



Grandstream IP Phone Configuration Guides

Version 1.0

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Table of Contents

FOR GRANDSTREAM GXP SERIES	3
Register with MyPBX	3
Provisioning for MyPBX.....	5
Phone provisioning via PnP mode.....	6
Phone provisioning via DHCP mode.....	8
FOR GRANDSTREAM HANDY TONE 386.....	10
How to setup ATA for MyPBX.....	10
FOR GRANDSTREAM HANDY TONE 486(487), 286(287), ATA	13
How to setup ATA for MyPBX:.....	14

For Grandstream GXP series

Important

This guide has been tested for Grandstream phones models GXP280, GXP285, GXP1100, GXP1105, GXP1200, GXP1400, GXP1405, GXP1450, GXP2000, GXP2100, GXP2110, GXP2120, GXP2124, DP710, DP715 with firmware version 1.2.4.3. Be aware that different firmware revisions may have different web interface formats and functionality.

The easiest way to set up a Grandstream phone for use with MyPBX is to use the built-in plug and play provisioning functionality inside MyPBX. This will allow the phone to configure itself by retrieving a generated phone configuration file. Alternatively you can configure using DHCP and option. You also can configure manually. For more information, see this configuration guide.

Register with MyPBX

Configuring the Phone to Register with MyPBX

1. Start up the phone and identify its IP Address from the LCD display. For this example we will assume the IP Address of the phone is 192.168.5.126, and the IP Address of MyPBX is 192.168.5.150
2. Point your browser to the web interface of the phone: <http://192.168.5.126>. The default password is 'admin'.
3. We now need to set the phone to register with MyPBX. Go to the 'Account 1' page:

Grandstream Device Configuration

STATUS BASIC SETTINGS ADVANCED SETTINGS **ACCOUNT 1** ACCOUNT 2 ACCOUNT 3 ACCOUNT 4 EXT 1 EXT 2

Account Active: No Yes

Account Name: (e.g., MyCompany)

SIP Server: (e.g., sip.mycompany.com, or IP address)

Outbound Proxy: (e.g., proxy.myprovider.com, or IP address)

SIP User ID: (the user part of an SIP address)

Authenticate ID: (can be same or different from SIP UserID)

Authenticate Password: (not displayed for security protection)

Name: (optional, e.g., John Doe)

Use DNS SRV: No Yes

User ID is phone number: No Yes

Figure 1-1

- 1) Set the 'Account Active' field to 'yes'
- 2) Set the 'Account Name' field to a name (for informational purposes only)

- 3) Set the 'SIP Server' field to the IP Address of MyPBX
- 4) Set the 'SIP User ID' field to the extension number you want to associate with this phone
- 5) Set the 'Authenticate ID' field to the extension's number
- 6) Set the 'Authenticate Password' field to the extension's Password
- 7) Set the 'Name' field to the name you would like to be displayed on other phones when calling out
- 8) Set the 'User ID is phone number' field to 'yes'
- 9) Set the 'Auth Answer' field to 'no' and the 'Allow Auth Answer by Call-Info' field to 'yes' (to allow paging functionality)

Auto Answer:	<input checked="" type="radio"/> No	<input type="radio"/> Yes
Allow Auto Answer by Call-Info:	<input type="radio"/> No	<input checked="" type="radio"/> Yes

Figure 1-2

- 10) Click the 'Update' button at the bottom of the page, and then click the 'Reboot' button. Your phone will restart. After rebooting, the phone will retrieve its configuration files and register with MyPBX. This can be verified via the 'Extension Status' page of MyPBX Management Console.

Provisioning for MyPBX

1. Verify Firmware Installed on your Phone

Verify the firmware version currently installed on the "Status" page of IP Phone. Go to Grandstream Support Website to download the latest firmware for your phone.

2. Plug phone into the network

Plug your Grandstream phone into your LAN. (The Phone must be on the same LAN as that of MyPBX IP PBX).

3. Approve phone and Assign an Extension

To do provisioning with Grandstream IP phones, you need to set MyPBX working as the only DHCP server any more.

Phone provisioning via PnP mode

Note: Grandstream GXP 2100 comes with PnP mode which is on by default. In this case, we test the firm version 1.0.4.9 of GXP 2100 IP phone.

Step1. Check MAC address of your Grandstream IP phone on "Status" page.

