

Spectrum Enterprise SIP Trunking Service Epygi QX50/200/2000/M8L R6.1.2 IP PBX Configuration Guide

About Spectrum Enterprise:

Spectrum Enterprise is a division of Charter Communications following a merger with Time Warner Cable and acquisition of Bright House Networks. Spectrum Enterprise is a national provider of scalable, fiber technology solutions. The Spectrum Enterprise portfolio includes networking and managed services solutions, including Internet access, Ethernet and Managed Network Services, Voice, TV and Cloud solutions. Our industry-leading team of experts works closely with clients to achieve greater business success.

About this document:

Spectrum Enterprise assures IP PBX compatibility by conducting interoperability testing to ensure any potential compatibility issues have been resolved prior to installation. Please review the IP PBX configuration instructions in this guide prior to your installation date.

Be advised that this document may contain references to Charter or Charter Business. All references to Charter should be read as Spectrum Enterprise.

Thank you,

**Spectrum Enterprise** 

# Epygi QX50/200/2000/M8L R6.1.2 IP PBX Configuration Guide

# **1** Introduction

This document describes how to configure the Epygi QX50/200/2000 and M8L IP PBX to inter-operate with the Charter network. It does not provide any information for provisioning, configuring or using the features of the AsteriskNow . Please refer to the documentation provided with the IP PBX or contact the vendor.

# 2 Configuration

## 2.1 SIP Trunk Setup

To setup the SIP trunk, follow the step-by-step procedure.

Step	Action	Result
1	Navigate to Telephony	
2	Click the VoIP Carrier tab	VOIP Carrier Wizard opens
3	Under Select VOIP Carrier at VOIP Carrier: Select Manual	
4	Description: Enter <b>Charter</b>	
5	Click Next Button	VOIP Carrier Settings open
6	Go to the next table	

#### **VOIP Wizard-VOIP Carrier**

6	epygi								✓Pending Events	Logged In As: Administrator (admin)	Log Out
	QX50	Overview	VoIP Carrier	Call Routing	Call Recording	NAT Traversal	RTP	SIP	Advanced		
8	Dashboard Setup	VoIP Ca	arrier Wiz	ard							Help 👻
<i>三</i> 市・ し	Extensions Interfaces Telephony	Select VolF	<sup>o</sup> Carrier								
•	Firewall Network	VolP Ca Descrip	rrier: Manual tion: Charter	•							
1º	Maintenance										
				Previous					Next		

Step	Action	Result
7	Under VOIP Carrier Settings	
	Account Name:	
	Enter the Trunk DID number	
8	SIP Server:	
	Enter the SBC LAN IP	
9	SIP Server Port:	
	Enter 5060	
10	Go to the next table	

#### **VOIP Wizard-VOIP Carrier Settings**

6	epygi									✓Pending Events	Logged in As: Administrator (admin)	C) Log Out
	QX50	Overview	VolP Carrier	Call Routing	Call Recording	NAT Traversal	RTP	SIP	Advanced			
	Dashboard Setup Extensions	VolP Ca	rrier Wiz	zard								Help 🔹
市しの	Interfaces Telephony Firewall	VolP Carrier	r Settings									
0	Network	VolP Car	rrier Common S	Settings		VolP Car	rier Advan	ced Setti	ings			
4	Status Maintenance	Account Passwo Confirm Passwo	tName: 30 rd: •	038356006		Use Authentii Name:	RTP Proxy cation Use d Keep-aliv	er ve Messa	ges to Proxy	1		
		SIP Sen	ver: 10 ver Port: 50	0.70.58.3		Timeo Outboun	d Proxy		se	c		^

Step	Action	Result
11	Under Outbound Proxy	
	Host Address:	
	Enter the SBC LAN IP	
12	Port:	
	Enter 5060	
13	Click Next button	VOIP Carrier Access Code opens
14	Go to the next table	

**VOIP Wizard-Outbound Proxy Settings** 

	Outbound Proxy	
	Host Address: 10.70.58.3	
	Port 5060	
	Secondary SIP Server	
	Host	
	Address.	
	Continued Draw for Serveday SID Server	
	Host	
	Address:	
	Port	
		^
Previous	Next	

Step	Action	Result
15	Under VOIP Carrier Wizard	
	Access Code:	
	Click By pattern:	
16	Enter 9*	
17	Click Next button	VOIP Carrier Summary opens
18	Go to the next table	

