

Interop T440/T640 2.0 QSC IPFonie extended

QSC IPFonie extended (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



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Gigaset T440/T640 PRO settings.

For entering a new SIP account 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 has the following block of numbers:

089-1234567[0-9]

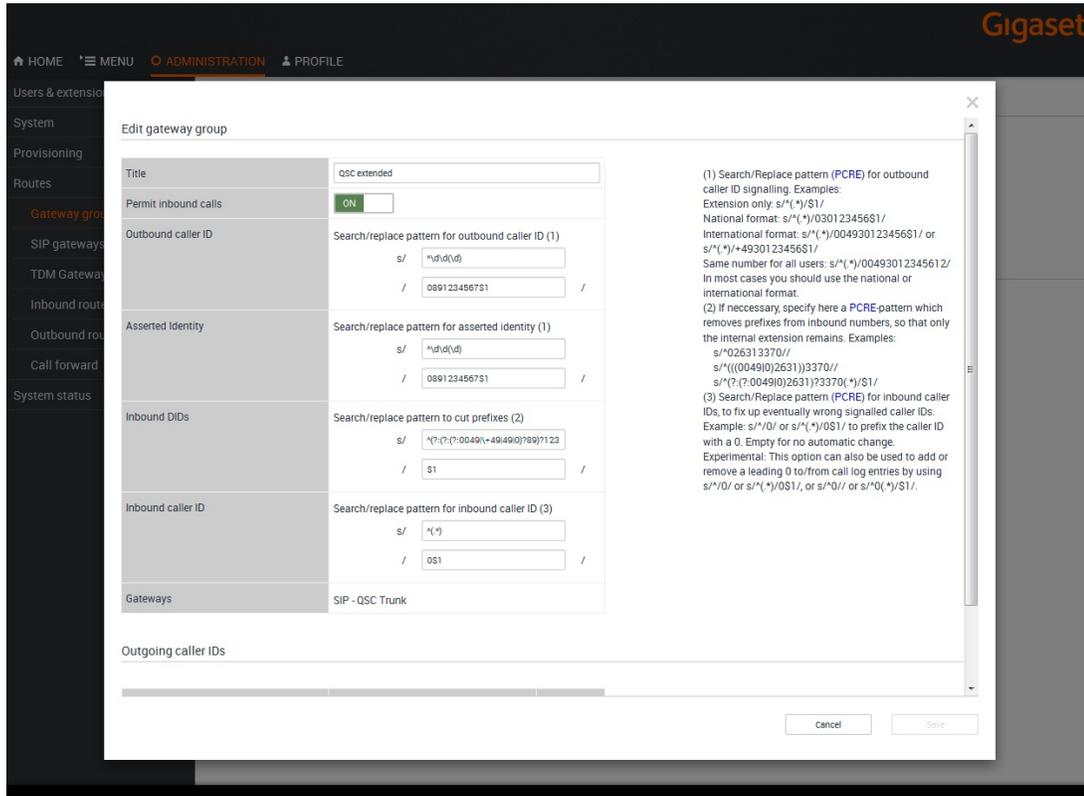
And we choose following block for internal extensions:

67[0-9], where our examples will be for the user with extension **678**.

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 Asserted Identity, 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 QSC IPFonie extended 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 with the term '^d\d(\d)'. As the provider wants the signalling number in the format +(country-code)(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 the QSC IPFonie extended, you can use the entries from the outbound caller ID fields e.g. ^d\d(\d) and 0891234567\$1

Check also the correct settings in the Placetel web-portal to forward A-numbers in the correct format.

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|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 data you received from the provider.

The screenshot shows the 'Edit SIP gateway' configuration window for 'QSC extended' in the Gigaset PBX administration interface. The window is divided into two main sections: a configuration table on the left and a list of notes on the right.