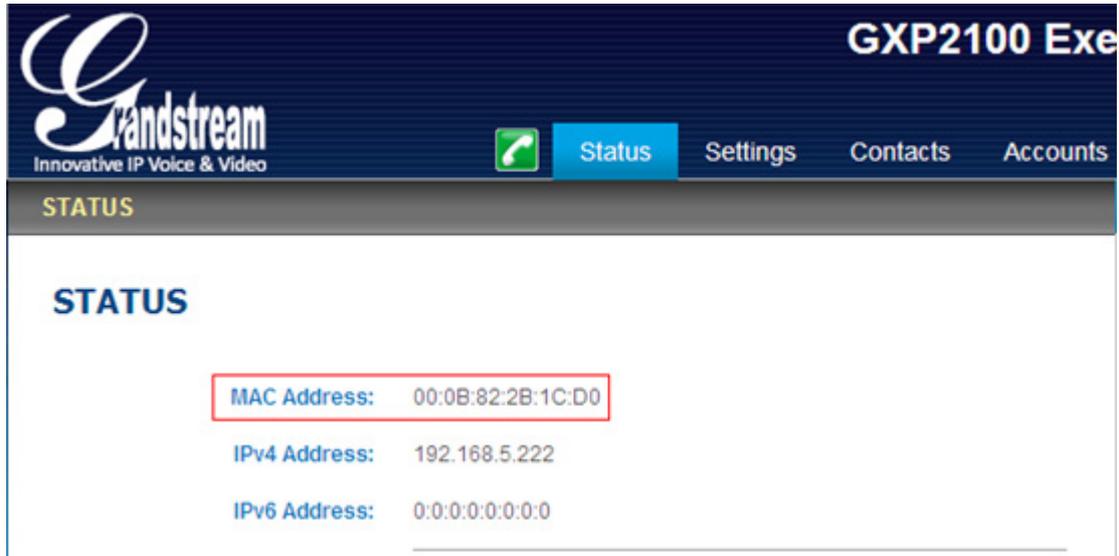


Figure 1-3

Step2. Reboot IP phone.

Step3. Search MAC address you would like configure in "phone provisioning" → "Not Configured Phone" page

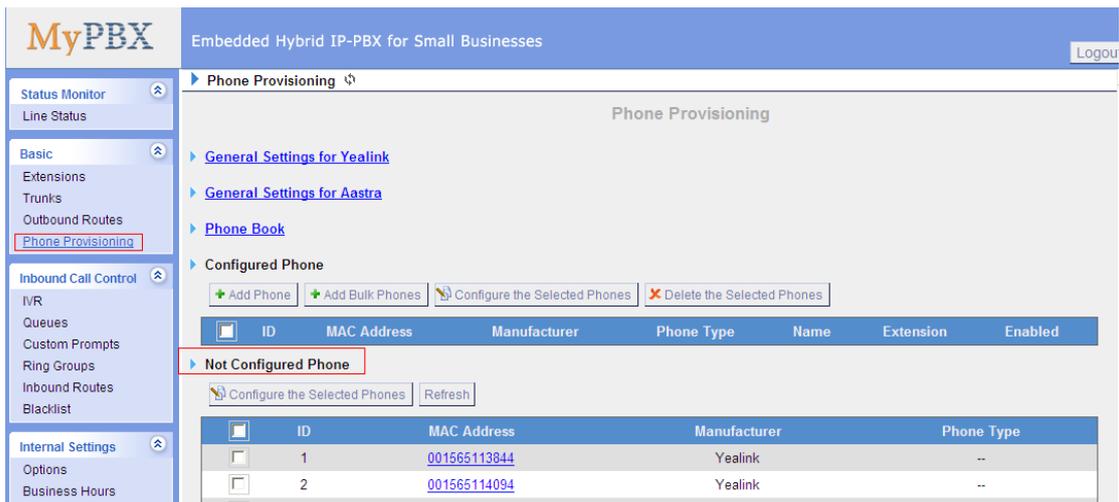


Figure 1-4

Step4. In this case, the MAC address of Grandstream IP phone is 000B822B1CD0, Click it to configure.

<input type="checkbox"/>	77	00041329ebe1	Snom	snom360
<input type="checkbox"/>	78	00156523db8e	Yealink	--
<input type="checkbox"/>	79	001565132161	Yealink	T28
<input type="checkbox"/>	80	001565120849	Yealink	--
<input type="checkbox"/>	81	00156534136e	Yealink	--
<input type="checkbox"/>	82	00156513213b	Yealink	--
<input type="checkbox"/>	83	00156513216d	Yealink	--
<input type="checkbox"/>	84	00a859c7740a	Fanvil	C62
<input type="checkbox"/>	85	000B822B1CD0	Grandstream	gxp2100

Figure 1-5

Step5. Fill in the phone detail message on the pop-up windows. Input Name, Call waiting, Line, Extension, Memory Key Settings and so on for the phone.

