
How to Configure Fermax IP DP device on the Quadro IP PBX



Revision: 1.0

Abstract: This document describes how to configure Quadro IP PBX with the Fermax Audio and Video Door Entry IP DP 1CP201 device (cityline series), hereafter referred as Fermax IP DP device.

Document Revision History

Revision	Date	Description	Valid for SW	Valid for models
1.0	27-Jul-11	Initial release	5.2.x	Quadro IP PBXs

Table of Contents:

- 1 Introduction..... 4**
- 2 Requirements and Preparations 4**
- 3 Configuration 4**
 - 3.1 Configuring the Quadro IP PBX..... 5
 - 3.2 Fermax IP DP Device Configuration as IP Line of Quadro IP PBX... 7
- 4 IP Video Phone configuration notice 11**
- 5 References 11**

1 Introduction

Quadro IP PBXs provide the option of using SIP phones/devices along with standard analogue phones. SIP phones/devices are connected to any network interface of Quadro via Ethernet and serve as additional extensions similar to onboard FXS extensions. The Quadro can be configured to serve IP phones connected to either LAN or WAN interfaces (see Figure 1, 2). Some products like Quadro6L and QuadroM32x are configured to have IP phones/devices connected to WAN interface by default.

To allow SIP phones/devices to function as Quadro extensions, both the SIP phones/devices and the Quadro should be appropriately configured.

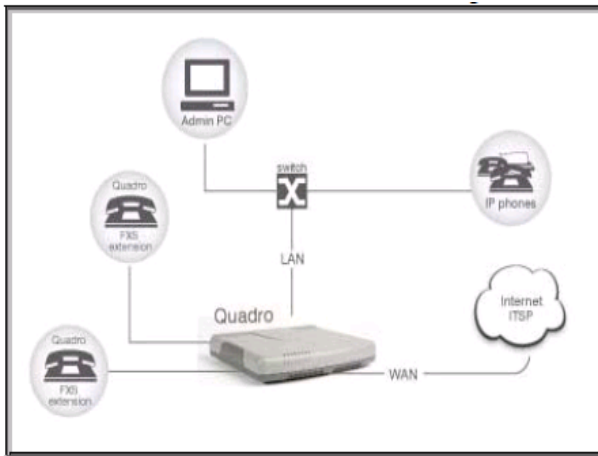


Figure 1: IP Phone connected to the Quadro LAN

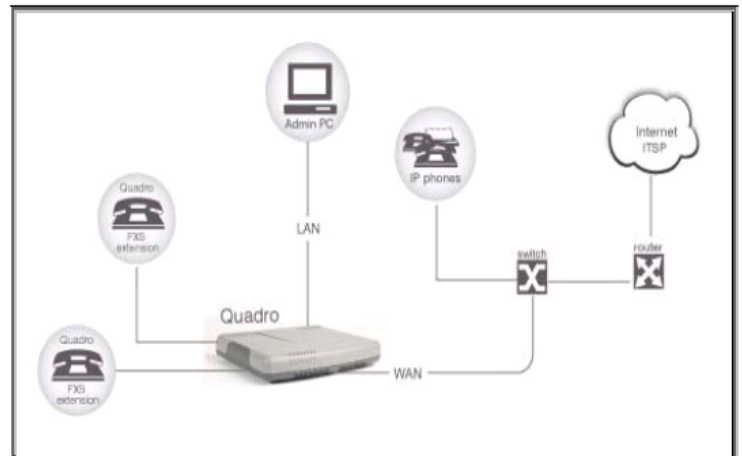


Figure 2: IP Phone connected to the Quadro WAN

This document describes how to configure Fermax IP DP device connected to the Quadro LAN or WAN.

2 Requirements and Preparations

- The Quadro IP PBX is connected to the network and all network settings are correctly configured.
- Fermax IP DP device is located in the network, available through the interface which is selected as "Network Interface" on IP Line Settings page and powered up.
- SW version 5.2.x or higher running on the Quadro IP PBX.
- Valid for Fermax IP DP device VoIP version: 1.53, UDV version: 3.5 and higher.

3 Configuration

In general there are two ways to configure Quadro with Fermax IP DP device:

1. Register device as IP Line of Quadro IP PBX. This kind of configuration is described in Section [3.1](#) and Section [3.2](#).
2. Configure Fermax IP DP device as standalone device, and configure routing rules on Quadro IP PBX to forward calls to the device. This kind of configuration is not described in current manual.

