

Grandstream GXE502x IPPBX Quick Start Guide



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This Quick Start Guide will quickly take you through the necessary steps to set up your Grandstream GXE502x. For advanced configuration instructions please consult the GXE user manual after completing the steps in this guide.

Check your GXE502x packaging:

- GXE502x unit
- Ethernet cable
- 12V DC power adapter

System Set-up Prerequisites:

- Compatible PC (to access web GUI)
- Ready access to power and UPS or surge protector
- DHCP must be configured with DHCP Option 66 enabled for Grandstream phones to be auto-provisioned (Grandstream default configuration. Non-Grandstream IP phones will need to be configured manually).

Connecting the GXE502x:

1. Connect one end of an RJ-45 Ethernet cable into the LAN port of the GXE.
2. Connect the other end of the Ethernet cable into the uplink port of an Ethernet switch/hub.

The GXE will be the router for this network, and will serve as a DHCP server as well. However, do not connect phones and other SIP devices to the switch/hub at this point; they will need to be connected later to be auto-provisioned.

3. Connect the 12V DC power adapter into the 12V DC power jack on the back of the GXE. Insert the main plug of the power adapter into a surge-protected power outlet.
4. Let the GXE boot up for the first time. You will know it is finished with the boot process when the "READY" LED is solid green.

Connect PSTN lines from the wall jack to the FXO ports, and analog lines (phone and fax) to the FXS ports. IP phones will be connected in a later step.

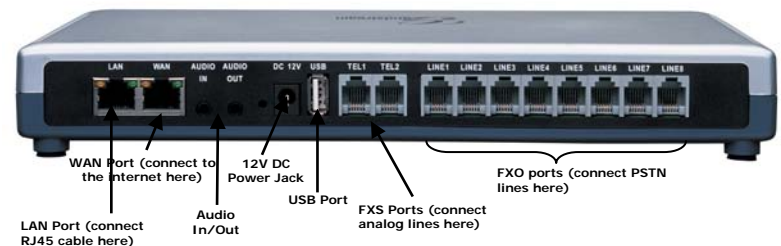
Note: Before configuring your GXE please go to <http://www.grandstream.com/BETATEST> for the newest firmware releases, voice prompts and updated GXE documentation.

Switch/Hub: network device used to share network connections

PSTN Line: traditional analog POTS line

DHCP: dynamic host configuration protocol – automatically assigns IP addresses

Extension Length: number of characters in an extension. For example: ext 800 has an extension length of 3.



GXE Configuration Steps

ONE. Access the web GUI (web configuration pages):

1. Connect a Windows PC to the same switch/hub that is connected to the GXE.
2. Click on the start menu and go to the "Run" option and type "cmd" to launch the Windows command prompt window.
3. Enter the following commands in the prompt window: *ipconfig /release* followed by *ipconfig/renew*. Press the enter button on your keyboard to run each command.
4. Open up a web browser of your choice (Microsoft Internet Explorer 7 recommended).
5. Type the default GXE LAN port IP address in the URL field: 192.168.10.1 and press the Enter key and the GXE web configuration login screen will load immediately. (See Figure 1-1)
6. The default login name and password are both "admin."
7. After logging in, the GXE web configuration interface (web GUI) will appear.

TWO: Set-up Wizard (Express Setup):

The set-up wizard is pre-configured with basic call settings that enable you to quickly configure your GXE. Use this wizard to begin making calls immediately and to understand the basic configuration set-up. **Note: The Express Setup Feature can only be run when the GXE is at the factory default settings.**

1. This page lets you define the length of your extensions as well as the extension prefix (See an example in Figure 2-1).
2. Click "Next" to bring up the Automatic Extensions Provisioning page (See Figure 2-2 on the next page). This page shows a list of the default extension numbers for various key GXE extensions. Please ensure that the extension length and extension digit prefix matches the values set in the previous Express Setup page.



Figure 1-1

Note: All GUI screenshots are examples, do not copy these configurations into your GXE.