#### VOIP Wizard-VOIP Carrier Access Code

	Overview VolP Carrier	Call Routing	Call Recording	NAT Traversal	RTP SIP	Advanced	
Dashboard							
Setup	VoIP Carrier W	izard					
Extensions							
Interfaces	VoIP Carrier Access Co	de					
Telephony							
Firewall	Access code:						
Network		<ul> <li>By prefix:</li> </ul>					
Status		By pattern:	9*				
maintenance							
	Emergency Code: *						
	Route Incoming Calls	00 -					
	Failover to PSTN						

Step	Action	Result
19	At the VOIP Carrier Summary	
	Verify the details of the summary	

20	If the summary details is correct	
	Click the Finish button	
	Then go to Step 22.	
21	If the summary details are not correct	
	Click the Previous button	
	to return to the form,	
22	Procedure completed	

#### **VOIP Wizard-VOIP Carrier Summary**

IP Carrier Wizard						
P Carrier Summary						
P Carrier Summary						
P Carrier Summary						
VolP Carrier:	Manual					
Description:	Charter					
VolP Carrier Common Settings						
Account Name:	3038356006					
SIP Server:	10.70.58.3					
SIP Server Port	5060					
VolP Carrier Advanced Settings						
Use RTP Proxy:	Feo					
Authentication User Name:						
Send Keep-alive Messages to Pr	roxy: No					
Outbound Proxy:	10.70.58.3.5060					
Voir Carrier Access Code						
Emannency Code:						
Route Incomina Calls to:	00					
Failmar to PSTR	No					
	Description: Well Carrier Common Settings Account Name: Sill Server: Sill Server: Sill Server: Vall Carrier Alvanced Settings Use RTP Proxip: Alvehedication User Name: Sete Kenp alves Messages to P Octionent Proxip: Well Carrier Access Code Access Code: Envergency Code Novel Incoming Calls In: Falover to PS110:	Description:         Description:           ADPC-antract Contensis Settings:         30330000           SIP Secure Prot:         10738.3           SIP Secure Prot:         1090           SIP Secure Prot:         1090           SIP Secure Prot:         100           SIP Secure Prot:         10           ADM-Detailed Settings:         10           Admetication Universities:         100           Secure Admetisties Settings:         100           ADM-Canter Admetistic Settings:         100           ADM Canter Admetistic Settings:         100           ADM Canter Admetistic Settings:         100           Admetistic Settings:         100           Admetistic Settings:         100           Admetistic Setting:         100           Admetistic Setting:         100           Fallware Ed SETE:         100	Description         Ontaria           ADPC-Carrier Common Settings         3033550050           Saff Secure Prior         103255005           Saff Secure Prior         103255005           Saff Secure Prior         10           Saff Secure Prior         10           ADHomication Unregarding         10           Adhemication Unregarding         10           Adhemication Unregarding         10528.5000           Add Carrier Actionates Offer         10528.5000           Add Carrier Actionates Offer         10528.5000           Resergerd Conffic         10528.500	Description         Onter           DefCarrent Common Settings:         30350005           Sef Secure Part:         10738.3           Sef Secure Part:         10738.3           Sef Secure Part:         10708.3           Sef Secure Part:         10708.3           Hold Contront Advanced Settings:         10           Adhedication Uner Internet:         10           Secure Part:         10708.3           Oddown Partenet:         10           Oddown Partenet:         10           More Control Control         10           Reserver Part:         10	Description         Description           ADPCArtent Common Settings         30355050           ADPCArtent Common Settings         1025505           SIP Server Prot         10306           SIP Server Prot         1000           SIP Server Prot         1000           ADECartent Advanced Settings         10           Adhebication Unretainest         1000           Adhebication Settings         1000           ADMC Common Advanced Settings         1000           Advanced Settings         1000           ADMC Common Advanced Settings         1000           Advanced Settings         1000           Advanced Settings         10000           Advanced Settings         10000           Advanced Settings         10000           Advanced Settings         100000           Advanced Settings         1000000           Advanced Settings         1000000000000000000	Description         Onder           ADPC-struct Common Settings         3000000000000000000000000000000000000

## 2.2 Extension Setup

To setup the extension, follow the step-by-step procedure.