3.1 Configuring the Quadro IP PBX

To configure the Quadro, login to the Quadro Web Management from your PC and configure the IP Line that will be used for the Fermax IP DP device to register to the Quadro:

1. Log into the Quadro as an administrator and access **Telephony->Line Settings->IP Line Settings** page.
2. From the **Attached Extension** column, choose an extension to be assigned to the SIP device and click on the corresponding IP line link (see Figure 3).

Line Settings

Onboard Line Settings **IP Line Settings**

Enable PnP for IP lines

Enable firmware version control

Configure IP phones from: LAN

Phones Default Template: systemdefault

[Manage IP Phones Templates](#)

[Upload IP Phones Logo](#)

[FXS Gateway Management](#)

Available IP Lines	Attached Extension	Type	Details
IP Line 1	103	SIP	UserName: locext103, Model: Epygi QuadroFXS 16, 00:f3:a0:02:60:01, Template: systemdefault, Advanced Web Restart
IP Line 2	104	SIP	UserName: locext104, Model: Snom 360, 00:04:13:23:28:D5, Template: systemdefault Advanced
IP Line 3	105	SIP	UserName: locext105, Model: Other
IP Line 4	106	SIP	UserName: locext106, Model: Epygi QuadroFXS 16, 00:f3:a0:02:60:01, Template: systemdefault, Advanced Web Restart
IP Line 5	107	SIP	UserName: locext107, Model: Epygi QuadroFXS 16, 00:f3:a0:02:60:01, Template: systemdefault, Advanced Web Restart

Save Back Help

Copyright (C) 2003-2010 Epygi Technologies, Ltd. All rights reserved.

Figure 3

3. Configure the IP line as follows:

- Select the **SIP Phone** radio button (see Figure 4).
- Select **Other** from the **Phone Model** drop down list.
- Specify the number for simultaneous calls – the total number of active and held calls, in the **Line Appearances** text box. Set this field to 2, thus only 2 active call will be possible to have on the phone. Making or accepting a third call will not be allowed by Quadro (please note that having bigger number of simultaneous calls to camera can overload it).
- Specify **Username** and **Password** fields.

Please Note: The same **Username** and **Password** should be specified when configuring GXV 36xx device.

- Click **Save** to submit the changes.

Main System Users Conferences Telephony Internet Uplink Network

IP Line Settings - IP Line 5

Inactive
 SIP Phone

Phone Model: Other

MAC Address: : : : : :

Line Appearance: 2

Username: locext107

Password: ***** Choose Generated Password

Transport: UDP

Use Session Timer

Use template: <-- use default -->

Enable Hot Desking Capability

Hot Desking Automatic Logout:


<input checked="" type="radio"/>	Never
<input type="radio"/>	After 0 hour(s) 0 min
<input type="radio"/>	At 0 : 0

Save Back

Figure 4

Please Note: IP lines table lists only the extensions attached to the IP lines. If the extension is not listed on this page, go to **Users ->Extensions Settings** page and attach an IP line to the extension by editing the corresponding extension settings (see Figure 5).

Main System Users Conferences Telephony Internet Uplink Network



Extensions Management - Edit Entry

General Settings

[SIP Settings](#)
[SIP Advanced Settings](#)
[Remote Settings](#)
[Call Queue Settings](#)
[Voice Mailbox Settings](#)
[Licensing](#)

[Go To User Settings](#)
[Go To Line Settings](#)
[Go To Codec Settings](#)

General Settings - 102

Display Name / Subject: User 1

Password: ***** Choose Generated Password

Confirm Password: *****

Attached Line: Line 2

Use Kickback
 Allow Call Relay
 GUI Login Allowed
 3pcc/Click2Dial Login Allowed
 Show on Public Directory

Percentage of Total Memory: 5 %

Allow other users to Barge In to this extension
[Edit Barge In Access List](#)

Save Back Help

Please check your pending events!
Copyright (C) 2003-2011 Epygi Technologies, Ltd. All rights reserved.