Add Phone
X

General

Enabled:	<input type="text" value="Yes"/>		
MAC Address:	<input type="text" value="000B822B1CD0"/>	Name:	<input type="text" value="Jane"/>
Manufacturer:	<input type="text" value="Grandstream"/>	Phone Type:	<input type="text" value="GXP2100"/>
Call Waiting:	<input type="text" value="Enabled"/>	Auto Answer:	<input type="text" value="Disabled"/>
Phone Book:	<input type="text" value="Enabled"/>		

Line

<input checked="" type="checkbox"/>	Line1	Extension: <input type="text" value="509"/>	Label: <input type="text" value="509"/>	Line Active: <input checked="" type="checkbox"/>
<input type="checkbox"/>	Line2	Extension: <input type="text"/>	Label: <input type="text"/>	Line Active: <input type="checkbox"/>
<input type="checkbox"/>	Line3	Extension: <input type="text"/>	Label: <input type="text"/>	Line Active: <input type="checkbox"/>
<input type="checkbox"/>	Line4	Extension: <input type="text"/>	Label: <input type="text"/>	Line Active: <input type="checkbox"/>

Memory Key Settings
⌵

Line Keys Settings
⌵

Figure 1-6

Click "Save" and "Apply Changes", then reboot IP phone manually.

Note: The IP phone will reboot twice to apply the configuration take effect. When done, you can find the account 509 is registered in MyPBX and GrandStream IP Phone.

Phone provisioning via DHCP mode

Step1. Disable DHCP Server on your local network.

E.g. Disable DHCP Server on Linksys Router.

The screenshot shows the Linksys Basic Setup page for an Etherfast Cable/DSL Router (BEFSR41). The 'Local DHCP Server' option is set to 'Disable', which is highlighted with a red box. Other settings include: Internet Connection Type (Obtain an IP automatically), Host Name, Domain Name, MTU (Disable, Size: 1500), Router IP (192.168.1.1), Subnet Mask (255.255.255.0), Start IP Address (192.168.1.100), Number of Addresses (50), DHCP Address Range (192.168.1.100 to 192.168.1.149), Client Lease Time (0 minutes), and Static DNS 1, 2, 3, and WINS (all set to 0).

Figure 1-7

Step2. Enable DHCP Server on MyPBX.

Login MyPBX web interface, System Settings → DHCP Server → Enable DHCP Server.

The screenshot shows the MyPBX DHCP Server configuration page. The 'DHCP Server' section is highlighted with a red box, showing the 'Enable' checkbox checked. The configuration includes: Router (192.168.5.1), Subnet Mask (255.255.255.0), Primary DNS (192.168.5.1), Secondary DNS (empty), Allow IP Address From (192.168.5.2), To (192.168.5.254), TFTP Server (tftp://192.168.5.150), and NTP Server (empty). The page also features a 'Logout' button and a 'Save' button.

Figure 1-8

Step3. Configure phones on MyPBX Auto-Provision page.

1. Login MyPBX web interface, Basic → Phone Provisioning → Add Phone.

The screenshot shows the MyPBX web interface. The top navigation bar includes the MyPBX logo, the text 'Embedded Hybrid IP-PBX for Small Businesses', and a 'Logout' button. The left sidebar contains a 'Phone Provisioning' menu item, which is highlighted. The main content area is titled 'Phone Provisioning' and contains several sections: 'General Settings for Yealink', 'General Settings for Aastra', 'Phone Book', and 'Configured Phone'. The 'Configured Phone' section has a table with the following data:

ID	MAC Address	Manufacturer	Phone Type	Name	Extension	Enabled
1	00041329EBE1	Snom	snom360	Sandy	501-500	Yes

Below the table, there is a 'Not Configured Phone' section with a 'Mac Address List' and an 'Upload a file' button. The 'Add Phone' button in the 'Configured Phone' section is highlighted with a red box.

Figure 1-9

2. Fill in the phone detail message on the pop-up windows. Input IP Phone's MAC address, Name, Manufacturer, Call waiting, Line, Extension and so on for the phone.

