



# Grandstream Networks, Inc.

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## CTI Guide



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## SUPPORTED DEVICES

Following table shows Grandstream products supporting CTI commands:

Model	Supported	Firmware
<b>GXP16XX Series</b>		
<b>GXP1610</b>	Yes	1.0.3.28 or higher
<b>GXP1620/1625</b>	Yes	1.0.3.28 or higher
<b>GXP1628</b>	Yes	1.0.3.28 or higher
<b>GXP1630</b>	Yes	1.0.3.28 or higher
<b>GXP17XX Series</b>		
<b>GXP1760</b>	Yes	1.0.0.37 or higher
<b>GXP1780/1782</b>	Yes	1.0.0.37 or higher
<b>GXP21XX Series</b>		
<b>GXP2130</b>	Yes	1.0.7.25 or higher
<b>GXP2140</b>	Yes	1.0.7.25 or higher
<b>GXP2160</b>	Yes	1.0.7.25 or higher
<b>GXP2135</b>	Yes	1.0.7.25 or higher
<b>GXP2170</b>	Yes	1.0.7.25 or higher
<b>DP750/720</b>		
<b>DP750/720</b>	Yes	1.0.4.2 or higher



## INTRODUCTION

CTI (Computer-Telephony Integration) provides ability to manage phone calls from a computer including basic call operations such as making and answering calls, and advanced call operations such as call forward, conference, call hold and more.

Grandstream DP750/720, GXP16XX, GXP17XX and GXP21XX series support CTI operations and commands providing complete control over phone calls from a desktop computer. CTI commands can be integrated with a 3<sup>rd</sup> party application to control interaction between customer's phone and desk computer or can be run using a web browser on customer's computer.

This guide describes available operations and commands with examples how-to run them from a web browser.

## **BENEFITS OF CTI**

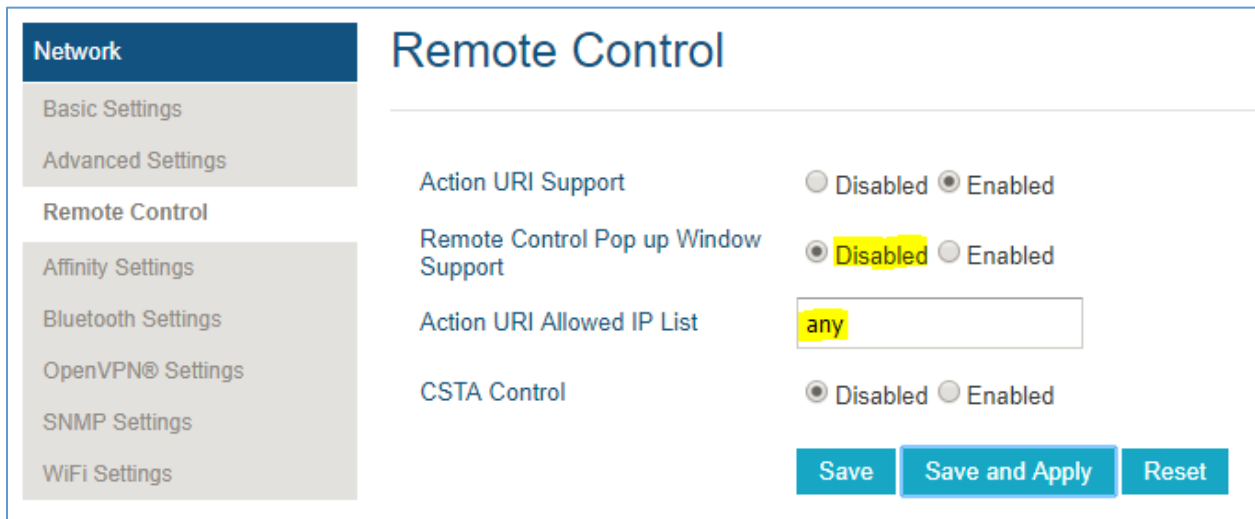
The major benefits of using Computer Telephony Integration (CTI) are the following:

- Complete control over calls (answer, hang-up, call on hold, manage “do not disturb”, call forward, conference, call transfer and 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 with possibility of automatic and pre-dial calls commonly used for telemarketing.
- Increase productivity and improve customer service.

