

# Interop T440/T640 2.0 HFO Telecom

## HFO Telecom NGN (T440/640 SW-version 2.0.0)

Feature	
Outgoing Calls	Yes
Incoming Calls	Yes
CLIP incoming	Yes
CLIP outgoing	Yes
Call Forwarding	Yes
Call Transfer	Yes
Call Waiting	Yes
DTMF	Yes
Anonymous Call	Yes
A-number forwarding	Yes
Fax	see chart below



- [HFO Telecom NGN \(T440/640 SW-version 2.0.0\)](#)
  - [Gigaset T440/T640 PRO settings.](#)
    - [Gateway Group](#)
    - [SIP gateway](#)
    - [Inbound routes](#)
    - [Outbound routes](#)
    - [Fax support](#)

## Gigaset T440/T640 PRO settings.

For entering a new SIP trunk into the PBX, you need some steps:

1. Adding a new Gateway group
2. Adding a new SIP gateway
3. Defining the inbound routes (assignment of number to extension)
4. Defining the outbound routes

Let's assume our SIP trunk contains the following numbers:

**0891234567[0-9]**

And we choose following internal numberblock:

**67[0-9]**

And we have a '0' as line-prefix.

## Gateway Group

In the Gigaset PBX go to "Administration" - "Routes" - "Gateway groups" enter a name for the new group and click on: **Create new group**

In the Gateway group you have to define the Outbound Caller ID, the Inbound DIDs (how the number is forwarded to the Inbound routes) and the Inbound caller ID (number presentation of external caller). in addition you can permit here inbound calls in general for this gateway group.

Example of HFO SIP trunk gateway group settings.

#### Outbound caller ID

As just the last digit of the trunk number block is changing, you can select just the last digit (in brackets) and put it into the variable \$1. As the provider wants the signalling number in the format (city-code)(number), you have to enter this number into the next line (here: **0891234567\$1**, where the **\$1** represents the changing part).

For external calls, we will present e.g. **08912345678** to the provider, and he will take care about the correct representation to the called party.

#### Asserted Identity

These fields are used specially for external forwardings. Some providers need special settings in order to present the correct number at the receiving party. For HFO Telekom, you can copy the entries from the Outbound caller ID fields. Here: **ldld(ld)** and **0891234567\$1** (new screenshot will follow).

#### Inbound DIDs

For incoming calls, you can use the regular expression, generated by the setup assistant. In your case you would have to adjust the city-code and the pilot-number, according to your line-settings.

**^(?:(?:0049|49|0)?89)?12345)?(.\*\$)**

This expression cuts all possibly available country- and city-codes and the pilot-number from the incoming number and only the extension is remaining (here: **678**). This will be forwarded to the Inbound Routes.

#### Inbound caller ID

For incoming calls, we will add an additional **0** in front of the external number of the caller, in order to use the callback-feature of the phone (e.g. **0089987654321**). During the call-setup the additional **0** will be automatically removed.

## Gateways

This field will be empty when you create this Gateway group. It will show later the assigned SIP gateways.

## SIP gateway

In the Gigaset PBX go to "*Administration*" - "*Routes*" - "*SIP gateways*" enter a name for the new gateway and click on: **Create new gateway**

The SIP gateway contains all necessary data for the registration and dial command and how the number is delivered to/from the provider.

Just enter or choose the values according to your contract or NGN data you received from the provider.