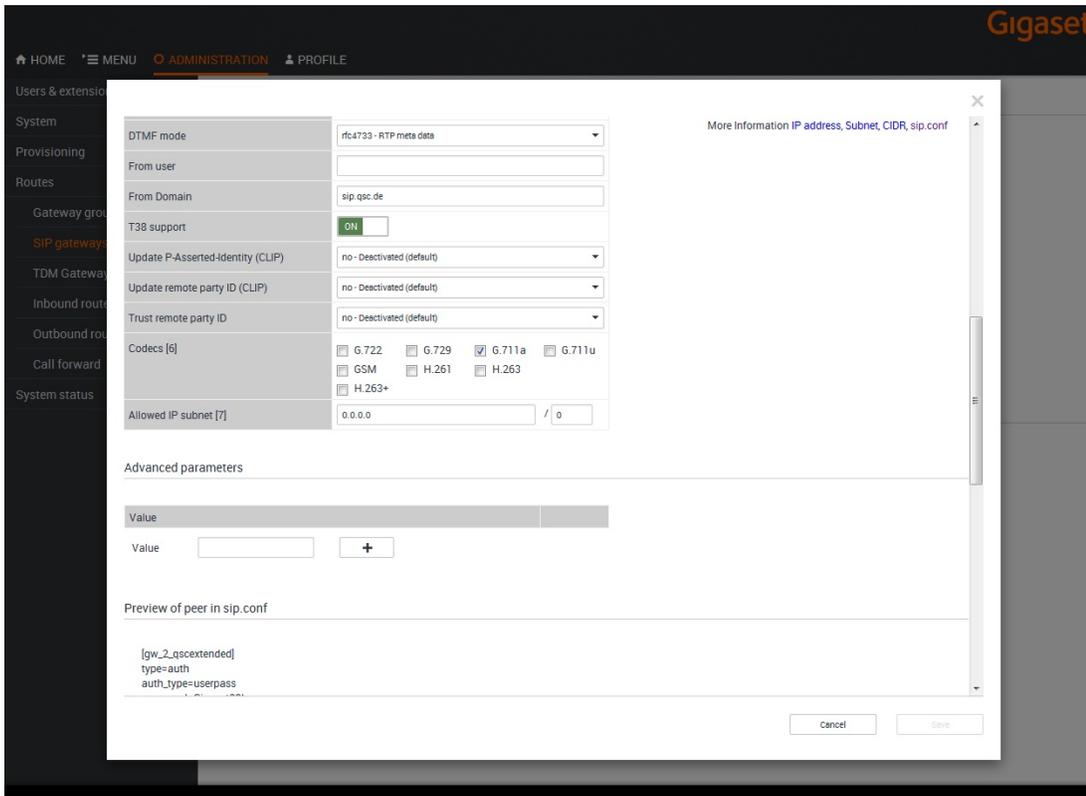
Field	Value
Title	QSC extended
Name	gw_2_qscextended
Registrar	sip.qsc.de
Proxy [1]	
User [2]	089123456@qsc.de
Password	*****
Allow outbound calls	<input checked="" type="checkbox"/>
Register	<input checked="" type="checkbox"/>
Language	de - German (de-DE)
Dial command [3]	PJSIP{prefix}{number1}@{gateway}
Transport name	default-udp
Source of destination number	To: header
Group [4]	QSC extended
Port [5]	5060
NAT	no
Redirect RTP stream	Do not reroute RTP stream (default)
Check availability	<input checked="" type="checkbox"/>
Simultaneous calls	0 for unlimited (default)

Notes on the right side of the window:

- (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, {number1} without the first digit and {gateway} with the internal description (e.g. gw_1_amt).
- (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](#), [SIP-DNS-Srv-Records](#), [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.

Buttons: Cancel, Save

Example of QSC IPFonie extended sip gateway settings 1/2.



Example of QSC IPFonie extended gateway settings 2/2. Registrar

Enter here the DNS name of the SIP-server, here:

`sip.qsc.de`

You have to use this DNS-name for registration, otherwise incoming calls will be rejected by the server.

User

Enter here the pilot-number of your account followed by "@qsc.de", here:

`089123456@qsc.de`

In case you have multiple number blocks, you have to create for each block a separate Gateway-group, SIP-gateway and incoming/outgoing routing!

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!!!`

In case you want to use the prefix-fields from the outbound rules, please add `'{prefix}'` before `{number:1}`.

Source of destination number

To derive the correct target number from the INVITE, select here

To: header

From Domain

To have the signalling correct enter here the following domain:

`sip.qsc.de`

T.38 support

In order to have the best possible fax support, you should activate this parameter. Check also the fax-interop list below. In case you encounter issues for incoming/outgoing fax, please try to deactivate the option.

Group

Select here the previously created gateway group.

Advanced Parameter

For the QSC line you don't have to enter any advanced parameter.

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 top navigation bar includes 'HOME', 'MENU', 'ADMINISTRATION', and 'PROFILE'. The left sidebar lists various settings: 'Users & extensions', 'System', 'Provisioning', 'Routes', 'Gateway groups', 'SIP gateways', 'TDM Gateways', 'Inbound routes', 'Outbound routes', 'Call forward', and 'System status'. The main content area is titled 'Inbound routes' and features a 'Gateway group' dropdown menu set to 'QSC extended (qsc-extended)'. Below this is an 'Advanced options' toggle switch set to 'ON'. A table lists the configured rules:

Rule	Active	Date	Weekdays	Time	Profile	Pattern	Target	
General	ON		M T W T F S S	00:00 to 24:00	-	^(*)	S1	[-] [+] [trash]
	ON		M T W T F S S	00:00 to 24:00	-			[+]

Example of QSC IPFonie extended 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 if you want to forward the incoming call to an internal fax 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**.

Users & extensions >
System >
Provisioning >
Routes >
Gateway groups >
SIP gateways >
TDM Gateways >
Inbound routes >

Outbound Routes

Advanced options ON

Rule	Active	Weekdays	Time	Pattern	Group	Gateway gr...	Add prefix
QSC extended	<input type="checkbox"/> ON	M T W T F S S ☑ ☑ ☑ ☑ ☑ ☑ ☑	00:00 to 24:00	*0	[all]	QSC exte	<input type="text"/>

Example of QSC IPFonie extended 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 QSC IPFonie extended.

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 (16.08.2016) 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 VolP 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 (external T38-Fax), Triumph Adler DCC 2725 (external machine-Fax)

* = T38 option in SIP gateway deactivated

** = T38 option in SIP gateway activated