Grandstream Networks, Inc.

Grandstream Affinity CTI Application Guide

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INTRODUCTION

The Grandstream Affinity is an easy to use CTI application allowing interaction with Grandstream GXP17xx/GXP21xx IP Phones series. GS Affinity provides a smooth call management and control interaction between customer's phone and desk computer running the application.

Using GS Affinity CTI application, customers will be able to get benefits from following major features:

- Complete control over calls (answer, hang-up, call on hold, manage "do not disturb", call forward, conference, call transfer etc.…).
- Incoming calls notifications on desk computer allowing caller numbers to be screened against a database to collect or provide more information related to caller.
- Initiate outbound calls from computer directly.
- Discovering phones with CTI feature enabled and communicate with the UCM6xxx directly to execute specific actions.
- Contacts management from computer and synchronization with connected hosts.
- Manage call history of connected hosts from computer.

This manual describes in details the user interface, supported features and how to install and run GS Affinity CTI application with Grandstream GXP phones.

SUPPORTED DEVICES

Following table shows Grandstream phones supporting CTI application and their firmware version:

Table 1: Supported Devices

Model	Supported	Firmware
GXP17XX Series		
GXP1760	Yes	1.0.0.48 or higher
GXP1780	Yes	1.0.0.48 or higher
GXP1782	Yes	1.0.0.48 or higher
GXP21XX Series		
GXP2130	Yes	1.0.8.42 or higher
GXP2140	Yes	1.0.8.42 or higher
GXP2160	Yes	1.0.8.42 or higher
GXP2135	Yes	1.0.8.42 or higher
GXP2170	Yes	1.0.8.42 or higher

GS Affinity application interacts with UCM6xxx running firmware **1.0.13.14** or higher and Grandstream phones connected to the same network as the computer running the application and the UCM6xxx.

Important Note:

When using the UCM6xxx with **Router** mode under network settings, make sure to connect the phones and computer running GS Affinity behind the **LAN** port, otherwise, the CTI application will not be able to discover and interact with GXP phones.

GS AFFINITY APPLICATION INSTALLATION

The Grandstream Affinity application is available on our website. Please refer to following steps to install GS Affinity:

Note: GS Affinity requires computer running Windows 8 or higher.