The screenshot shows the Gigaset PBX administration interface. The left sidebar contains a menu with options: HOME, MENU, ADMINISTRATION (selected), and PROFILE. Below this, there are links for Users & extensions, System, Provisioning, Routes, Gateway group, SIP gateway (selected), TDM Gateway, Inbound route, Outbound route, Call forwarding, and System status. The main content area displays the 'Edit SIP gateway: HFO Trunk' form. The form has two columns. The left column contains fields for: Title (HFO Trunk), Name (gw\_1\_hfotrunk), Registrar (registrar.hfosip.de), Proxy [1] (proxy.hfosip.de/ir), User [2] (08912245670@ext.hfosip.de), Password (masked with asterisks), Allow outbound calls (ON), Register (ON), Language (de - German (de-DE)), Dial command [3] (PJSIP/(number:1)g(gateway)), Transport name (default-udp), Source of destination number (To: header), Group [4] (HFO Trunk), Port [5] (5060), NAT (yes), Redirect RTP stream (Do not reroute RTP stream (default)), Check availability (ON), and Simultaneous calls (0). The right column contains a list of numbered notes: (1) Empty for no proxy. (2) For some SIP providers, it might be necessary to use the format user@domain. (domain is then used in the From header, which equals fromdomain in Asterisk.) (3) String for the Dial() command. T440/T640 PRO will automatically replace (number) by the called number, (number:1) without the first digit and (gateway) with the internal description (e.g. gw\_1\_ami). (4) In order to use gateways, they must be assigned to a gateway group. (5) When specifying the port (standard SIP port: 5060), it will be directly used. Without a DNS lookup of the SRV record \_sip.\_udp of the domain (or server) will be performed upon dialout. More information: [Srv Resource Record](#), [Srv Resource Record \(en\)](#), [CIDR](#), [SIP-DNS-Srv-Records](#), [SIP-DNS-Srv-Records \(en\)](#), [SIP-DNS-Srv-Records \(en\)](#). (6) The priority of the codes is from left to right and top to bottom. (7) Useful settings are e.g. 0.0.0.0/0, to allow calls from all IP addresses, 192.0.2.0/24 to allow calls originating from network 192.0.2.\*, 192.168.0.0/16 to allow calls originating from network 192.168.\*, 192.168.1.1/32 to allow calls originating from IP address 192.168.1.1 etc. At the bottom of the form are 'Cancel' and 'Save' buttons.

Example of HFO SIP gateway settings 1/2.

**Gigaset**

HOME MENU ADMINISTRATION PROFILE

Users & extensions  
System  
Provisioning  
Routes  
Gateway groups  
**SIP gateways**  
TDM Gateways  
Inbound routes  
Outbound routes  
Call forwarding  
System status

**SIP gateway settings**

DTMF mode: rfc4733 - RTP meta data

From user:

From Domain: hfospip.de

T38 support: ☒ ON

Update P-Asserted-Identity (CLIP): Use P-Asserted-Identity header

Update remote party ID (CLIP): no - Deactivated (default)

Trust remote party ID: no - Deactivated (default)

Codescs [6]:  
☐ G.722 ☐ G.729 ☒ G.711a ☒ G.711u  
☐ GSM ☐ H.261 ☐ H.263  
☐ H.263+

Allowed IP subnet [7]: 0.0.0.0 / 0

**Advanced parameters**

Value
Value <input type="text"/> +

**Preview of peer in sip.conf**

```
[gw_1_hfotrunk]
type=auth
auth_type=userpass
```

Cancel Save

Example of HFO SIP gateway settings 2/2.

#### Registrar

Use here the **SIP-Server / Registrar** (as mentioned on the paper, received by HFO Telekom).

registrar.hfospip.de

#### Proxy

Enter here the **Proxy-Server**, followed by ';lr'.

proxy.hfospip.de;lr

#### User

Enter here the **Username** (Benutzername), followed by '@extrasip.de'. Extrasip.de is a registered address/realm from HFO Telecom. This is needed to properly register the trunk at the provider.

For example

0891234567@extrasip.de

#### Dial command

The dial command is the command which is used in the asterisk software. The term **{number :1}** means, that at the dialled number (e.g. **0089987654321**) the first digit is removed. If you don't use a line access code (in most cases '0' is used), you have to remove the ':1' !!!

#### Group

Select here the previously created gateway group.

#### Update remote party ID (CLIP)

To display the correct extension at external parties, you have to use the P-Asserted-Identity (PAI) setting. If this is not selected, only the head-number (e.g. **0891234567-0**) will be presented, no matter which extension is used for dialing.

#### From Domain

Enter here the **Domain/Realm** delivered by HFO Telecom

hfosip.de

### [T38 support](#)

In order to have a better fax-support for fax-machines, connected to the FXS ports, please deactivate this option. In case only T38 faxes are used in the communication, you can activate this option. Activated T38 option may lead to wrong error messages when sending faxes via machines which are connected to the FXS ports.