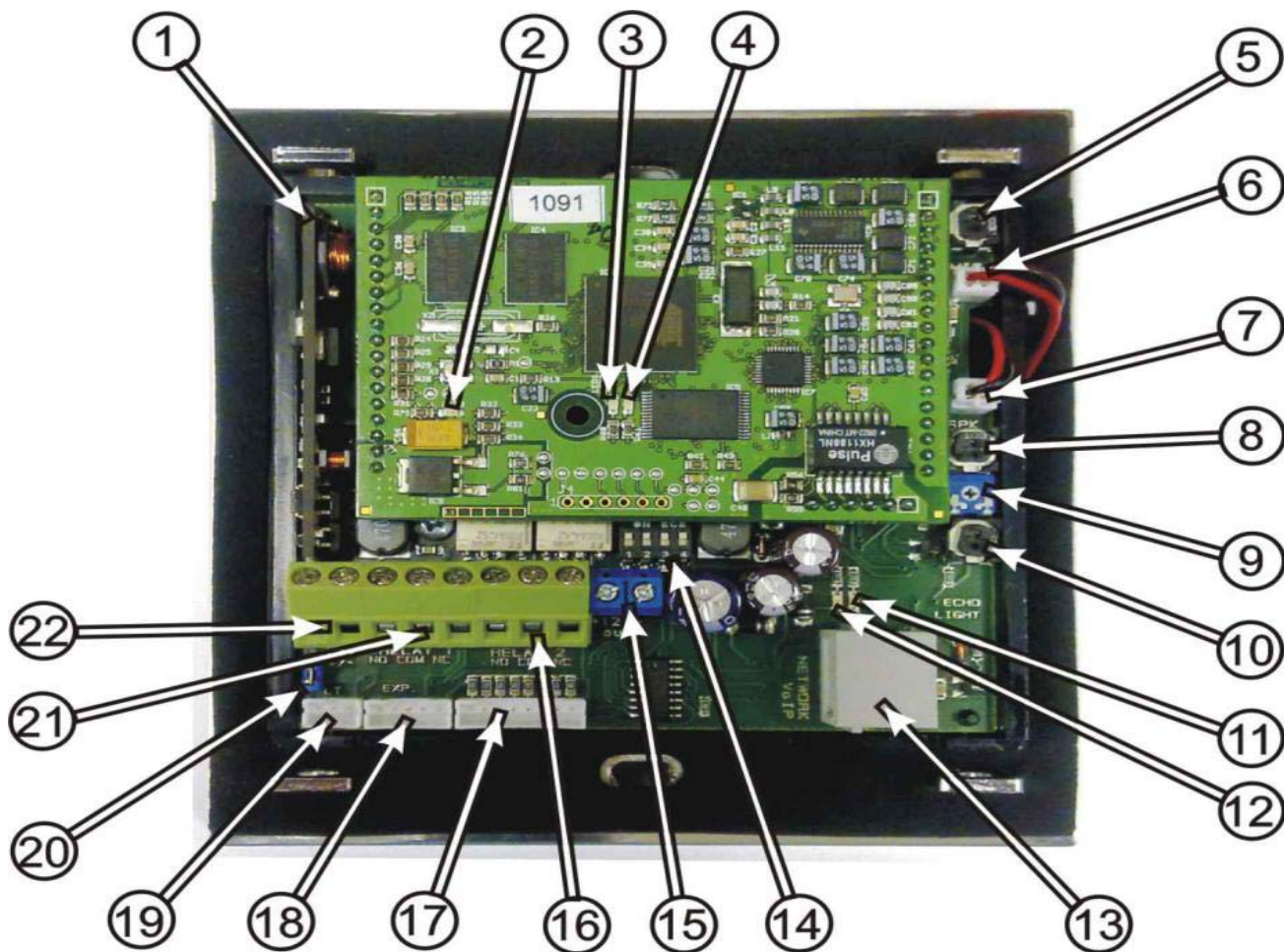
Figure 5

To enable video, user should go to "Go To Codec Settings" link and enable H263 codec from that page.

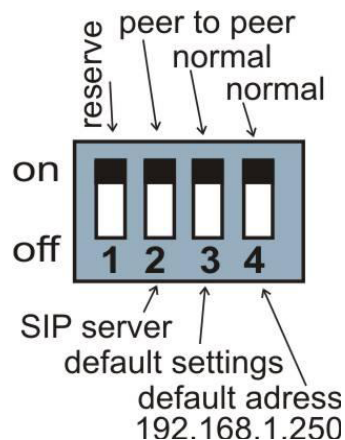
3.2 Fermax IP DP Device Configuration as IP Line of Quadro IP PBX

To configure Fermax IP DP device as IP Line of Quadro IP PBX, one should change position of "DIP Switch" number 2 (located at the back of the device).