Step	Action	Result
1	Navigate to Interfaces	
2	Click the IP Lines tab	IP Lines opens
3	Click New IP Line	The new IP Line selected opens IP Line 7 is an example.
4	Go to the next table	

Extension Setup-New IP Line

4.00		100 100 101	- Hard	teen man. Parn unternigs
Dashboard	PLines PLine Setting	s IP Phone Templates IP	Phones Logo	FIS Gateways
Setup	IP Lines			
Extensions	H. CHIGA			
Interfaces	Available IP Lines	Attached Extension	Туре	Details
Freual	Pline1	100	sp	UserName: locest103, Modek Polycom SoundPoint IP 330, 00.04/2:14:65:9d, Template systemdefault,
Network Status	PLine2	158	sp	Use/Name: locest104, Model: Polycom SoundPoint IP 330, 00:04:52:14:b6/26, Template: systemdefault
Maintenance	Pline3	105	sıp	Use/Name: locest105, Model: Polycom SoundPoint IP 330, 00:04/2114/b5/9d, Template: systemdefault,
	IP Line 4	106	549	UseName locest106, Model: Cisco SPA5016, elbedr0-6kb566, Template: systemdefault
	IP Line 5	107	sø	UserName: locext107, Model: Cisco 7960, 00:14.a981:90.08, Template: systemdefault
	IP Line 6	108	589	UseName locest108, Model Cisco 7968, 00.1c.58:57:5c.78, Template systemdefault
	211447	100	c.p	Traditional Inconting Model Solution Counterfactor (\$125,000,000,000,000,000,000,000,000,000,0

Step	Action	Result
5	In IP Line Settings	
	Click SIP Phone	
6	Phone Model:	Polycom SoundPoint IP 335 is an example
	Select the phone model	
7	MAC Address:	
	Enter the MAC address of the IP Phone	
8	Transport:	
	Select UPD	
9	Click Save button	
10	Go to the next table	

#### **Extension Setup**

0350	Austrian 01 inst DV. DVA D1/11 Teach SDAI Teach MD1/ Automat
Dashboard	Overview Planes PAS PAO EVITITIUM. Government PSIN Galeways
Setup	a real a real strongly is contents is considered in a real real to
Extensions	IP Line Settings - IP Line 7
Interfaces	O Go Back
Telephony	
Frewall	Inactive
Network	SIP Phone Phone Model: Polycom SoundPoint IP 335
Status	
Maintenance	MAC Address: 00 : 04 : 12 : 24 : 5b : aa
	Line Appearance: 2
	Username: locext109
	Pessword: Generate Password
	Transport: UDP v
	Use Session Timer
	Use template: < use default> V
	Enable Hot Desking Capability
	Hot Desking Automatic Logout:

Step Action Result

11	Navigate to Extensions	
12	Click the Extensions tab	
13	Click the box next to the number to edit Click the <b>Edit</b> tab	Extensions Management-Edit Entry screen opens
14	Make changes required	
15	Procedure completed	