1. Once downloaded, run the setup wizard and follow further instructions.

2. Accept the license agreement by pressing **I Agree** button.
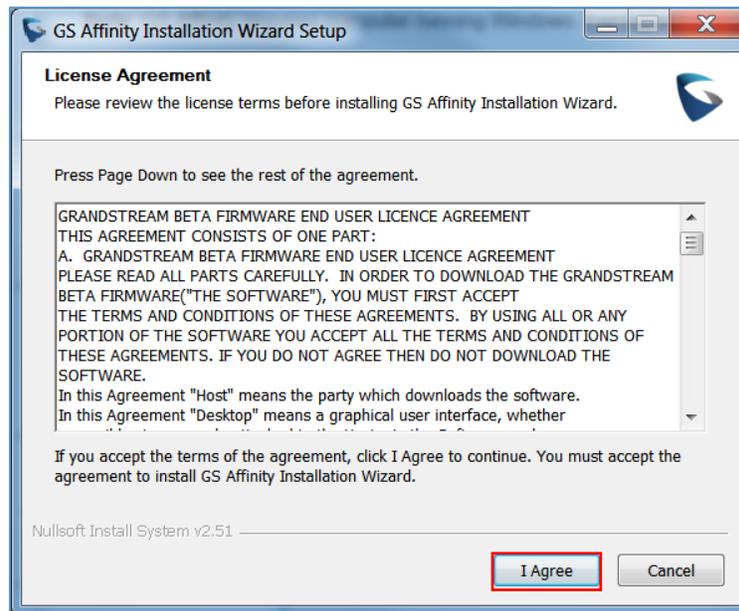
3. If "**Bonjour SDK**" is not previously installed on the computer, check its component and click **Next** to continue.
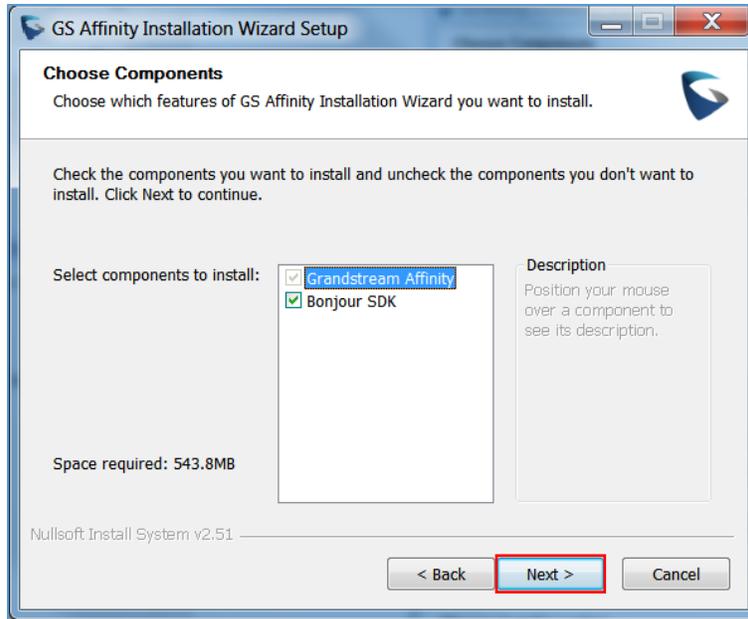
4. Choose the install location and click on **Install** to start the installation.
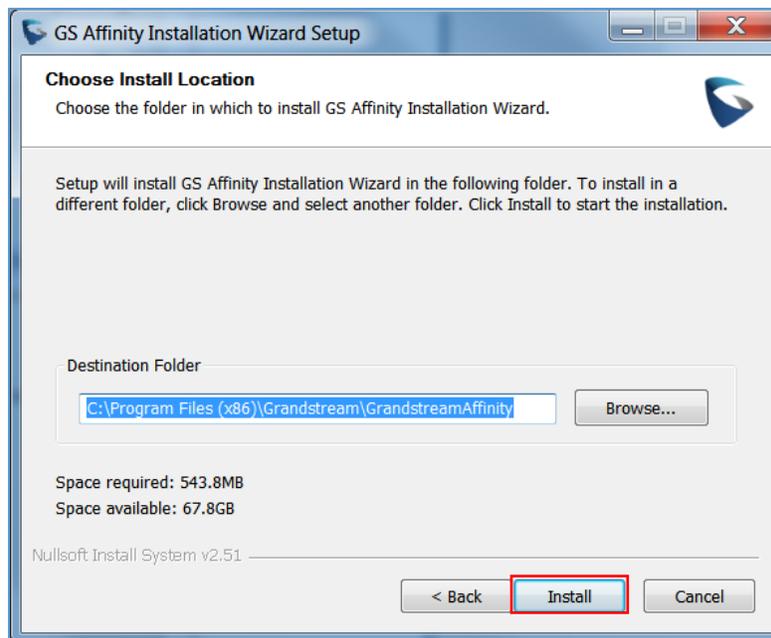
5. The installation wizard will display the status of the installation as displayed on the following screenshot.
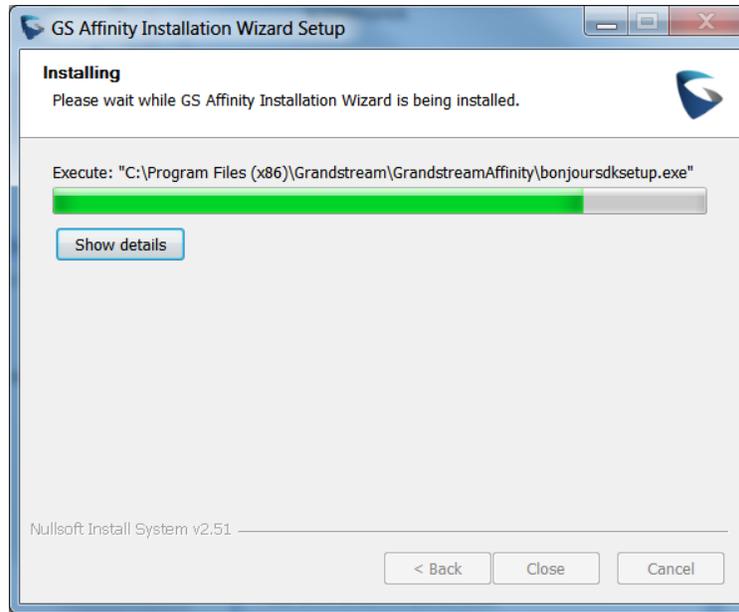
6. If **Bonjour SDK** component has been selected, accept its agreement and click on **Next** button to continue the installation.
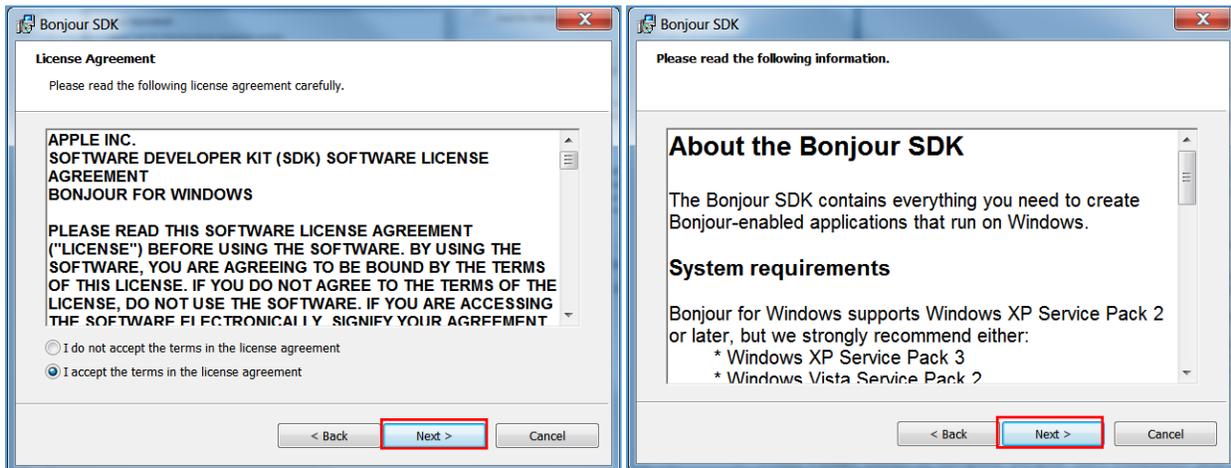
7. Press **Finish** button to complete Bonjour SDK installation and continue installing GS Affinity application.

8. Press **Close** button to finish GS Affinity installation.

ENABLING CTI FEATURE ON GXP PHONES

After installing GS Affinity CTI application on the computer, users need to enable CTI feature on GXP phones to allow interaction between them.

The following steps describe how to enable CTI feature on GXP phones.

GXP17xx Series

To enable CTI application on GXP17xx series, follow below steps:

1. Access GXP17xx web GUI as administrator.

2. Navigate to **Settings** -> **CTI Settings**.

3. Enable **CTI Support** by checking **Enabled**.

4. Select CTI target SIP account under **CTI Account** field (Account 1, Account 2…).

5. Press **Save and Apply** button.

6. Reboot the GXP17xx phone to allow the interaction with GS Affinity application.

GXP21xx Series

To enable CTI application on GXP21xx series, follow below steps:

1. Access GXP21xx web GUI as administrator.

2. Navigate to **Network** -> **Affinity Settings**.

3. Enable **Affinity Support** by checking **Enabled**.

4. Select affinity target SIP account under **Preferred Account** field (Account 1, Account 2…).

5. Press **Save and Apply** button.

6. Reboot the GXP21xx phone to allow the interaction with GS Affinity application.

CONNECTING GS AFFINITY WITH GXP PHONES

GS Affinity application supports two ways to connect with GXP phones:

- Simple Connection
- Advanced Connection

Before establishing the connection between the GS Affinity application and GXP phones, make sure of the following:

- CTI settings are enabled on the host phones (Enabling CTI Feature on GXP Phones).