DIP switch are shown at **number 14** on the picture below:



DIP switch N 2 should be switched down to "SIP Server":



- Log in to Fermax IP DP device using default 192.168.1.250 IP address (default user name "admin", default password "1234").
- Click on "**Network Settings**" link and change IP address to the IP address in Quadro's WAN or LAN subnet (depending on the way of IP phones configured on the Quadro, either on LAN or on WAN, please see Quadro's configuration). Or set up DHCP based IP address, if you are sure that DHCP provided address will be in the same subnet as Quadro's WAN or LAN. Change default gateway as deemed necessary. You can use Quadro's IP address as default gateway and as DNS also. Press "**save and restart**" – device will be rebooted and you will need to log in again to device with new IP address.

FERMAX
Audio and Video Door Entry Systems
Day mode

Menu:

- Network setting
- Basic parameters
- SIP parameters
- Setting audio
- Setting video
- Relays
- Time parameters
- Memory numbers
- User interface
- Service
- Video
- Help

Language:

english

Network setting:

Display name:

Setup via DHCP:

DHCP client ID:

IP address:

Network mask:

Default gateway:

Primary DNS server:

Secondary DNS server:

Figure 6

- Next step will be to click on "**SIP parameters**" link (see Figure 7).

FERMAX
Audio and Video Door Entry Systems

Day mode

Menu:

- Network setting
- Basic parameters
- SIP parameters
- Setting audio
- Setting video
- Relays
- Time parameters
- Memory numbers
- User interface
- Service
- Video
- Help

Language:

english

SIP parameters:

SIP proxy server Address: 172.20.0.116
Port: 35062

SIP registrar server Address: 172.20.0.116
Port: 35062

Account module Name: locext107
Password:
Auth. Id: locext107
Expiration [sec]: 600
Registration successful

Use (180 Ringing):
Use (183 Session progress):
Enable Simmetric RTP:
Send DTMF as SIP INFO:
Send DTMF according to RFC2833:

Figure 7

- Set up “**SIP proxy server**” -> “**Address**” to the IP address of Quadro’s interface used for phones configuration.
- Set up “**SIP proxy server**” -> “**Port**” to the SIP UDP port of Quadro IP PBX (specified in the **UDP Port** field of Quadro IP PBX in the **Telephony->SIP Settings** page).
- Set the same settings for “SIP registrar server” Address and Port.
- Set “**Account Module**” **Name** and **Auth ID** fields to the **Username** entered in “IP Line Settings” page of Quadro IP PBX.
- Set up “**Account Module**” **Password** to the **Password** entered in “IP Line Settings” page of Quadro IP PBX.
- Press “**save changes**” button. After a while you should see “Registration successful” status as on the picture above.

Making video call to the extension attached to the Fermax IP line will result in automatic off hook of the device and user can see and talk (if user has video phone) to the person at Fermax IP DP device.

- The next step is to configure the Fermax IP DP device for making calls to Quadro IP PBX, by using 2 pushbuttons locate on device (**number 4** in the Figure 8):

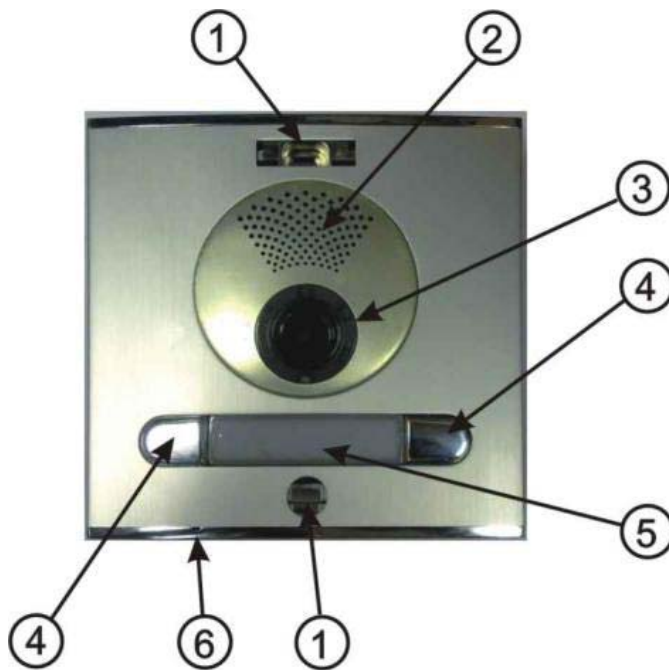



Figure 8

- Press **“memory number”** link on the left part of WEB GUI of the phone (see Figure 9):