#### **Extension Management**

	Andrew Marchaeler Andre			- 10 · · · ·		
Unever	Dating Directories Contre	ences necordings nec	eptonst ALD Authors	ed Phones		
board Edensions A	Id Extension Add Multiple Extensions Bul	kimport				
Extension	ns Management					E
insions						
Total extensions	count 52					
+Add /Est	Delete /Hide extensions attached to disa	bled P lines 🖉 Use Epygi SP se	ver			
	n 🔻 Disolav Name	Attached Line	SIP Address	Percentage of System Memory	External Access	0
	Attendant		00	5% (1 day 21 hour 51 min 14 sec)		8
tenance	Attendent	RIS 1	00 3038356047	5% (1 day 21 hour 51 min 14 sec) 5% (1 day 21 hour 51 min 14 sec)	None	8
tenance	Attendant	RIS1 RIS2	05 3038256047 102	5% (1 day 21 hour 51 min 14 sec) 5% (1 day 21 hour 51 min 14 sec) 5% (1 day 21 hour 51 min 14 sec)	None None	82
us  Lenance C  S  S  S  S  S  S  S  S  S  S  S  S  S	Attendent Phone 1	PIS1 PIS2 IP Line 1	00 3038056047 102 7206342065	3% (1 day 21 hour 31 min 14 sec)           5% (1 day 21 hour 31 min 14 sec)           5% (1 day 21 hour 31 min 14 sec)           5% (1 day 21 hour 31 min 14 sec)           64% (3 hour 40 min 5 sec)	None None None	
terance C 2000	Attendent Phone 1 Phone 2	RIS1 RIS2 Pline1 Pline2	00 3038056047 NG2 7206342065 154	5% (1 day 21 hour 51 min 14 sec) 5% (1 day 21 hour 51 min 14 sec) 5% (1 day 21 hour 51 min 14 sec) 5% (1 day 21 hour 51 min 14 sec) 0.4% (1 hour 40 min 5 sec) 0.4% (3 hour 40 min 5 sec)	Nore Nore Nore Nore	23 23 23 23 23 23
tenance C 200	Attendent Phone 1 Phone 2 Phone 3	RS1 RS2 Pline1 Pline2 Pline3	00 3030556047 102 7206342085 104 7206342083	35. (1 day 21 hour 51 min 14 acc)           35. (1 day 21 hour 51 min 14 acc)           35. (1 day 21 hour 51 min 14 acc)           35. (1 day 21 hour 51 min 14 acc)           0.45. (1 hour 40 min 5 acc)           0.45. (1 hour 40 min 5 acc)           0.45. (1 hour 40 min 5 acc)	None None None None None	23 23 23 23 23 23 23
terance	Attenduet Attenduet Prone 1 Prone 2 Prone 3 Prone 4	RIS1 RIS2 PLine1 PLine2 PLine3 PLine4	80 30805647 102 72054205 104 72054206 106	5%(1 day 21 hour 31 min 14 and)           6%(3 hour 40 min 5 and)	None None None None None None	23 23 23 23 23 23 23 23 23 23 23 23
st C 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Attendent Attendent Phone 1 Phone 2 Phone 3 Phone 3 Phone 3 Phone 3 Phone 3 Phone 4 Ph	RIS1 RIS2 Pline1 Pline2 Pline3 Pline4 Pline 5	80 3038256547 102 700534095 104 700534098 105 700534094	5% (1 day 21 hour 31 min 14 and) 5% (1 day 21 hour 31 min 14 and) 5% (1 day 21 hour 31 min 14 and) 5% (1 day 21 hour 31 min 14 and) 6% (3) hour 40 min 5 and)	Nore Nore Nore Nore Nore Nore Nore Nore	

#### **Extension Management-Edit Entry**



## 2.3 Call Routing Setup

To setup the call routing, follow the step-by-step procedure.

Step	Action	Result
1	Navigate to Telephony	
2	Click the Call Routing tab tab	Call Routing Wizards opens

3	Under Routing Call Type-Edit Entry	
	Destination Number Pattern:	
	Enter 9*	
4	Description:	
	Enter Charter	
5	Check Filter on Source /Modify Caller ID:	
6	Click the Next button	Routing Call Setting-Edit Entry opens
7	Go to the next table	

#### Call Routing Wizard-Routing Call Type

	Overview VolPCamer Call Routing Call Recording NAT Traversal RTP SP Advanced
2 Dashboard	Call Routing Table Call Routing Local AUA Table SP Tunnel Class of Senice
Setup	Call Pouting Wizard
Extensions	Call Rodulig Wizard
- interfaces	O Go Back
C Telephony	
Freval	Routing Call Type - Edit Entry
Network	
Status	Enable Record
🔑 Maintenance	
	Destination Number Pattern: g+ (wildcard supported) Enabler Ker:
	Humber of Discoulard Sumbols
	Disaber Key
	Prefix El Require Authorization for Enabling/Disabling

#### Call Routing Wizard-Routing Call Type

Metric:	10		
Description:	Charter		
Filter on Source / Modify	Caller ID		
<ul> <li>Set Date/Time Period(s)</li> <li>Set Overall Calling Time</li> </ul>	Limit		
Set Tracing / Debug Opt	ons on This Rule		
			^
	Previous	Next	

Step	Action	Result
8	In Routing Call Settings-Edit Entry	
	Desination Host:	
	Enter the SBC LAN IP address	
9	Under SIP Privacy	
	Click Default Privacy	

7

10	Under Transport Protocol for SIP	
	Click UDP	
11	Click the Next button	Source Filter/ Modify Caller ID-Edit Entry opens
12	Go to the next table	