- If UCM6xxx is set with **Router** mode, make sure that computer running GS Affinity and GXP phones are connected behind UCM6xxx **LAN** port.

Simple Connection

The simple connection mode is the default mode after launching GS Affinity. Users need to enter the host extension number to interact with.

Follow steps below to establish a simple connection using GS affinity application:

1. Launch the GS Affinity application.
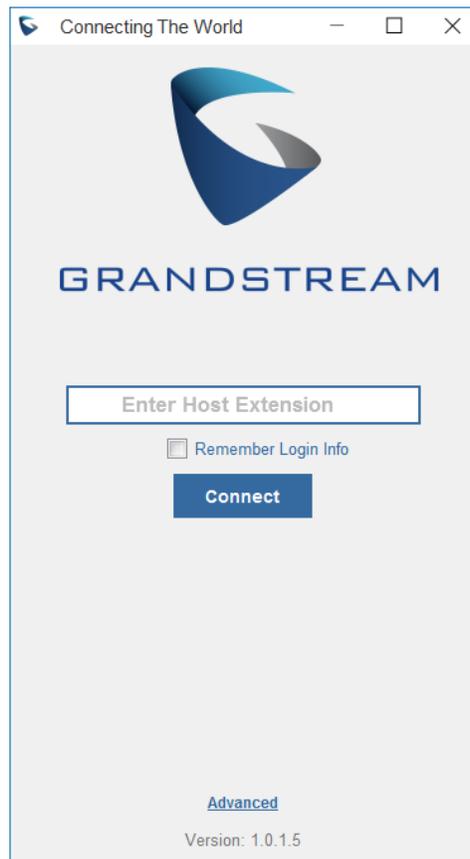
Figure 1: CTI Simple Connection

2. Enter the host's extension registered and press **Connect** button.

3. The host phone will display a 4-digit confirmation code (**CTI Authentication Code**) on its LCD.

    Note: CTI Authentication Code appears only for new connection and needs to be entered within 60 seconds on GS Affinity application, otherwise the CTI connection will be dropped.
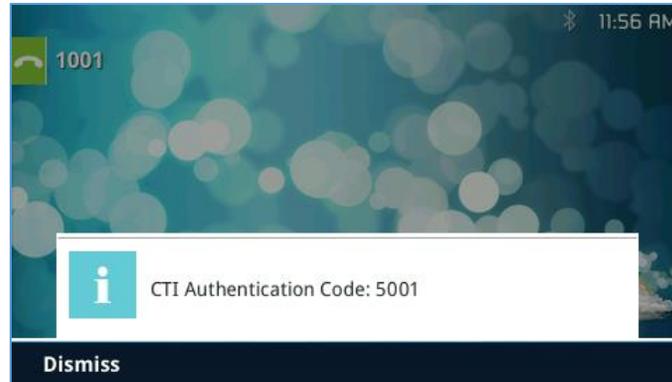
Figure 2: CTI Authentication Code on GXP2170 – Simple Connection

4. Enter the CTI authentication code on the GS Affinity application and press **OK** button to establish the connection between GS Affinity application and the phone.
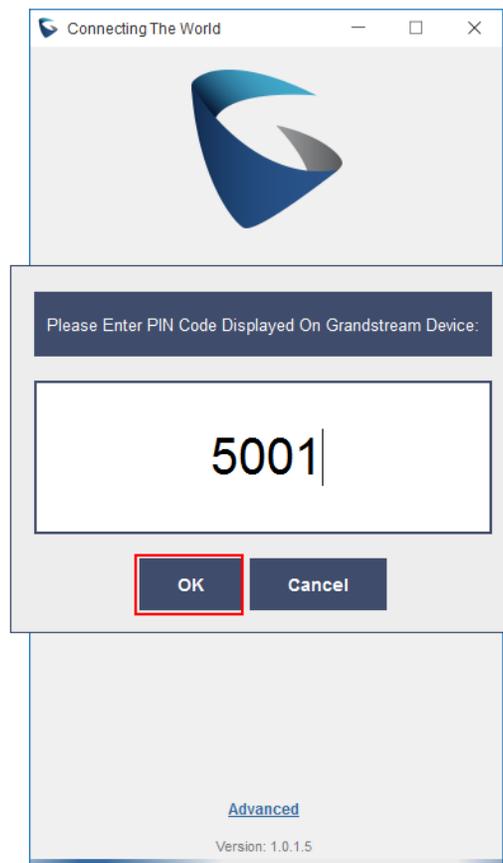
Figure 3: CTI Authentication Code on GS Affinity – Simple Connection

Advanced Connection

Advanced connection mode allows users to discover available GXP phones within the same network or to connect with a specific GXP phone by entering its IP address.

Advanced Connection options can be accessed by clicking on **Advanced** button at the bottom of the page as shown on the following screenshot:
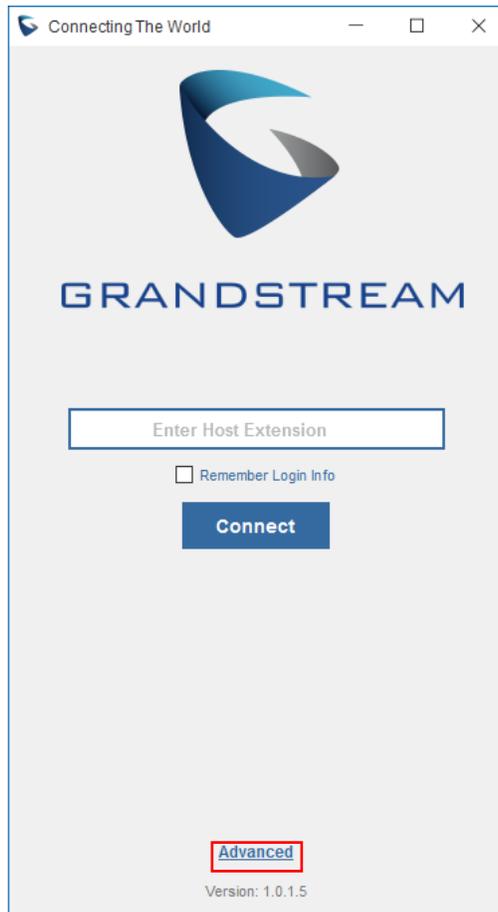
Figure 4: Advanced options

Direct Connect

Direct connect method allows users to establish a connection between the GS Affinity application and the desired phone using its IP address.