Audio and Video Door Entry Systems

Day mode

Menu:

- Network setting
- Basic parameters
- SIP parameters
- Setting audio
- Setting video
- Relays
- Time parameters
- Memory numbers
- User interface
- Service
- Video
- Help

Language:

english ▼ Set

Memory numbers:

	Group DAY	Group NIGHT
Button 1:	<input type="text" value="55"/>	<input type="text"/>
Button 2:	<input type="text" value="811021"/>	<input type="text"/>
Button 3:	<input type="text"/>	<input type="text"/>
Button 4:	<input type="text"/>	<input type="text"/>
Button 5:	<input type="text"/>	<input type="text"/>
Button 6:	<input type="text"/>	<input type="text"/>
Button 7:	<input type="text"/>	<input type="text"/>
Button 8:	<input type="text"/>	<input type="text"/>
Button 9:	<input type="text"/>	<input type="text"/>
Button 10:	<input type="text"/>	<input type="text"/>
Button 11:	<input type="text"/>	<input type="text"/>
Button 12:	<input type="text"/>	<input type="text"/>

Figure 9

On Button 1, Button 2 user can set up any extension number or any routing rule number and press **“save changes”** button. Pressing pushbutton will result in call to corresponding numbers, and upon answered video call will be established.

4 IP Video Phone configuration notice

Video phone making call to Fermax IP DP device, should support H263 video codec. If that video IP phone is extension of Quadro IP PBX, H263 video codec should be enabled on that video phone's codecs list (see Figure 10).

Main System Users Conferences Telephony Internet Uplink Network		
Extension 117 Codecs		
Enable/Disable Select all Inverse Selection Move Up Move Down Make preferred		
Audio Codecs		State
<input type="checkbox"/> G.711u (PCM audio coding standard, 8 kHz sample rate, 8 bits, 64 kbit/s data rate) (preferred)		Enabled
<input type="checkbox"/> G.711a (PCM audio coding standard, 8 kHz sample rate, 8 bits, 64 kbit/s data rate)		Enabled
<input type="checkbox"/> G.729a (CS-ACELP speech coding at 8 kbit/s rate)		Enabled
<input type="checkbox"/> G.726-16 (ADPCM speech coding at 16 kbit/s rate)		Disabled
<input type="checkbox"/> G.726-24 (ADPCM speech coding at 24 kbit/s rate)		Disabled
<input type="checkbox"/> G.726-32 (ADPCM speech coding at 32 kbit/s rate)		Disabled
<input type="checkbox"/> G.726-40 (ADPCM speech coding at 40 kbit/s rate)		Disabled
<input type="checkbox"/> iLBC (Internet Low Bit Rate Coder at 13,33 kbit/s rate)		Disabled
<input type="checkbox"/> G.722 (HD audio coding at 48-64 kbit/s data rate, 16 kHz sample rate)		Disabled
<input type="checkbox"/> G.722.1 (HD audio coding at 24-32 kbit/s data rate, 16 kHz sample rate)		Disabled
<input type="checkbox"/> TDVC (Time Domain Voicing Cutoff at 1,95 kbit/s rate)		Disabled
Video Codecs		State
<input type="checkbox"/> H.264 (Advanced video coding for low bit rate communication) (preferred)		Enabled
<input type="checkbox"/> H.263 (Video coding for low bit rate communication)		Enabled

Figure 10

Below is the list of Video IP phones that are tested to use for Video Conferencing:

- Polycom VVX1500
- Grandstream GXV3140
- Grandstream GXV 3175
- Yealink VP2009

5 References

The following documents can be helpful for further configuration of the Quadro IP PBX. They can be downloaded from Epygi's WEB portal at www.epygi.com

- Quadro Manual II - Administrators Guide

THIS DOCUMENT IS PROVIDED TO YOU FOR INFORMATIONAL PURPOSES ONLY. The information furnished in this document, believed by Epygi Technologies to be accurate as of the date of publication, is subject to change without notice. Epygi Technologies assumes no responsibility for any errors or omissions in this document and shall have no obligation to you as a result of having made this document available to you or based upon the information it contains.

Epygi is a registered trademark of Epygi Technologies, Ltd. All other products and services are the registered trademarks of their respective holders.