## ENABLING CTI FEATURE

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

1. Access GXP21xx web GUI as administrator.
2. Navigate to **Network** → **Remote Control**.
3. Enable **Action URI Support** by checking "Enabled".
4. On field **Action URI Allowed IP List**, put the remote party's IP address. If the IP address is unknown, add "any".
5. Set **Remote Control Pop up Window Support** to "Disabled" to allow remote control without confirmation on the physical phone.
6. Press Save and Apply button.



<b>Network</b>	<h2>Remote Control</h2>
Basic Settings	
Advanced Settings	
<b>Remote Control</b>	
Affinity Settings	
Bluetooth Settings	
OpenVPN® Settings	
SNMP Settings	
WiFi Settings	

Action URI Support	<input type="radio"/> Disabled <input checked="" type="radio"/> Enabled
Remote Control Pop up Window Support	<input checked="" type="radio"/> Disabled <input type="radio"/> Enabled
Action URI Allowed IP List	<input type="text" value="any"/>
CSTA Control	<input checked="" type="radio"/> Disabled <input type="radio"/> Enabled

**Note:** The CTI feature is enabled by default on DP750/720, GXP17xx and GXP16xx phones.



## CTI COMMANDS FORMAT DEFINITION

### Request format

The general CTI commands request format is:

<http://Phone-IP-Address/cgi-bin/function?passcode=PASSWORD&param=value>

“*Function*” is one of CTI functions as described in next chapter (*api-get\_line\_status* for example)

“*Password*” is the phone’s admin level password

“*Param=value*” is the parameter for specific CTI function type

### Response format

#### Positive answer with no returned value

```
{"response": "success", "body": "complete"}
```

#### Negative answer

```
{"response": "error", "body": "failed"}
```

#### Positive answer with returned values

```
{"response": "success", "body": [{"line": 1, "state": "idle", "acct": "",  
"remotename": "", "remotenum": "", "active": 0}, {"line": 2, "state":  
"idle", "acct": "", "remotename": "", "remotenum": "", "active": 0},  
{"line": 3, "state": "idle", "acct": "", "remotename": "", "remotenum":  
"", "active": 0}]}
```



## TYPE OF CTI FUNCTIONS

Please refer to following table describing type of CTI functions supported:

Type	Function	Description
<b>Functions used on GXP phones only</b>		
<b>Line Status</b>	<i>api-get_line_status</i>	Retrieves line status of the phone
<b>Phone Status</b>	<i>api-get_phone_status</i>	Retrieves phone status
<b>Phone Operations</b>	<i>api-phone_operation</i>	Sends phone operations commands (hang up, answer call, reject call...)
<b>Functions used only on DP750/720</b>		
<b>Account Status</b>	<i>api-get_account_status</i>	Retrieves account status
<b>Handset Status</b>	<i>api-get_hs_status</i>	Retrieves handset status
<b>Handset Line Status</b>	<i>api-get_hs_line_status</i>	Retrieves handset line status
<b>Make Call</b>	<i>api-make_call</i>	Make a call using a specific handset
<b>Device Operations</b>	<i>api-device_operation</i>	Sends device operations commands: mute, speaker, setdnd...
<b>Functions used on all models</b>		
<b>Send Keys</b>	<i>api-send_key</i>	Sends keys functions (speaker, volume up, volume down, mute, hold, 0-9... )
<b>System Operations</b>	<i>api-sys_operation</i>	Sends system operations commands (reset, reboot...)





## CTI COMMANDS AND EXAMPLES

Following commands have been run in a web browser on computer in same phone's network. In the examples below, a GXP2135 phone is used with IP address 192.168.5.135 and admin level password set to default (passcode=admin).