Please refer to following steps illustrating how to interact with GXP phone using the IP address.

1. Launch the GS Affinity application.
2. Click on **Advanced** button, to access advanced options.
3. Enter the IP address of the host phone under "**Enter Host Address**" field.
4. Press **Connect** button to establish a connection between the GS Affinity application and the host phone.
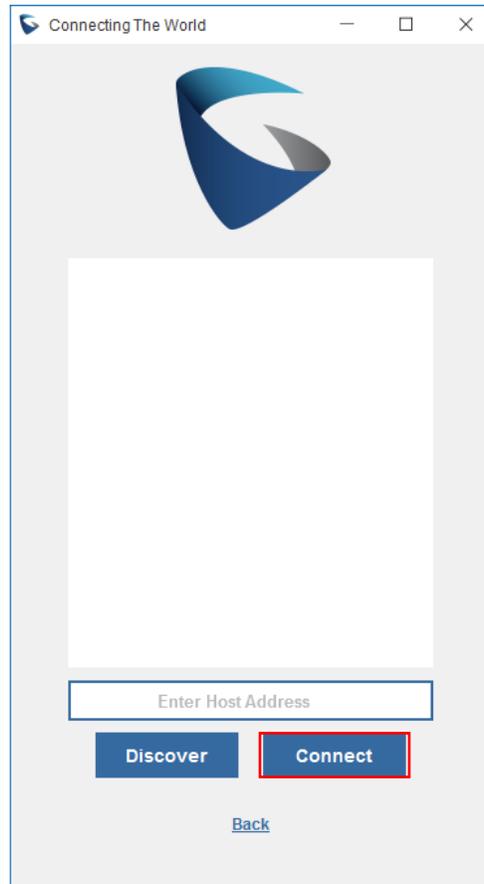
Figure 5: Direct connection

5. The host phone will display a 4-digit confirmation code (**CTI Authentication Code**) on its LCD.

   Note: CTI Authentication Code appears only for new connection and needs to be entered within 60 seconds on GS Affinity application, otherwise the CTI connection will be dropped.
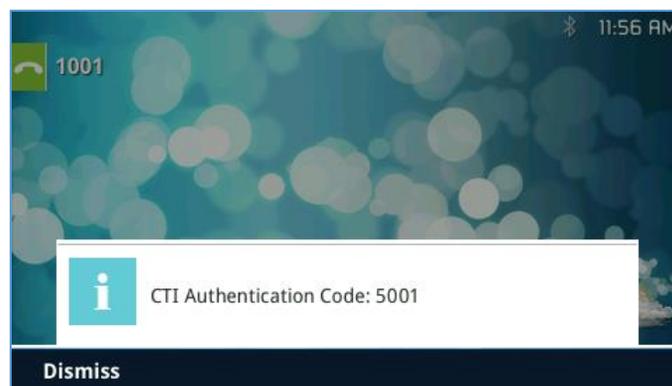
Figure 6: CTI Authentication Code on GXP2170 – Advanced Connection (Direct Connect)

6. Enter the CTI authentication code on the GS Affinity application and press **OK** button to establish the connection between GS Affinity application and the phone.
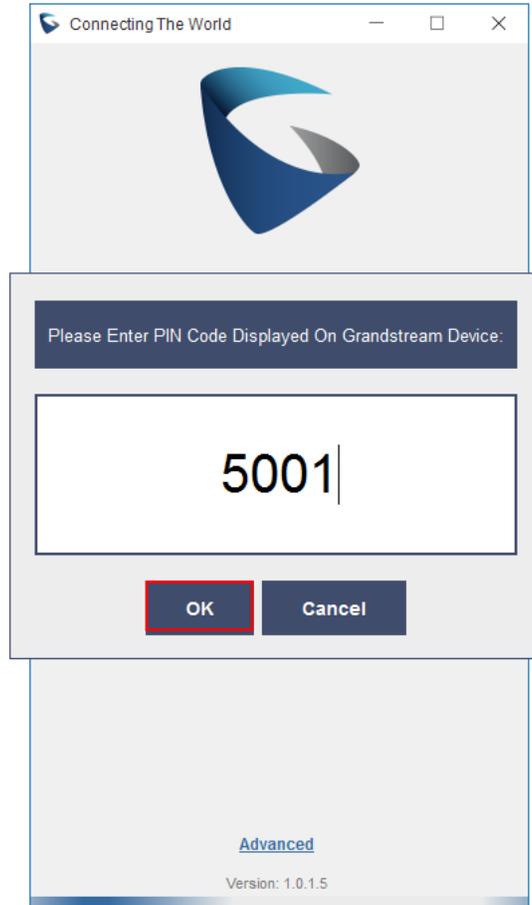
Figure 7: CTI Authentication Code on GS Affinity - Advanced Connection (Direct Connect)

Discovery Mode

The discovery method on the Grandstream Affinity application allows to discover available GXP phones with CTI functionality enabled and broadcasting their IP addresses using mDNS.

Please refer to following steps illustrating how to interact with discovered GXP phone.