Figure 2-1

3. Click on the button labeled: "Finish and Start Auto Provisioning" (See Figure 2-2). Once the Automatic Extensions Provisioning screen loads (See Figure 2-3), the GXE will begin finding devices by waiting for them to communicate via DHCP. At this point, please start connecting all SIP devices/phones into the switch/hub. The page will keep refreshing as the GXE looks for new devices.

In addition, your SIP devices/phones need to have **DHCP enabled** as well as have **DHCP Option 66** allowed to be auto-provisioned; these are factory default settings on Grandstream products as well as many others.

Note: if you don't want to use the Auto Provisioning, you can simply Click on the button labeled: "Finish".

To ensure proper auto-provisioning of Grandstream IP phones, connect the IP phones to the switch/hub after Step 3, as the GXE will only auto-provision phones found during this stage.



Figure 2-2



Figure 2-3

4. As the SIP devices/phones are auto-provisioned, the "Number of extensions provisioned" counter will increment to inform you of the auto-provisioning progress. Press the "Stop Auto Provisioning and Done" button when all devices are configured (See Figure 2-3), this will stop the Auto Provisioning and reboot the GXE. After that, the Extensions Directory page will load automatically (See Figure 2-4). This will show you the default operator extension and all devices found during the Auto Provisioning step.
5. You are now ready to make phone calls locally!! Try to make calls between your extensions.
6. To make a call pick up the receiver and dial the extension and press the send button or #.

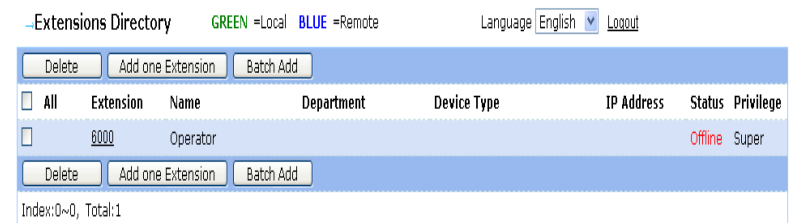


Figure 2-4

THREE: Manually Adding Extensions

1. If you need to add more extensions manually, you can click on “Add One Extension” or “Batch Add” to add multiple extensions at a time. Choosing “Add One Extension” will load the “Add Extension page” (See Figure 3-1); enter a User Name, Extension, and SIP Password. You may set any of the other optional settings as you wish or click on “Advanced” to show the advanced options, and then click the “Submit” button when done.
2. Next you will need to log into the web interface of the phone to be added by typing the IP address of the phone in your web browser.
3. Type in “admin” for the password on the phone’s login screen (example given for Grandstream phones).
4. When you are logged in, the advanced settings page will load automatically.
5. Click on the Account 1 page of your phone to load the account configuration page (See Figure 3-2) and enter the 192.168.10.1 as the SIP Server.
6. Enter the corresponding information from the GXE’s “Add Extension” page for SIP User ID (The Extension #), Authenticate ID (The Extension#) and Authenticate password (SIP Password).
7. Scroll to the bottom of the account configuration page and click the “update” button. After the next page loads, click on the “reboot” button.
7. Congratulations, you have manually added an extension to your GXE!

Config Extension Language English Logout

Advanced

User Name
Department Name
Extension 6001
Privilege Regular
SIP Password
Voicemail Allowed Yes No
Ring Attempts Before Forward to Voicemail 25 (In seconds)
Faxmail Allowed Yes No
Forward Voice/Faxmail to Email
Password
Call Forward On Off
Call Forward To
Call Forward Rule None
Time for No-Answer-Forwarding 25 (In seconds)

Submit

Figure 3-1

Grandstream Device Configuration

STATUS BASIC SETTINGS ADVANCED SETTINGS ACCOUNT 1 ACCOUNT 2 ACCOUNT 3 ACCOUNT 4 ACCOUNT 5 ACCOUNT 6

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)

Figure 3-2

FOUR: Configuring the Network Settings

1. Click on "System Configuration" in the left hand column. This will automatically load the Network Settings configuration page (See Figure 4-1). On this page you can configure the LAN and WAN settings such as toggling between using DHCP or using a static IP address. You may choose to simply use the default setting values, or customize them if necessary.
2. The default LAN Base IP is 192.168.10.1/255.255.255.0. If you wish to use a different internal IP addressing scheme, please change it before running the express setup as the GXE will auto-provision the LAN Base IP into the phones for them to communicate with the GXE. Reboot the GXE before proceeding to the next step to make the LAN Base IP setting change take effect.