### Functions used on GXP phones only

#### Line Status Function

##### General Format

The general format of CTI command to retrieve the line status is:

[http://Phone-IP-Address/cgi-bin/api-get\\_line\\_status?passcode=PASSWORD](http://Phone-IP-Address/cgi-bin/api-get_line_status?passcode=PASSWORD)

##### Example

<b>Request</b>	<a href="http://192.168.5.135/cgi-bin/api-get_line_status?passcode=admin">http://192.168.5.135/cgi-bin/api-get_line_status?passcode=admin</a>
<b>Response</b>	<pre>{"response":"success", "body": [{"line": 1, "state": "idle", "acct": "", "remotename": "", "remotenum": "", "active": 0}, {"line": 2, "state": "idle", "acct": "", "remotename": "", "remotenum": "", "active": 0}, {"line": 3, "state": "idle", "acct": "", "remotename": "", "remotenum": "", "active": 0}]}</pre>

In this example, the phone shows that only one account is available on line 1; other lines are not registered.

#### Phone Status Function

##### General Format

The general format of CTI command to retrieve phone status is:

[http://Phone-IP-Address/cgi-bin/api-get\\_phone\\_status?passcode=PASSWORD](http://Phone-IP-Address/cgi-bin/api-get_phone_status?passcode=PASSWORD)

##### Example

<b>Request</b>	<a href="http://192.168.5.135/cgi-bin/api-get_phone_status?passcode=admin">http://192.168.5.135/cgi-bin/api-get_phone_status?passcode=admin</a>
<b>Response</b>	<p><b>Phone available</b>  <pre>{"response":"success", "body": "available", "misc": "0"}</pre></p> <p><b>Phone busy</b>  <pre>{"response":"success", "body": "busy", "misc": "0"}</pre></p>



## Phone Operations Functions

### General format

The general format of CTI command to send phone operations is:

[http://Phone-IP-Address/cgi-bin/api-phone\\_operation?passcode=PASSWORD&cmd=OPERATION](http://Phone-IP-Address/cgi-bin/api-phone_operation?passcode=PASSWORD&cmd=OPERATION)

### Examples

Operation	Function	Examples
<b>endcall</b>	End established call	<a href="http://192.168.5.135/cgi-bin/api-phone_operation?passcode=admin&amp;cmd=endcall">http://192.168.5.135/cgi-bin/api-phone_operation?passcode=admin&amp;cmd=endcall</a>
<b>holdcall</b>	Put the established call on Hold	<a href="http://192.168.5.135/cgi-bin/api-phone_operation?passcode=admin&amp;cmd=holdcall">http://192.168.5.135/cgi-bin/api-phone_operation?passcode=admin&amp;cmd=holdcall</a>
<b>acceptcall</b>	Accept incoming call	<a href="http://192.168.5.135/cgi-bin/api-phone_operation?passcode=admin&amp;cmd=acceptcall">http://192.168.5.135/cgi-bin/api-phone_operation?passcode=admin&amp;cmd=acceptcall</a>
<b>rejectcall</b>	Reject incoming call	<a href="http://192.168.5.135/cgi-bin/api-phone_operation?passcode=admin&amp;cmd=rejectcall">http://192.168.5.135/cgi-bin/api-phone_operation?passcode=admin&amp;cmd=rejectcall</a>
<b>cancel</b>	Reject or cancel calls	<a href="http://192.168.5.135/cgi-bin/api-phone_operation?passcode=admin&amp;cmd=cancel">http://192.168.5.135/cgi-bin/api-phone_operation?passcode=admin&amp;cmd=cancel</a>

### Positive answer

If accepted, the command will be run instantly on the phone and below positive answer can be returned:

```
{"response": "success", "body": true}
```

### Negative answer

If not accepted, the phone will not react to it and below negative answer can be returned:

```
{"response": "error", "body": false}
```

## Functions used on DP750/720 only

### Account Status

#### General Format

The general format of CTI command to retrieve account status is:

[http://Phone-IP-Address/cgi-bin/api-get\\_account\\_status?passcode=PASSWORD&account=NUMBER](http://Phone-IP-Address/cgi-bin/api-get_account_status?passcode=PASSWORD&account=NUMBER)



## Example

<b>Request</b>	<a href="http://192.168.5.135/cgi-bin/api-get_account_status?passcode=admin&amp;account=1">http://192.168.5.135/cgi-bin/api-get_account_status?passcode=admin&amp;account=1</a>
<b>Response</b>	<p><b>Registered</b></p> <pre>{ "response": "success", "Account1": { "Registered": 1, "Profile": 1, "Active": 1, "HSMode": "HS1" } }</pre> <p><b>Not registered</b></p> <pre>{ "response": "success", "Account1": { "Registered": 0, "Profile": 1, "Active": 0, "HSMode": "HS1" } }</pre>

## Handset Status

### General Format

The general format of CTI command to retrieve handset status is:

[http://Phone-IP-Address/cgi-bin/api-get\\_hs\\_status?passcode=PASSWORD&hs=NUMBER](http://Phone-IP-Address/cgi-bin/api-get_hs_status?passcode=PASSWORD&hs=NUMBER)

### Example

<b>Request</b>	<a href="http://192.168.5.135/cgi-bin/api-get_hs_status?passcode=admin&amp;hs=1">http://192.168.5.135/cgi-bin/api-get_hs_status?passcode=admin&amp;hs=1</a>
<b>Response</b>	<p><b>Handset paired</b></p> <pre>{ "response": "success", "HS1": { "initialized": 1, "subscribed": 1, "status": "idle" } }</pre> <p><b>Handset not paired</b></p> <pre>{ "response": "success", "HS1": { "initialized": 0, "subscribed": 0, "status": "" } }</pre>

## Handset Line Status

### General Format

The general format of CTI command to retrieve handset line status is:

[http://Phone-IP-Address/cgi-bin/api-get\\_hs\\_line\\_status?passcode=PASSWORD&hs=NUMBER](http://Phone-IP-Address/cgi-bin/api-get_hs_line_status?passcode=PASSWORD&hs=NUMBER)

### Example

<b>Request</b>	<a href="http://192.168.5.135/cgi-bin/api-get_hs_line_status?passcode=admin&amp;hs=1">http://192.168.5.135/cgi-bin/api-get_hs_line_status?passcode=admin&amp;hs=1</a>
<b>Response</b>	<pre>{ "response": "success", "HS1": { "Line1": { "Status": "idle", "Account": 1, "Registered": 1, "Active": 1 }, "Line2": { "Status": "idle", "Account": 0, "Registered": 0, "Active": 0 }, "Line3": { "Status": "idle", "Account": 0, "Registered": 0, "Active": 0 }, "Line4": { "Status": "idle", "Account": 0, "Registered": 0, "Active": 0 }, "Line5": { "Status": "idle", "Account": 0, "Registered": 0, "Active": 0 }, "Line6": { "Status": "idle", "Account": 0, "Registered": 0, "Active": 0 }, "Line7": { "Status": "idle", "Account": 0, "Registered": 0, "Active": 0 } }</pre>



```
"Active": 0 }, "Line8": { "Status": "idle", "Account": 0,
"Registered": 0, "Active": 0 }, "Line9": { "Status": "idle",
"Account": 0, "Registered": 0, "Active": 0 }, "Line10": {
"Status": "idle", "Account": 0, "Registered": 0, "Active": 0 }
} }
```

## Make Call

### General Format

The general format of CTI command to initiate call is:

[http://Phone-IP-Address/cgi-bin/api-make\\_call?passcode=PASSWORD&hs=NUMBER&phonenumber=NUMBERS](http://Phone-IP-Address/cgi-bin/api-make_call?passcode=PASSWORD&hs=NUMBER&phonenumber=NUMBERS)