The screenshot shows the 'Add Phone' pop-up window. The 'General' section contains the following fields:

- Enabled: Yes
- MAC Address: 000B822B1CD0
- Name: Jane
- Manufacturer: Grandstream
- Phone Type: GXP2100
- Call Waiting: Enabled
- Auto Answer: Disabled
- Phone Book: Enabled

The 'Line' section contains a table for adding lines:

Line	Extension	Label	Line Active
<input checked="" type="checkbox"/> Line1	506	506	<input checked="" type="checkbox"/>
<input type="checkbox"/> Line2			<input type="checkbox"/>
<input type="checkbox"/> Line3			<input type="checkbox"/>
<input type="checkbox"/> Line4			<input type="checkbox"/>

At the bottom of the window, there are 'Memory Key Settings' and 'Line Keys Settings' sections, and 'Save' and 'Cancel' buttons.

Figure 1-10

3. Click "Save" and "Apply Changes", then reboot IP phone manually.

Note: The IP phone will reboot twice to apply the configuration take effect. When done, you can find the account 506 is registered in MyPBX and GrandStream IP Phone.

Remark: The factory default setting of DHCP for IP Phone is “enable”, so you can skip this step to step 5.

If the DHCP is disabled, please follow below step to enable it. (e.g.: Grandstream GXP2100 IP Phone).

1. Login IP phone’s web page. Go to “Settings → BASIC SETTINGS” page.
2. Enable DHCP.



The screenshot shows the Grandstream GXP2100 web interface. The top navigation bar includes 'Status', 'Settings' (highlighted in blue), 'Contacts', and 'Accounts'. Below this, the 'BASIC SETTINGS' tab is selected and highlighted in yellow. The main content area is titled 'BASIC SETTINGS' and contains several configuration fields:

- End User Password:** A text input field with a note below it: "(purposely not displayed for security protection)".
- Confirm Password:** A text input field.
- Internet Protocol:** Radio buttons for 'Prefer IPv4' (selected) and 'Prefer IPv6'.
- IPv4 Address:** Radio buttons for 'DHCP' (selected and highlighted in red) and 'Static'.
- Host name (Option 12):** A text input field.
- Vendor Class ID (Option 60):** A text input field containing 'Grandstream GXP2100'.
- Allow DHCP Option120 to override SIP server:** Radio buttons for 'No' (selected) and 'Yes'.

Figure 1-11

Step4: Done

For GrandStream Handytone 386

How to setup ATA for MyPBX

Follow these steps to set up a GrandStream HandyTone 386 VoIP ATA with

MyPBX:

1. Connect the device's LAN port to your computer with a straight network cable.
2. The device is preconfigured with IP Address 192.168.5.126. Configure your computer to have static IP Address 192.168.5.126, with subnet mask 255.255.255.0.
3. Launch a browser and go to <http://192.168.5.126>. The default username is 'Admin'.
4. Select the 'Basic settings' tab.

Grandstream Device Configuration

STATUS BASIC SETTINGS ADVANCED SETTINGS FXS PORT1 FXS PORT2 CALL PROG TONES

End User Password: (purposely not displayed for security protection)

Web Port: (default for HTTP is 80)

IP Address: dynamically assigned via DHCP (default) or PPPoE
(will attempt PPPoE if DHCP fails and following is non-blank)

DHCP hostname (Option 12):

DHCP domain (Option 15):

DHCP vendor classID (Option 60):

PPPoE account ID:

PPPoE account password:

PPPoE Service Name (option):

Preferred DNS server:

statically configured as:

IP Address:

Subnet Mask:

Default Router:

DNS Server 1:

DNS Server 2:

Time Zone:

Daylight Savings Time: No Yes

Optional Rule:

PSTN access code: (key pattern to use the PSTN line, default is '*00')

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Figure 2-1

5. If your network has a DHCP Server, then select the radio button labeled 'dynamically assigned via DHCP'.
6. If your network does NOT have a DHCP Server, then set up static IP Addressing. From this point onwards, we will assume that the IP Address of MyPBX Server on the network is 192.168.5.150, the IP Address of the device will be 192.168.5.150, the IP Address of the default gateway is 192.168.5.1, and the IP Address of the DNS Server for the subnet is 10.25.0.168.
7. Scroll to the bottom of the page and click the 'Update' button. You will be prompted to reboot the device. Click the 'Reboot' button. After the device has finished rebooting, you may consult the DHCP Server's administrative tools to retrieve the device's new IP Address.
8. Now that you have access to the web configuration you can start configuring

- it against MyPBX. Launch a browser and point it to device's new IP Address.
9. Ensure that you have already created the extension in MyPBX. Take note of the Authentication ID field and the Authentication password that you have entered for the extension connected to the ATA device.
 10. Go to 'FXS PORT 1' tab.