Warning: Do NOT change the LAN Base IP after auto-provisioning phones after the express setup, this will break the connection between your configured phones and the GXE.

The screenshot displays the "Networking Settings" page, which is divided into several sections: LAN Settings, WAN Settings, and Port Forwarding. The LAN Settings section includes fields for LAN Base IP (192.168.10.1), LAN Subnet Mask (255.255.255.0), and DHCP Enable (checked). The WAN Settings section includes options for DHCP, PPPoE, and Static IP, with DHCP selected. The Port Forwarding section contains a table for configuring WAN ports to LAN ports and protocols.

LAN Settings			
LAN Base IP	192	168	10
LAN Subnet Mask	255	255	255
DHCP Enable	<input checked="" type="radio"/> Enable <input type="radio"/> Disable		
Start of DHCP IP Pool	100		
End of DHCP IP Pool	199		
DHCP IP Lease Time	120		
WAN Settings			
	<input checked="" type="radio"/> DHCP <input type="radio"/> PPPoE <input type="radio"/> Static IP		
PPPoE Account ID			
PPPoE Password			
Preferred DNS server			
IP Address	192	168	0
Subnet Mask	255	255	255
Default Router	192	168	1
Primary DNS			
Secondary DNS			
WAN Side HTTP(S) Access	<input type="radio"/> No <input checked="" type="radio"/> Yes		
Web Access Mode	<input checked="" type="radio"/> HTTP <input type="radio"/> HTTPS		
HTTP Port	80		
HTTPS Port	443		
Allow PING From WAN Side	<input checked="" type="radio"/> No <input type="radio"/> Yes		
UPNP Server Active	<input type="radio"/> Enable <input checked="" type="radio"/> Disable		
PPTP VPN Enabled	<input type="radio"/> No <input checked="" type="radio"/> Yes		
IPSEC VPN Enabled	<input type="radio"/> No <input checked="" type="radio"/> Yes		
L2TP VPN Enabled	<input type="radio"/> No <input checked="" type="radio"/> Yes		
DDNS Active	<input type="radio"/> Enable <input checked="" type="radio"/> Disable		
DDNS ISP Type	3domain.hk(Closed in 5/1)		
Site Name			
DDNS Account			
DDNS Password			
Layer 3 QoS	48 (Diff-Serv or Precedence value)		
Port Forwarding			
WAN Port	LAN IP	LAN Port	Protocol
0		0	UDP Only
0		0	UDP Only
0		0	UDP Only
0		0	UDP Only
0		0	UDP Only
0		0	UDP Only
0		0	UDP Only
0		0	UDP Only
0		0	UDP Only
Submit			

Figure 4-1

FIVE: Configuring the System Settings

1. Click on "System Configuration" in the menu bar on the left.
2. Click on "System Settings" in the expanded menu to load the system settings page (See Figure 5-1). This page lets you configure the login and contact information of the system administrator, email options, time zones, call record servers and storage quotas.
3. For better security, please change the web configuration password by entering your own password in the "Login Password" field. Keep this password safe and do not lose it.
4. To enable the voicemail-to-email feature, please create a new email address or use an existing one.
5. Enter the email account SMTP Server, Login Name, Login Password, and Email Address settings in the corresponding fields; you may obtain this information from your email provider.
6. Click on the "Submit" button to save your changes.
7. At any time you can click on the link "Advanced" to display the advanced options.