### Example

<b>Request</b>	<a href="http://192.168.5.135/cgi-bin/api-make_call?passcode=admin&amp;hs=1&amp;phonenumber=3501">http://192.168.5.135/cgi-bin/api-make_call?passcode=admin&amp;hs=1&amp;phonenumber=3501</a>
<b>Response</b>	{ "response": "success", "body": true }

## Device Operations Functions

### General Format

The general format of CTI command to send device operations is:

[http://Phone-IP-Address/cgi-bin/api-device\\_operation?passcode=PASSWORD&hs=NUMBER&line=NUMBER&cmd=OPERATION](http://Phone-IP-Address/cgi-bin/api-device_operation?passcode=PASSWORD&hs=NUMBER&line=NUMBER&cmd=OPERATION)

### Examples

Operation	Function	Examples
<b>endcall</b>	End established call	<a href="http://192.168.5.135/cgi-bin/api-device_operation?passcode=admin&amp;hs=1&amp;line=1&amp;cmd=endcall">http://192.168.5.135/cgi-bin/api-device_operation?passcode=admin&amp;hs=1&amp;line=1&amp;cmd=endcall</a>
<b>holdcall</b>	Put the established call on Hold	<a href="http://192.168.5.135/cgi-bin/api-device_operation?passcode=admin&amp;hs=1&amp;line=1&amp;cmd=holdcall">http://192.168.5.135/cgi-bin/api-device_operation?passcode=admin&amp;hs=1&amp;line=1&amp;cmd=holdcall</a>
<b>unholdcall</b>	Resume on-hold call	<a href="http://192.168.5.135/cgi-bin/api-device_operation?passcode=admin&amp;hs=1&amp;line=1&amp;cmd=unholdcall">http://192.168.5.135/cgi-bin/api-device_operation?passcode=admin&amp;hs=1&amp;line=1&amp;cmd=unholdcall</a>



<b>acceptcall</b>	Accept incoming call	<a href="http://192.168.5.135/cgi-bin/api-device_operation?passcode=admin&amp;hs=1&amp;line=1&amp;cmd=acceptcall">http://192.168.5.135/cgi-bin/api-device_operation?passcode=admin&amp;hs=1&amp;line=1&amp;cmd=acceptcall</a>
<b>rejectcall</b>	Reject incoming call	<a href="http://192.168.5.135/cgi-bin/api-device_operation?passcode=admin&amp;hs=1&amp;line=1&amp;cmd=rejectcall">http://192.168.5.135/cgi-bin/api-device_operation?passcode=admin&amp;hs=1&amp;line=1&amp;cmd=rejectcall</a>
<b>cancel</b>	Reject or cancel calls	<a href="http://192.168.5.135/cgi-bin/api-device_operation?passcode=admin&amp;hs=1&amp;line=1&amp;cmd=cancel">http://192.168.5.135/cgi-bin/api-device_operation?passcode=admin&amp;hs=1&amp;line=1&amp;cmd=cancel</a>
<b>For mute, speaker, setdnd and unsetdnd commands, there is no "line=x" argument</b>		
<b>mute</b>	Mute while on call	<a href="http://192.168.5.135/cgi-bin/api-device_operation?passcode=admin&amp;hs=1&amp;cmd=mute">http://192.168.5.135/cgi-bin/api-device_operation?passcode=admin&amp;hs=1&amp;cmd=mute</a>
<b>speaker</b>	Enable speaker while on call	<a href="http://192.168.5.135/cgi-bin/api-device_operation?passcode=admin&amp;hs=1&amp;cmd=speaker">http://192.168.5.135/cgi-bin/api-device_operation?passcode=admin&amp;hs=1&amp;cmd=speaker</a>
<b>setdnd</b>	Enable DND	<a href="http://192.168.5.135/cgi-bin/api-device_operation?passcode=admin&amp;hs=1&amp;cmd=setdnd">http://192.168.5.135/cgi-bin/api-device_operation?passcode=admin&amp;hs=1&amp;cmd=setdnd</a>
<b>unsetdnd</b>	Disable DND	<a href="http://192.168.5.135/cgi-bin/api-device_operation?passcode=admin&amp;hs=1&amp;cmd=unsetdnd">http://192.168.5.135/cgi-bin/api-device_operation?passcode=admin&amp;hs=1&amp;cmd=unsetdnd</a>