1. Launch the GS Affinity application.
2. Click on **Advanced** button, to access advanced options.
3. Press **Discover** button to list available GXP phones with CTI feature enabled.
4. Select desired phone and press **Connect** button.
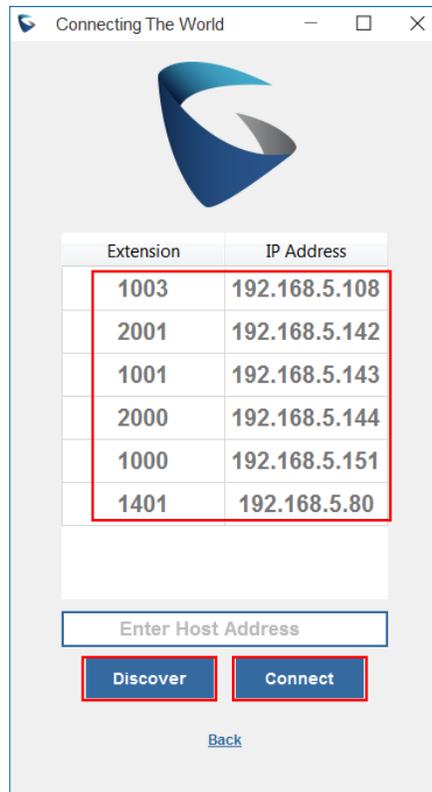
Figure 8: Discovery mode

5. The host phone will display a 4-digit confirmation code (**CTI Authentication Code**) on its LCD.

    Note: CTI Authentication Code appears only for new connection and needs to be entered within 60 seconds on GS Affinity application, otherwise the CTI connection will be dropped.
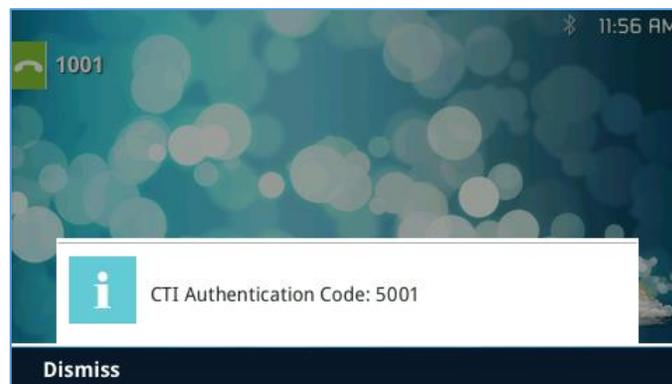
Figure 9: CTI Authentication Code on GXP2170 – Advanced Connection (Discover mode)

6. Enter the CTI authentication code on the GS Affinity application and press **OK** button to establish the connection between GS Affinity application and the phone.
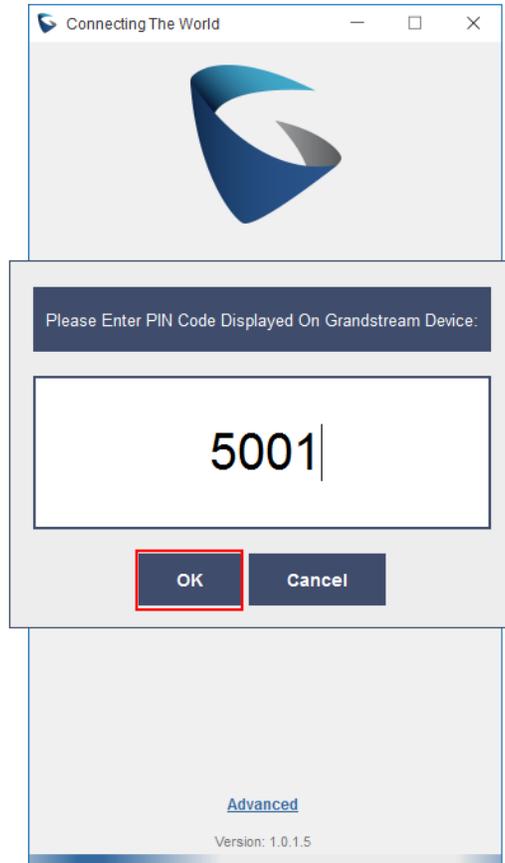
Figure 10: CTI Authentication Code on GS Affinity - Advanced Connection (Discover mode)

GS AFFINITY OVERVIEW

Home Interface

Once the user establishes a connection between the host phone and Grandstream Affinity application, the dialer page will show up as main home interface serving to control and route incoming/outgoing calls and navigate to other tabs on the navigation bar.

Refer to following GS Affinity screenshot and buttons descriptions:
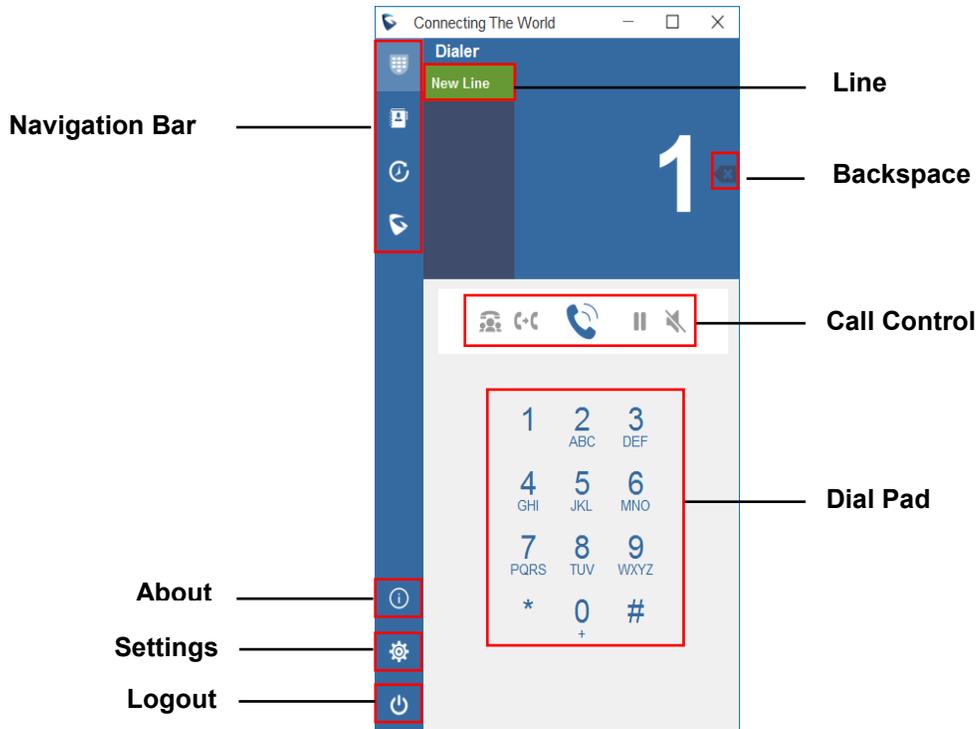
Figure 11: Dialing State Interface

Table 2: Buttons definitions

Button	Description
Dialer panel	
Line	Line button displays status of connected extension/line. Refer to [**Call Status**] for more details.
Call Control	Call control buttons allow to manage ongoing calls (Hold, Transfer, Mute…) Refer to [**Dialer Page**] for more details.
Dial Pad	12-key dial pad.