The screenshot displays the "System Settings" web interface. At the top right, there is a "Language" dropdown set to "English" and a "Logout" link. The main content is organized into several sections:

- Administrator Settings (Advanced):** Includes input fields for Login Password, Name, Contact Phone, Contact Mobile, Contact Email, and System Name.
- Fax Options:** Features a "Manual Selection of Fax" section with radio buttons for "Yes" (selected) and "No".
- Email Settings:** Contains fields for SMTP Server, SMTP SSL (radio buttons for "Yes" and "No", with "No" selected), Outbound email notification (radio buttons for "Email" and "MTA", with "MTA" selected), Login Name, Login Password, Email Address, and Test Email Address. A "Test" button is located next to the Test Email Address field.
- Time Settings:** Includes fields for Time, Time Zone (dropdown menu showing "GMT-5:00 (US Eastern Time, New York)"), Self-Defined Time Zone (text input with "MTZ+6MDT+5,M4.1.0,M11.1.0"), Synchronize with NTP Server (radio buttons for "Yes" (selected) and "No"), NTP Server (text input with "us.pool.ntp.org"), WAN side NTP server (radio buttons for "Yes" and "No", with "No" selected), LAN side NTP server (radio buttons for "Yes" (selected) and "No"), and No key entry timeout (text input with "6" and a "(In seconds)" label).
- Storage quota of voicemail/videomail/faxmail per privilege level:** A table with five rows for privilege levels: Super, Privileged, Regular, Basic, and Restricted. Each row has a dropdown menu currently set to "2%".
- System Music Options (Play Current Greeting):** Includes a "System Music" dropdown set to "System music files" and an "Upload System music" section with a "Choose File" button and the text "No file chosen". A "Submit" button is at the bottom left.

Figure 5-1

SIX: Configuring PSTN Lines (if available)

1. Click on TRUNK/Phone Lines on the left menu bar to load the Internal PSTN Trunk Line configuration page (See Figure 6-1).
2. Click on the button “Add” to add a new line call control (Figure 6-2).
3. Specify a name to this trunk and enter “1-8” in the Line field (if it’s a GXE5028) or “1-4” (if it’s a GXE5024).
4. Set the Dial Prefix field to the prefix used for outgoing PSTN calls; for example, “9” is commonly used (it’s not a required field, you can also configure the outbound calls under the section “Call routing”).
5. For the Call routing profile, you can select the profile used for the inbound calls. The default profile used is “General Inbound”.
6. Once you’re done, Click on “Submit” to save the configuration.
7. Click on “advanced” to set the PSTN lines settings and assign them to the FXO ports. You can also use this page to run the PSTN Auto Detection Module and find automatically the PSTN settings to use.