### Positive answer

If accepted, the command will be run instantly on the phone and below positive answer can be returned:

```
{"response": "success", "body": true}
```

### Negative answer

If not accepted, the phone will not react to it and below negative answer can be returned:

```
{"response": "error", "body": false}
```

## Functions used on all Models

### Sending Keys Functions

#### General format

- **For GXP Series**

The general format of CTI command to send keys functions is:

[http://Phone-IP-Address/cgi-bin/api-send\\_key?passcode=PASSWORD&keys=KEY](http://Phone-IP-Address/cgi-bin/api-send_key?passcode=PASSWORD&keys=KEY)



- **For DP750/720**

The general format of CTI command to send keys functions is:

[http://Phone-IP-Address/cgi-bin/api-send\\_key?passcode=PASSWORD&hs=NUMBER&keys=KEY](http://Phone-IP-Address/cgi-bin/api-send_key?passcode=PASSWORD&hs=NUMBER&keys=KEY)

**Examples**

Key	Function	Example
<b>SPEAKER</b>	Enable or Disable Speaker	<a href="http://192.168.5.135/cgi-bin/api-send_key?passcode=admin&amp;keys=SPEAKER">http://192.168.5.135/cgi-bin/api-send_key?passcode=admin&amp;keys=SPEAKER</a>
		<a href="http://192.168.5.135/cgi-bin/api-send_key?passcode=admin&amp;hs=1&amp;keys=SPEAKER">http://192.168.5.135/cgi-bin/api-send_key?passcode=admin&amp;hs=1&amp;keys=SPEAKER</a>
<b>XFER</b>	Enable Transfer	<a href="http://192.168.5.135/cgi-bin/api-send_key?passcode=admin&amp;keys=XFER">http://192.168.5.135/cgi-bin/api-send_key?passcode=admin&amp;keys=XFER</a> <b>Note:</b> This command works only during established call
<b>VUP</b>	Volume UP	<a href="http://192.168.5.135/cgi-bin/api-send_key?passcode=admin&amp;keys=VUP">http://192.168.5.135/cgi-bin/api-send_key?passcode=admin&amp;keys=VUP</a>
<b>VDOWN</b>	Volume Down	<a href="http://192.168.5.135/cgi-bin/api-send_key?passcode=admin&amp;keys=VDOWN">http://192.168.5.135/cgi-bin/api-send_key?passcode=admin&amp;keys=VDOWN</a>
<b>MUTE</b>	Enable / Disable Mute	<a href="http://192.168.5.135/cgi-bin/api-send_key?passcode=admin&amp;keys=MUTE">http://192.168.5.135/cgi-bin/api-send_key?passcode=admin&amp;keys=MUTE</a>
		<a href="http://192.168.5.135/cgi-bin/api-send_key?passcode=admin&amp;hs=1&amp;keys=MUTE">http://192.168.5.135/cgi-bin/api-send_key?passcode=admin&amp;hs=1&amp;keys=MUTE</a>
<b>HOLD</b>	Put the call on Hold	<a href="http://192.168.5.135/cgi-bin/api-send_key?passcode=admin&amp;keys=HOLD">http://192.168.5.135/cgi-bin/api-send_key?passcode=admin&amp;keys=HOLD</a> <b>Note:</b> This command works only during established call
<b>0-9,*,#</b>	Send standard keypad keys	<a href="http://192.168.5.135/cgi-bin/api-send_key?passcode=admin&amp;keys=1:0:0:0">http://192.168.5.135/cgi-bin/api-send_key?passcode=admin&amp;keys=1:0:0:0</a> <b>Note:</b> The phone will send number 1000
		<a href="http://192.168.5.135/cgi-bin/api-send_key?passcode=admin&amp;hs=1&amp;keys=1:0:0:0:HASH">http://192.168.5.135/cgi-bin/api-send_key?passcode=admin&amp;hs=1&amp;keys=1:0:0:0:HASH</a> <b>Note:</b> # key need be sent as HASH on DP750/DP720
<b>LINE[1-8]</b>	Select phone line	<a href="http://192.168.5.135/cgi-bin/api-send_key?passcode=admin&amp;keys=LINE1">http://192.168.5.135/cgi-bin/api-send_key?passcode=admin&amp;keys=LINE1</a>
<b>CONF</b>	Enable conference mode	<a href="http://192.168.5.135/cgi-bin/api-send_key?passcode=admin&amp;keys=CONF">http://192.168.5.135/cgi-bin/api-send_key?passcode=admin&amp;keys=CONF</a> <b>Note:</b> This command works only during established call
<b>VM</b>	Access to Voice mail	<a href="http://192.168.5.135/cgi-bin/api-send_key?passcode=admin&amp;keys=VM">http://192.168.5.135/cgi-bin/api-send_key?passcode=admin&amp;keys=VM</a>
<b>HEADSET</b>	Enable Headset Mode	<a href="http://192.168.5.135/cgi-bin/api-send_key?passcode=admin&amp;keys=HEADSET">http://192.168.5.135/cgi-bin/api-send_key?passcode=admin&amp;keys=HEADSET</a>