The screenshot shows the 'Grandstream Device Configuration' web interface. At the top, there are tabs for 'STATUS', 'BASIC SETTINGS', 'ADVANCED SETTINGS', 'FXS PORT1', 'FXS PORT2', and 'CALL PROG. TONES'. The 'FXS PORT1' tab is selected. The configuration fields are as follows:

- SIP Server:** 192.168.5.150 (e.g., sip.mycompany.com, or IP address)
- Outbound Proxy:** 192.168.5.150 (e.g., proxy.myprovider.com, or IP address, if any)
- SIP User ID:** 501 (the user part of an SIP address)
- Authenticate ID:** 501 (can be identical to or different from SIP User ID)
- Authenticate Password:** (purposefully not displayed for security protection)
- Name:** (optional, e.g., John Doe)
- Use DNS SRV:** No Yes
- User ID is phone number:** No Yes
- SIP Registration:** No Yes
- Unregister On Reboot:** No Yes
- Register Expiration:** 60 (in minutes, default 1 hour, max 45 days)
- local SIP port:** 5060 (default 5060)
- local RTP port:** 5004 (1024-65535, default 5004)
- Use random port:** No Yes
- DTMF Payload Type:** 101
- Send DTMF:** in-audio via RTP (RFC2833) via SIP INFO
- Send Flash Event:** No Yes (Flash will be sent as a DTMF event if set to Yes)
- Enable Call Features:** No Yes (if yes, start codes will be supported locally)
- Use Bell-style 3-way Conference:** No Yes (if Yes, *23 will be disabled)
- Offhook Auto-Dial:** (User ID/extension to dial automatically when offhook)
- Proxy-Require:**
- Disable Call-Waiting:** No Yes
- NAT Traversal (STUN):** No Yes
- No Key Entry Timeout:** 4 (in seconds, default is 4 seconds)

Figure 2-2

11. Set the 'SIP Server' field to the IP Address of the server on which MyPBX is installed – in this example 192.168.5.150.
12. Set the 'Outbound Proxy' field to the same value as in step 11.
13. The 'SIP User ID' field should match the 'Extension Number' field of the extension in MyPBX Management Console.
14. The 'Authenticate ID' and 'Authenticate Password' fields must match the Authentication ID and Password set for that extension in MyPBX Management Console.
15. The 'Name' field is optional. A suitable value would be the name of the user using this phone.
16. Set 'User ID is phone number' to 'Yes'
17. Set 'Sip Registration' to 'Yes'
18. Set 'Unregister on Reboot' to 'Yes'
19. Set the 'Register Expiration' field to a suitable value. For testing purposes you may want to use 60 seconds, but once the configuration is tested a larger value would be more appropriate to limit unnecessary network traffic. A good setting for general use could be 3600 seconds (1 hour).
20. Set 'Enable Call Features' to 'Yes'. This setting enables feature like transfer,

- on hold etc from the analog phone connected to the FXS port of the device.
21. Set the 'Preferred Vocoder' to choice 1: PCMU, choice 2: PCMA. The settings for choices 3 to 6 will not come in use since they will not be used by MyPBX.
 22. Set 'Allow outgoing call without Registration' to 'yes'.
 23. Scroll to the bottom of the page and click the 'Update' button. You will be prompted to reboot the device. Click the 'Reboot' button.
 24. Repeat steps 11-24 for the configuring 'FXS port 2'.
 25. After the HandyTone has restarted, switch to MyPBX Management Console, and click on 'Line Status', your new extension connected to the PBX should be listed with a blue status light.

For GrandStream HandyTone 486(487), 286(287), ATA

Configuring GrandStream HandyTone 486(487), 286(287), ATA for MyPBX

Important

This guide has been tested with firmware version 1.1.0.37. Be aware that

different firmware revisions may have different web interface formats and functionality. This is based on a new ATA OR one that has been reset to factory defaults.

How to setup ATA for MyPBX:

Connect the LAN to the WAN port of the HandyTone

1. Connect an analog phone to the HandyTone phone port. Pick up the headset and press `****`. This will start up a Voice Prompt Menu. Now press `02` to listen to the IP address that was assigned to the device by the DHCP server
2. Enable the wan side Web access, dial `****` and then `129`
3. Launch a browser and go to the IP Address, The default username is `admin`, Select the `Advanced Settings 1` tab.