Navigation panel	
	Dialing page of the CTI application. Refer to [**Dialer Page**] for more details.
	Contacts page of the CTI application. Refer to [**Contacts Management**] for more details.
	Call history page of the CTI application. Refer to [**Call History**] for more details.
	UCM and GXP host phone settings pages for the CTI application. Refer to [**UCM and GXP Settings**] for more details.
	Status page of the CTI application to view information about. Refer to [**About Page**] for more details.
	Button to access Settings page. Refer to [**Settings Page**] for more details.
	Logout button to quit or disconnect from the CTI application. Refer to [**Logout and Quit Grandstream Affinity Application**] for more details.

Dialer Page

The dialer page allows to initiate an outgoing call using call control buttons described below:

Table 3: Icons Description

Icons	Description
	Call Button Enter destination number and press **Call Button** to initiate the call. GS Affinity will instruct connected GXP phone to initiate the call to entered destination number.
	End Call Button When pressed during an active call, the CTI application will hang up the current active line call and the call will be ended from both GXP phone and GS Affinity.
	Mute Button When pressed during an active connected call, the call/line will be muted.
	Unmute Button When pressed during an active connected call previously muted, the call will be unmuted.

Hold Button		
	When pressed during an active connected call, the call/line will be placed on hold. Can be used to toggle between hold/resume.	

Transfer Call Button	
	When pressed during an active connected call, the CTI application will enter to transfer state. Enter or select transfer target number to complete the transfer.

Conference Call Button	
	When pressed during an active connected call, the CTI application will enter the conference state. Enter or select destination numbers to join the conference.

Accept Button	
	This button appears during call transfer and conference call. If pressed, the CTI application will proceed and complete call transfer/conference process.

Cancel Button	
	This button appears during call transfer and conference call. If pressed, the CTI application will cancel/reject call transfer/conference process.

The following screenshots gives some examples for handling incoming/outgoing calls using the Grandstream Affinity application:
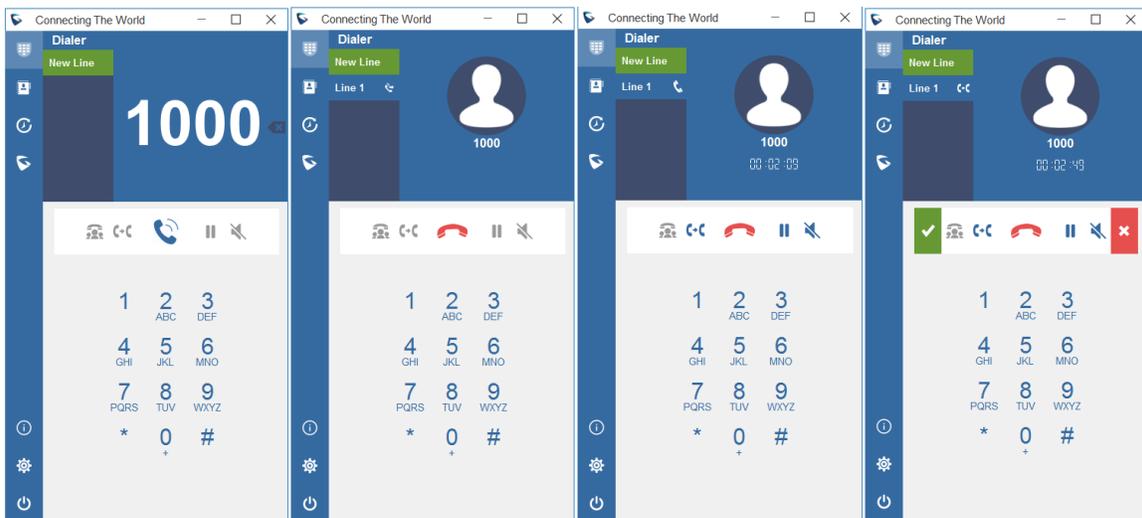

Figure 12: Call Control on GS Affinity Application

Note: After a call is established, relevant information such as the name and number of the current connected call/line will be shown on top right portion of the application. In this state, call control buttons will be available.

Call Status

The Line key displays status of connected extension/line. The following table describes call status:

Table 4: Call States description

Call States	Description
New Line	Idle - new line.
Line 1	Outgoing call initiated.
Line 1	Incoming call received.
Line 1	Ongoing call.
Line 1	Ongoing call on hold.
Line 1	Line is muted.
Line 1	Transfer initiated.
Line 1	Conference call.

Notes:

- For call transfer and conference call, users also have the option to either dial a new number or select a contact from Contacts or Call History pages.

- During the transfer and conference states, only cancel and end call buttons are valid for use; all other command buttons will be unresponsive.

Contacts Management

Contacts page on Grandstream Affinity application allows to view, add, delete, and modify existing contacts on the host phones.

The page can list all existing contacts and allow users to view each contact with his details including profile, name, work, cell, and home numbers (if available). Users can select a contact to edit, delete or call using corresponding buttons.