<b>DND</b>	Enable / Disable DND mode	<a href="http://192.168.5.135/cgi-bin/api-send_key?passcode=admin&amp;keys=DND">http://192.168.5.135/cgi-bin/api-send_key?passcode=admin&amp;keys=DND</a>
<b>SEND</b>	Send call	<a href="http://192.168.5.135/cgi-bin/api-send_key?passcode=admin&amp;keys=SEND">http://192.168.5.135/cgi-bin/api-send_key?passcode=admin&amp;keys=SEND</a>
<b>SOFT[1-4]</b>	Select soft keys	<a href="http://192.168.5.135/cgi-bin/api-send_key?passcode=admin&amp;keys=SOFT1">http://192.168.5.135/cgi-bin/api-send_key?passcode=admin&amp;keys=SOFT1</a>
<b>MPK[1-24]</b>	Select MPK keys	<a href="http://192.168.5.135/cgi-bin/api-send_key?passcode=admin&amp;keys=MPK1">http://192.168.5.135/cgi-bin/api-send_key?passcode=admin&amp;keys=MPK1</a>
<b>LEFT_SOFT_KEY</b>	Press left soft key	<a href="http://192.168.5.135/cgi-bin/api-send_key?passcode=admin&amp;hs=1&amp;keys=LEFT_SOFT_KEY">http://192.168.5.135/cgi-bin/api-send_key?passcode=admin&amp;hs=1&amp;keys=LEFT_SOFT_KEY</a>
<b>RIGHT_SOFT_KEY</b>	Press right soft key	<a href="http://192.168.5.135/cgi-bin/api-send_key?passcode=admin&amp;hs=1&amp;keys=RIGHT_SOFT_KEY">http://192.168.5.135/cgi-bin/api-send_key?passcode=admin&amp;hs=1&amp;keys=RIGHT_SOFT_KEY</a>
<b>STAR</b>	Press star key	<a href="http://192.168.5.135/cgi-bin/api-send_key?passcode=admin&amp;hs=1&amp;keys=STAR">http://192.168.5.135/cgi-bin/api-send_key?passcode=admin&amp;hs=1&amp;keys=STAR</a>
<b>ONHOOK</b>	Reject call	<a href="http://192.168.5.135/cgi-bin/api-send_key?passcode=admin&amp;hs=1&amp;keys=ONHOOK">http://192.168.5.135/cgi-bin/api-send_key?passcode=admin&amp;hs=1&amp;keys=ONHOOK</a>
<b>OFFHOOK</b>	Answer call	<a href="http://192.168.5.135/cgi-bin/api-send_key?passcode=admin&amp;hs=1&amp;keys=OFFHOOK">http://192.168.5.135/cgi-bin/api-send_key?passcode=admin&amp;hs=1&amp;keys=OFFHOOK</a>
<b>OK</b>	Press OK	<a href="http://192.168.5.135/cgi-bin/api-send_key?passcode=admin&amp;hs=1&amp;keys=OK">http://192.168.5.135/cgi-bin/api-send_key?passcode=admin&amp;hs=1&amp;keys=OK</a>
<b>LOCK</b>	Lock keypad	<a href="http://192.168.5.135/cgi-bin/api-send_key?passcode=admin&amp;hs=1&amp;keys=LOCK">http://192.168.5.135/cgi-bin/api-send_key?passcode=admin&amp;hs=1&amp;keys=LOCK</a>
<b>UNLOCK</b>	Unlock keypad	<a href="http://192.168.5.135/cgi-bin/api-send_key?passcode=admin&amp;hs=1&amp;keys=UNLOCK">http://192.168.5.135/cgi-bin/api-send_key?passcode=admin&amp;hs=1&amp;keys=UNLOCK</a>
<b>UP</b>	Press UP	<a href="http://192.168.5.135/cgi-bin/api-send_key?passcode=admin&amp;hs=1&amp;keys=UP">http://192.168.5.135/cgi-bin/api-send_key?passcode=admin&amp;hs=1&amp;keys=UP</a>
<b>DOWN</b>	Press DOWN	<a href="http://192.168.5.135/cgi-bin/api-send_key?passcode=admin&amp;hs=1&amp;keys=DOWN">http://192.168.5.135/cgi-bin/api-send_key?passcode=admin&amp;hs=1&amp;keys=DOWN</a>
<b>LEFT</b>	Press LEFT	<a href="http://192.168.5.135/cgi-bin/api-send_key?passcode=admin&amp;hs=1&amp;keys=LEFT">http://192.168.5.135/cgi-bin/api-send_key?passcode=admin&amp;hs=1&amp;keys=LEFT</a>
<b>RIGHT</b>	Press RIGHT	<a href="http://192.168.5.135/cgi-bin/api-send_key?passcode=admin&amp;hs=1&amp;keys=RIGHT">http://192.168.5.135/cgi-bin/api-send_key?passcode=admin&amp;hs=1&amp;keys=RIGHT</a>