STATUS BASIC SETTINGS **ADVANCED SETTINGS 1** ADVANCED SETTINGS 2

Admin Password: ***** (purposefully not displayed for security protection)

SIP Server: 192.168.5.150 (e.g., sip.mycompany.com, or IP address)

Outbound Proxy: 192.168.5.150 (e.g., proxy.myprovider.com, or IP address, if any)

SIP User ID: 500 (the user part of an SIP address)

Authenticate ID: 500 (can be identical to or different from SIP User ID)

Authenticate Password: (purposefully not displayed for security protection)

Name: (optional, e.g., John Doe)

Home NPA:

Advanced Options:

Preferred Vocoder: (in listed order)

choice 1: current setting is "PCMU" ▾

choice 2: current setting is "PCMA" ▾

choice 3: current setting is "G723" ▾

choice 4: current setting is "G729" ▾

choice 5: current setting is "G726-32" ▾

choice 6: current setting is "iLBC" ▾

choice 7: current setting is "PCMU" ▾

G723 rate: 6.3kbps encoding rate 5.3kbps encoding rate

iLBC frame size: 20ms 30ms

iLBC payload type: 101 (between 96 and 127, default is 97)

Silence Suppression: No Yes

Voice Frames per TX: 2 (up to 10/20/32/64 for G711/G726/G723/other codecs respectively)

Fax Mode: T.38 (Auto Detect) Pass-Through

Layer 3 QoS: 48 (Diff-Serv or Precedence value)

Layer 2 QoS (VoIP): 802.1Q VLAN Tag 0 802.1p priority value 0 (0-7)

Layer 2 QoS (PC): 802.1Q VLAN Tag 0 802.1p priority value 0 (0-7)

Allow incoming SIP messages from SIP proxy only: No Yes

Use DNS SRV: No Yes

Figure 3-1

4. Set the `SIP Server` field to the IP Address of the server on which MyPBX is installed – in this example 192.168.5.150
5. Set the `Outbound Proxy` field to the same value as sip server
6. The `SIP User ID` field should match the `Extension Number` field of the extension created for this phone in MyPBX Management Console
7. In the `Authenticate ID` and `Authenticate Password` fields must match the `extension` and `Password` set for that extension in MyPBX Management Console
8. The `Name` field is optional. A suitable value would be the name of the user

using this phone

9. Set the 'Preferred Vocoder' to choice 1: PCMU, choice 2: PCMA. The settings for choices 3 to 7 will not come in use since they will not be used by MyPBX
10. Set 'payload type' to 101 for successful registration
11. Set 'User ID is phone number' to 'Yes'
12. Set 'Sip Registration' to 'Yes'
13. Set 'Unregister on Reboot' to 'Yes'
14. Set the 'Register Expiration' field to a suitable value. For testing purposes you may want to use 60 seconds, but once configuration is tested a larger value would be more appropriate to limit unnecessary network traffic. A good setting for general use could be 3600 seconds (1 hour)
15. Set 'Allow outgoing call without Registration' to yes
16. Set 'Enable Call Features' to 'Yes'. This setting enables features like transfer, on hold etc from the analog phone connected to the FXS port of the device
17. Scroll to the bottom of the page and click the 'Update' button. You will be prompted to reboot the device. Click the 'Reboot' button

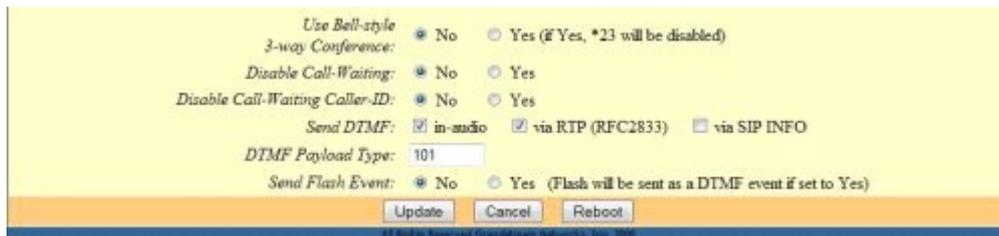


Figure 3-2

18. After the HandyTone has restarted, switch to MyPBX Management Console, and click on 'Line Status'. In the section 'Extensions', your new extension connected to the PBX should be listed with a blue status light

<Finish>