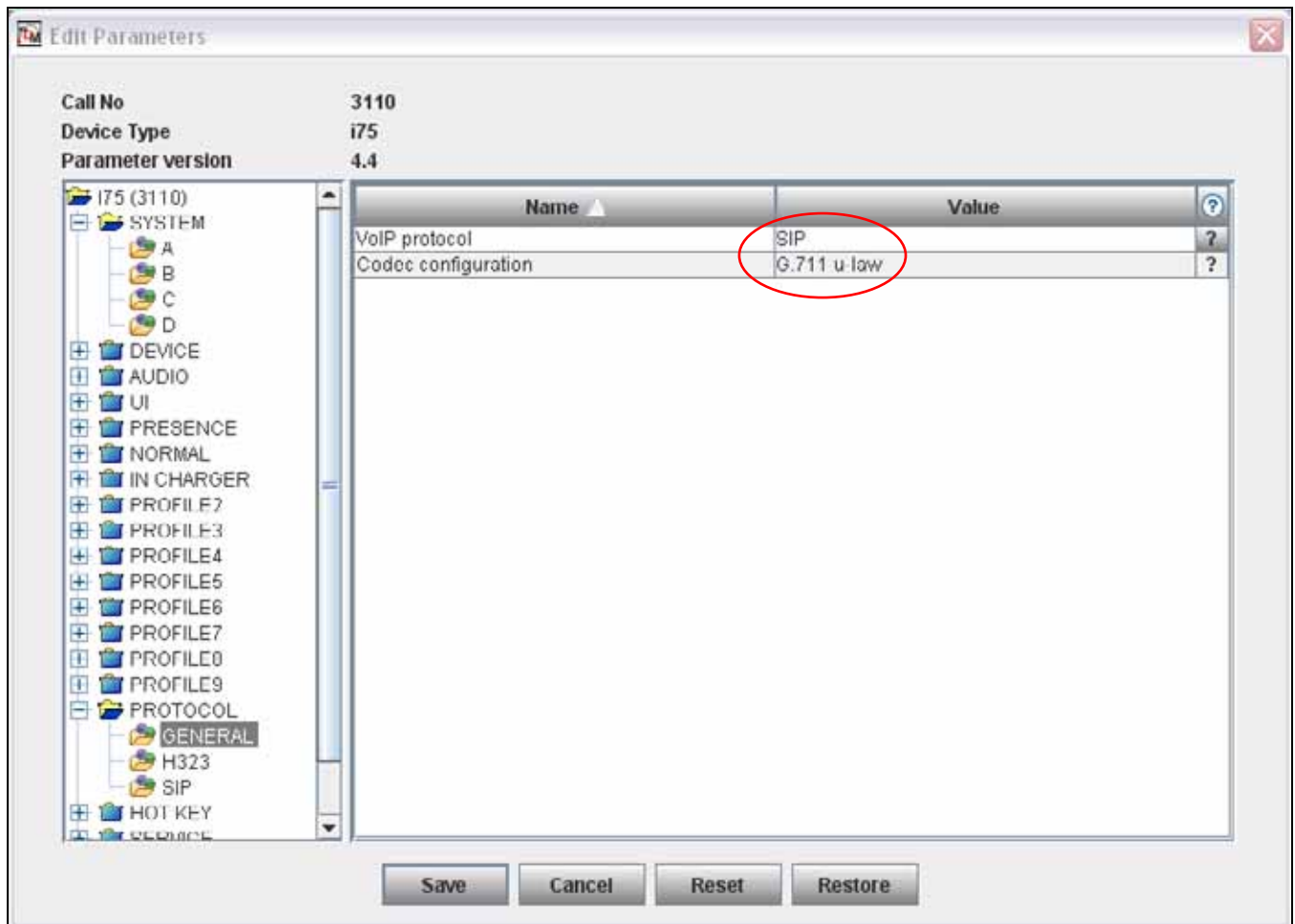


Figure 12

- 1.3 Navigate to Protocol | SIP and set the SIP proxy IP address parameter to the CallManager IP Address and set the SIP proxy password parameter to the assigned device password configured in the CallManager.  
Note: The SIP Proxy password shall equal the value of the assigned “user digest credential” parameter in the CallManager.