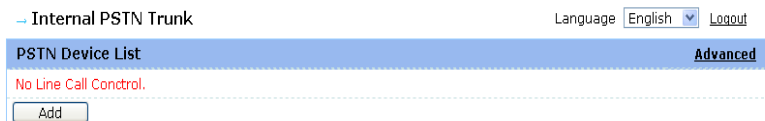


Figure 6-1

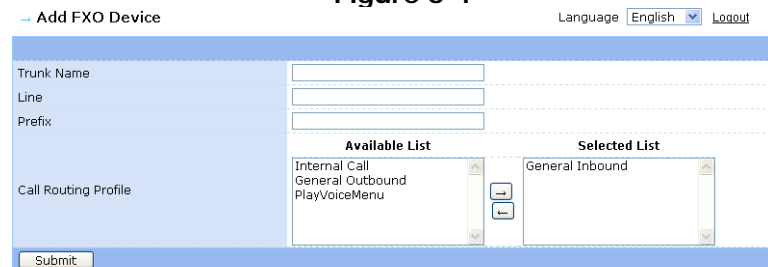


Figure 6-2

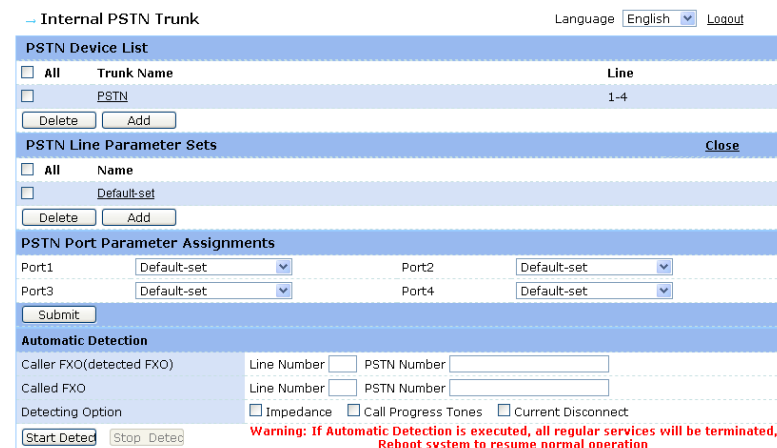


Figure 6-3

SEVEN: Configuring SIP Trunks (if available)

1. Click on TRUNK/Phone Lines on the left menu bar and then click on "SIP Trunk" to load the SIP Trunk configuration page (**Figure 7-1**).
2. Your SIP service provider will provide you with SIP account and registration information, which you may enter in the respective fields of this page.
3. Set the "Trunk Active" setting to "Enable" to enable this trunk on your GXE. You may also specify an arbitrary name for this trunk in the "Trunk Name" field, as well as one for the SIP account in the "Account Name" field.
4. To set a limit on the number of calls allowed through this trunk, please set the "Max Concurrent Calls Allowed" field to the limit allowed by your service provider, or a lower number if you wish.
5. Set the dial digit prefix which users will prefix outbound numbers with to specify this trunk to be used (This is not a required field, you can configure it in the section "Call routing").
6. You can click on the link "Advanced" to access to more advanced settings.
7. Once you're done, press the button "submit" to save the trunk configuration.

EIGHT: Configuring a Peer System (if available)

1. If you have more than one GXE502x, you can configure the units to be peers. To do this, click on "Advanced Options" in the menu bar to load the "Peer Systems" page.
2. Click the "Add" button to load the "Add Peer System" Page (**Figure 8-1**). This page lets you enter configuration data for the remote GXE you are adding as a peer system.
3. In the Peer URL field, enter the IP address or domain name of the peer GXE. Assign a number to the Trunk Number parameter to set the # of concurrent calls possible on the peer system.
4. Set the extension prefix of the remote PBX extensions in the Prefix field. The GXE will route calls starting with this prefix to the peer system.
5. Set the Peer extension length.
6. Click on "Submit" and reboot the GXE so the configuration changes can take effect.

→ Add SIP Trunk Language English Logout

Advanced

Trunk Name

Trunk Active Enable Disable

SIP Server URL

Outbound Proxy URL

Account Name

Account ID

Authenticate ID

Password

Max Concurrent Calls Allowed

Dial Prefix

Figure 7-1

→ Add Peer Systems Language English Logout

Advanced

Peer Name

Active Enable Disable

Peer URL

Max Concurrent Calls

Peer Extension Prefix

Peer Extension Length

Figure 8-1

NINE: Configuring the Call Routing Profile

1. Click on “Call routing” in the left hand column. This will automatically load the Call routing Profile Page (**See Figure 9-1**). On this page you can configure the call routing for internal, inbound and outbound calls.
2. Click on “Internal call” to configure the rules for internal calls between extensions and feature codes.

Note: The GXE configure automatically the internal call profile while doing the express setup.

3. Click on “General Inbound” to configure the route of the incoming calls for all trunks (PSTN, SIP and Peers).

Note: by default the GXE route all the incoming calls to the default auto attendant.

4. Click on “General Outbound” to configure the route of the outgoing calls by using a static prefix or country code ... Please visit the help section on the Call routing page for more information.

<input type="checkbox"/> All	Profile Name	Number of Control Rules
<input type="checkbox"/>	Internal Call	2
<input type="checkbox"/>	General Inbound	1
<input type="checkbox"/>	General Outbound	0
<input type="checkbox"/>	PlayVoiceMenu	0

Buttons:

Figure 9-1