The users can search for contacts on the text box on top of the contacts list, as well as add a contact using the add + contact button to the right of the search text box.
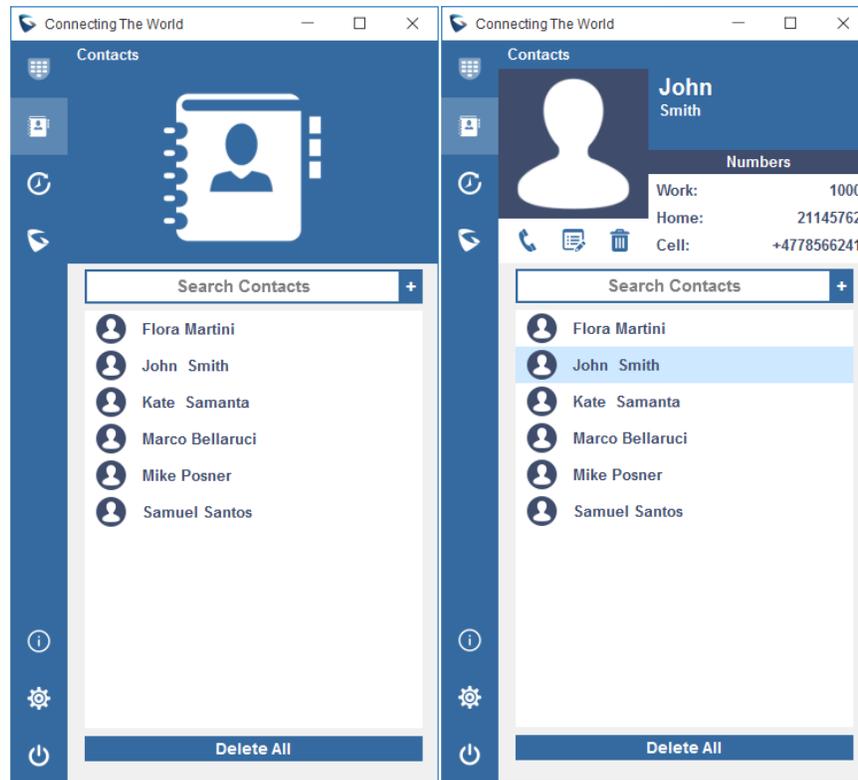
Figure 13: Contacts Page

Call History

The Grandstream Affinity application synchronizes with GXP host phone call history to display list of outgoing, incoming, and missed calls.

The list shows the name, number, date/time, call duration and call type (all, answered, dialed, missed and transferred calls) for each call. Tabs on the top of the page filter the list by each type of call.

Icon	Description
↙	Answered Calls
↗	Dialed Calls
↘	Missed Calls
→	Transferred Calls

When an entry of the list is clicked, two additional buttons show up giving the ability to add the call to the host's contacts, delete the entry from the list or calling the entry's number directly.
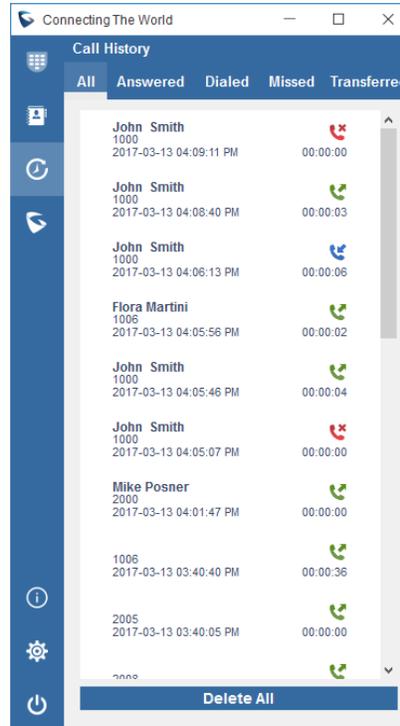
Figure 14: Call History

UCM and GXP Settings

UCM Settings and GXP Settings pages allow to configure Do Not Disturb and Call Forwarding call features either on UCM or GXP side.
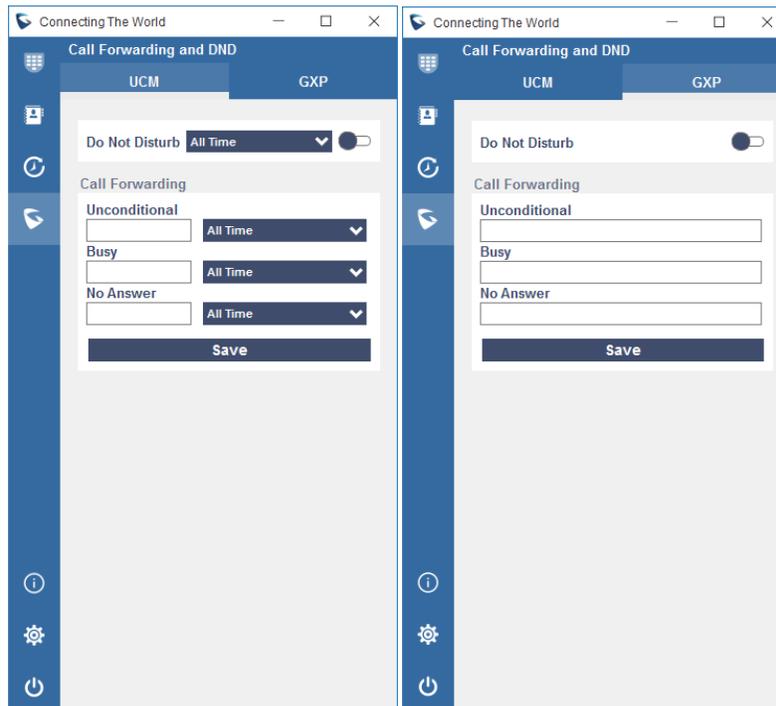

Figure 15: UCM and GXP Settings Pages

About Page

The about dialog window opens when the "**About**" button is pressed on the home interface.