Underneath the configuration parameter you will see a preview of the complete sip.conf file.

## Inbound routes

In the Gigaset PBX go to *"Administration" - "Routes" - "Inbound routes"* select the correct Gateway group and press **Show**.

In addition it is advised to activate the **advanced options** by clicking it to 'ON' and then pressing **Show**.

The screenshot shows the Gigaset PBX administration interface. The sidebar menu on the left includes: HOME, MENU, ADMINISTRATION (selected), and PROFILE. Under ADMINISTRATION, there are links for Users & extensions, System, Provisioning, Routes, Gateway groups, SIP gateways, TDM Gateways, Inbound routes (selected), Outbound routes, Call forward, and System status. The main content area is titled 'Inbound routes' and shows the configuration for the 'HFO Trunk (hfo-trunk)' gateway group. The 'Advanced options' section is set to 'ON'. Below this is a table with columns: Rule, Active, Date, Weekdays, Time, Profile, Pattern, and Target. The table contains two rules: 'General' and an empty rule. The 'General' rule is active (ON) and has a pattern of '^.\*\$'. The 'Advanced options' section is set to 'ON'. The table has columns for Rule, Active, Date, Weekdays, Time, Profile, Pattern, and Target. The 'General' rule is active and has a pattern of '^.\*\$'. The 'Advanced options' section is set to 'ON'.

Example of HFO Telecom Inbound routes.

### Rule

Enter here a name for the according rule.

### Date / Weekdays / Time

With these settings you can configure a time-controlled routing to different targets.

### Pattern / Target

In the pattern you define which part of the incoming number is used to forward the call to the according extension.

In our example we receive already the correct extension from the gateway group. Therefore no further number-manipulation is necessary.

When the PBX finds an according extension it will route the call to it.

But you can add here exceptions from this rule, for example for internal fax users or waiting queues, etc.

Please have in mind the order of these rules, as the system is using **First Match!!!**

## Outbound routes

In the Gigaset PBX go to *"Administration" - "Routes" - "Outbound routes"* activate the Advanced options by clicking it to 'ON' and then pressing **Show**.

HOME
MENU
ADMINISTRATION
PROFILE

Gigaset

- Users & extensions >
- System >
- Provisioning >
- Routes >
- Gateway groups
- SIP gateways
- TDM Gateways
- Inbound routes
- Outbound routes
- Call forward
- System status >

### Outbound Routes

Advanced options ON

Rule	Active	Weekdays	Time	Pattern	Group	Gateway group	Add prefix	
General	<span style="background-color: #777; color: white; padding: 0 5px;">ON</span>	M T W T F S S ☑ ☑ ☑ ☑ ☑ ☑ ☑	00:00 to 24:00	*0	[all]	HFO Trun		⋮
	<span style="background-color: #777; color: white; padding: 0 5px;">ON</span>	M T W T F S S ☑ ☑ ☑ ☑ ☑ ☑ ☑	00:00 to 24:00		[all]	HFO Trun		+

Example of HFO Telecom Outbound routes.  
Rule

Enter here a name for the according rule.

Date / Weekdays / Time

With these settings you can configure a time-controlled routing.

Pattern

In the pattern you define how the outside line is seized. In our example all dialled numbers starting with '0' will use the Gateway group HFO Telecom.

Remark: For calling anonymous to external parties, use the CLIR-setting in the HOME screen of the user!

## Fax support

Following table shows you the current state (01.08.2016) of supported fax constellations. These results are without a guarantee. Due to different end-devices, configuration of PBX or other settings the fax transmission might fail. [More info about fax via VoIP networks can be found here.](#)

Receiving	Sending			
	Internal FXS	Internal T38-Fax	External T38-Fax	External machine-Fax
Internal FXS	---	---	OK*/**	OK*/**
Internal T38-Fax	---	---	OK**	OK**
External T38-Fax	OK*	OK**	---	---
External machine-Fax	OK*	OK**	---	---

Used devices or services:

Canon Fax-L100 (internal FXS), [www.minifax.de](http://www.minifax.de) (external SW-Fax), Triumph Adler DCC 2725 (external machine-Fax)

\* = T38 option in SIP gateway deactivated

\*\* = T38 option in SIP gateway activated