# Application Note

**Product:** Ascom FreeNET i75 VoWiFi Handsets

**Purpose:** Configuration guide for SIP endpoint integration toward Cisco CallManager

**Date:** November 6, 2007

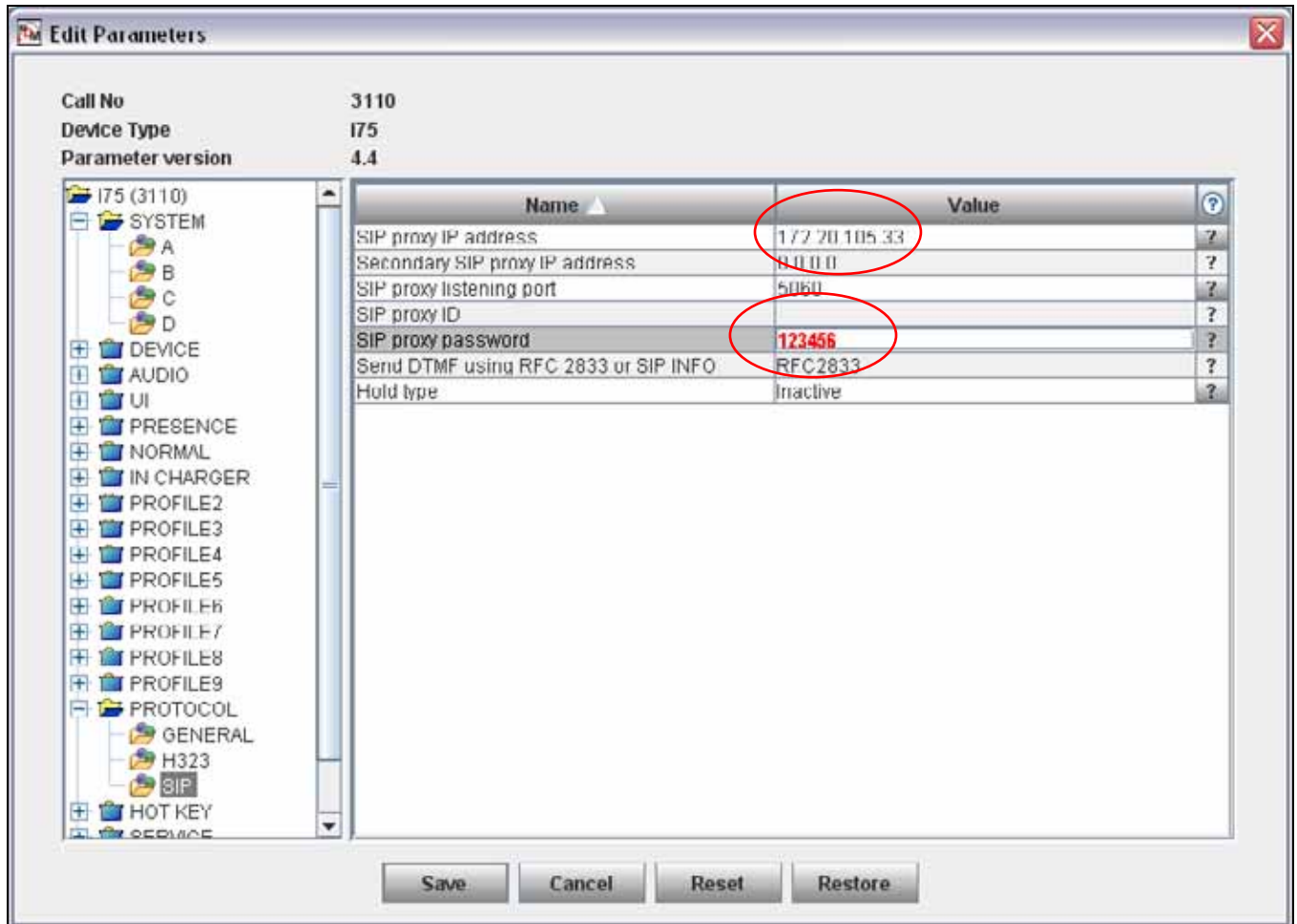


Figure 13

## Device Parameter overview

Parameter	Value	Information
VoIP Protocol	SIP	n/a
SIP proxy IP address	CM IP address	n/a
Alternate SIP proxy IP address	Alternate CM IP address	Needed for systems with redundant CM
SIP proxy listening port	5060 (default value)	Should align with CM configuration
SIP proxy ID	CM host name	Needed for systems with configured SIP domains
SIP proxy password	CM end user password	
Endpoint number	CM end user ID	Must be the same as the extension number

# Application Note



**Product:** Ascom FreeNET i75 VoWiFi Handsets

**Purpose:** Configuration guide for SIP endpoint integration toward Cisco CallManager

**Date:** November 6, 2007

## Related Documents

Configuration Manual for Cisco CallManager in Ascom VoWiFi System	TD 92437GB
System Description VoWiFi System	TD 92313GB
Function Description VoWiFi System	TD 92314GB
Considerations for Ascom VoWiFi System Planning	TD 92408GB
Configuration Manual i75 VoWiFi Handset	TD 92431GB
Installation and Operation Manual Portable Device Manager, Windows version	TD 92325GB
Installation and Operation Manual Portable Device Manager, System version	TD 92378GB

## Contact information

For any additional questions, please contact the Ascom Technical Assistance Center at 1-877-71-ASC0M, option 3.