The window shows general information on the host phones that the CTI application is connected to (model, IPv4 Address, MAC address, software version and hardware version), as well as information about the UCM account of the host (name, user ID, and UCM connection status) and also HTTP access info (status and port).
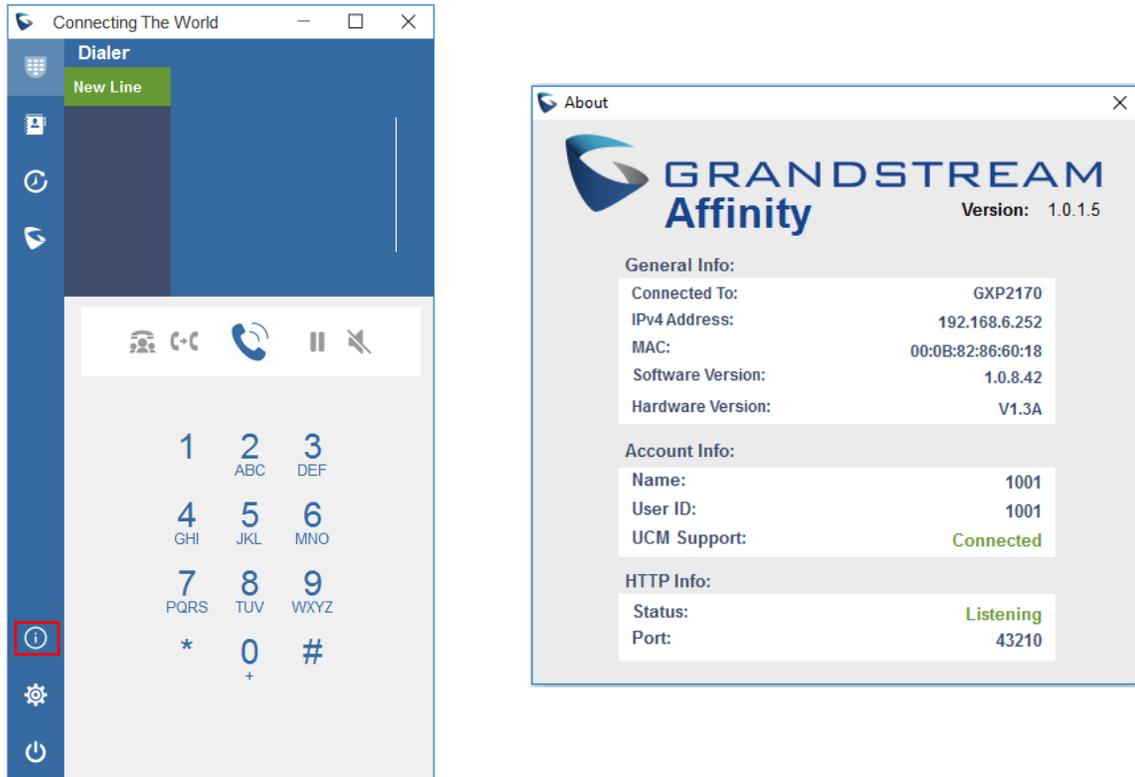

Figure 16: Grandstream Affinity About Page

Settings Page

The settings dialog window displays CTI application settings.

The settings include minimizing CTI application options, sorting options for Contacts and Call History, enabling/disabling CTI notifications and syslog configuration.
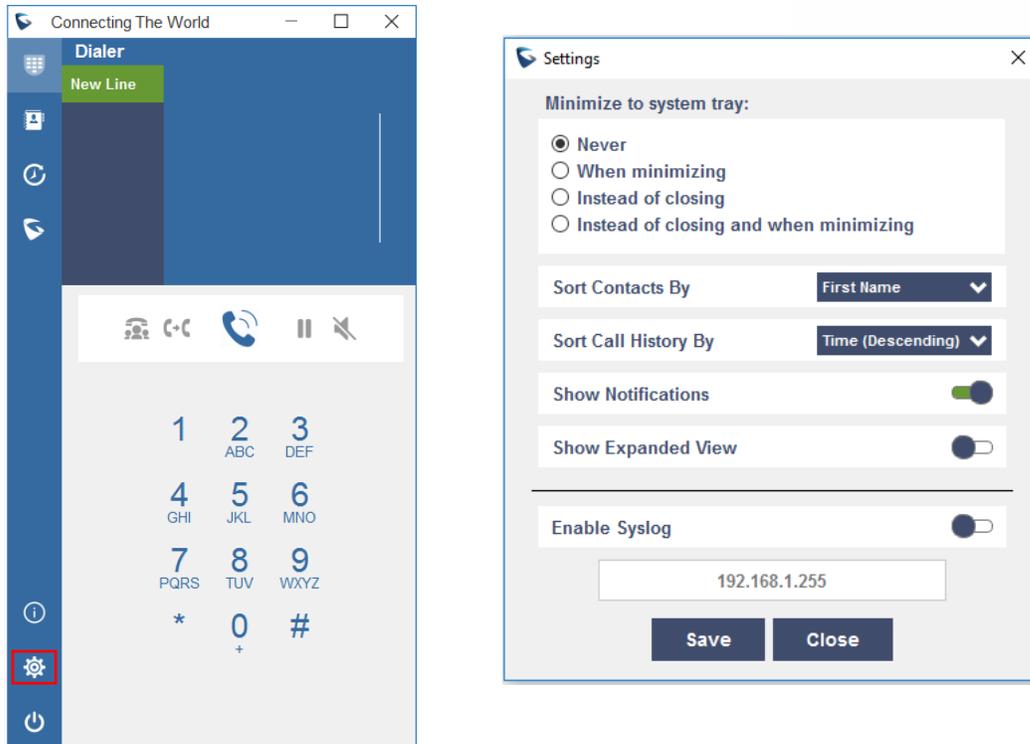
Figure 17: Grandstream Affinity Settings Page

Logout and Quit Grandstream Affinity Application

To Logout or Quit the Grandstream Affinity application, users need to press **Logout** button as displayed on the following screenshot.

Notes:

- If users press **Logout** button, it will force the Grandstream Affinity application to disconnect and close the interaction with the current connected host phone and display the simple connection interface.

- If users press **Quit** button, the Grandstream Affinity application will be closed and the interaction terminated.

- **Cancel** button will cancel pending action and allow users to return back to the home interface.
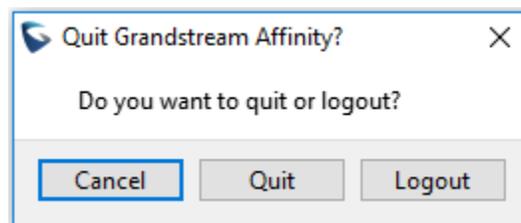
Figure 18: GS Affinity Menu Page