### Positive answer

If accepted, the command will be run instantly on the phone and below positive answer can be returned:

```
{"response": "success", "body": "complete"}
```

### Negative answer

If not accepted, the phone will not react to it and below negative answer can be returned:

```
{"response": "error", "body": "unknown"}
```



## System Operations Functions

### General Format

The general CTI command to send phone system operations is:

[http://Phone-IP-Address/cgi-bin/api-sys\\_operation?passcode=PASSWORD&request=OPERATION](http://Phone-IP-Address/cgi-bin/api-sys_operation?passcode=PASSWORD&request=OPERATION)

### Examples

Operation	Function	Example
REBOOT	Reboot the phone	<a href="http://192.168.5.135/cgi-bin/api-sys_operation?passcode=admin&amp;request=REBOOT">http://192.168.5.135/cgi-bin/api-sys_operation?passcode=admin&amp;request=REBOOT</a>
RESET	Reset the phone to default settings	<a href="http://192.168.5.135/cgi-bin/api-sys_operation?passcode=admin&amp;request=RESET">http://192.168.5.135/cgi-bin/api-sys_operation?passcode=admin&amp;request=RESET</a>

### Positive answer

If accepted, the command will be run instantly on the phone and below positive answer can be returned:

**Reboot (all models except DP750):** {"response":"success", "body": "savereboot"}

**Reboot (DP750):** {"response":"success", "body": "directreboot"}

**Reset:** {"response":"success", "body": "reset"}

### Negative answer

If not accepted, the phone will not react to it and below negative answer can be returned:

{"response":"error", "body": "unknown"}