#### Call Routing Wizard-Routing Call Settings

🥐 epygi	✓Pending Logget3in Aa Eventa Administrator (admin) Log
QK50	Overview VolP Carrier Call Routing Call Recording NAT Travenal RTP SP Advanced
Dashboard	Call Routing Table Call Routing Local AAA Table SP Tunnel Class of Service
Setup	Call Routing Wizard
Extensions	Can rooding theard
B- Interfaces	O Go Back
C Telephony	
Freval	Routing Cail Settings - Edit Entry
Network	
Status	
& Maintenance	Use Edension 🔤 Keep Original Caller Fallover Reason(s) Settings: D. Fallover Reason(s)
	🖂 Add Ramota Party ID 🛛 💌 None
	Destination Host 10/70/58.3  Pacticipation Root Fallower Reason(s) Fallower Reason(s)
	Busy Wrong Number
	Usemame System Failure System Failure
	Pastword Other

#### Call Routing Wizard-Routing Call Settings

Enable Adhily Timeout Adhily Timeout	© Any
Use RTP Prov	
Naximum Duration (sec):	BP Privacy     Transport Protocol for SP     messages     Default Privacy     LICE
AAA Required:	Disable Privacy     O TCP
	Esable Privacy Esable Privacy Session Header
	Ouser D
Previous	Next

Step	Action	Result
13	In Source Filter/ Modify Caller ID-Edit Entry	
	For Source Number Pattern	
	Enter *	
14	Source Type:	
	Select PBX	
15	Click the Next button	Summary- Edit Entry opens
16	Go to the next table	

#### Source Filter/ Modify Caller ID-Edit Entry

💼 epygi	✓Pending Events Administrator (admini) Log C	ut .
QXS0	Overview VolP Carrier Call Routing Call Recording NAT Traversal RTP SIP Advanced	
Dashboard	Call Routing Table Call Routing Local AAA Table SIP Tunnel Class of Senice	
Setup	Call Routing Wizard	•
Extensions	O Go Back	
L Telephony		
A Firewall	Source Filter / Modity Caller ID - Edit Entry	
Network		
Status	Source Filter	
📕 Maintenance	Source Number Pattern: • (wildcard supported)	
	Source Type: PBX •	
	Cater ID Modification Number of Discarded Symbols: Prefix Prefix Discard Non-Numeric Symbols Display Name: Remove Display Name	
	Previous Next	

Step	Action	Result
17	In Summary- Edit Entry	
	Verify details	
18	If the details are correct	
	Go to Step 19	
	If not click, the <b>Previous</b> button	
	to correct	
19	Click the Next button	Call Routing table opens
20	Go o the next table	

9

6	epygi						✓Pending Events	Logged In As: Administrator (admin)	Log Out
	QX50	Overview VolP Carrier Call I	Routing Call Recording	NAT Traversal	RTP 5	a Advanced			
en en	Dashboard	Call Routing Table Call Routing Li	ocal AAA Table SIP Tunnel	Class of Service					
0	Setup	Call Routing Wizord							Help +
R	Extensions	Call Routing Wizaru							~
÷.	Interfaces	O Go Back							
с.	Telephony								
0	Firewall	Summary - Edit Entry							
0	Network								
Last	Status	During Coll Trace		Deutine Cell Cellin					
1	Maintenance	Rooding Call Type		Notally Call Setal	ngo Minana				
		Number of Discarded Sumbols:	1	Keep Original Call	ungs.	No			
		Draffy:		Add Romote Darts	an no.	No			
		Suffix:		Destination Most	100	10 70 59 3			
		Destination Tener	oip	Destination Post		6060			
		Matric:	10	Uparnamer					
		Description	Chadar	Transport Protoco	in face CID:	100			
		Description.	Change	SIP Privacy	A PAR BEP.	Default			
	Maturali			Use RTP Proxy:		No			
	Pretaiork			Activity Timeout:		Disabled			
	Maintenance			Single Call Durati	on Limit:	Disabled			
	Proprior Torrow			AAA Required:		AAA disabled.			
				Failover Reason(s	4):	None			
				Routing Call Sour	ce Information				
				Discard Non-Num	eric Symbols:	No			
				Source Number P	attern:				
				Source Type:		PBX			
				Caller ID Modifica	tion				
				Number of Discar	ded Symbols:				
				Prefix:					
				Routing Call Class	s Service Infor	mation			
				Class of Services					
1									
1			Previous				Finish		

Step	Action	Result
21	At the Call Routing Table	The call route entry will appear
	Click the +Add tab	in the table
22	Procedure completed	

#### **Call Routing Table**

	epygi										✓Pendir Events	a l Admi	.ogged In inistrator (	As: 🕞 admin) Log Out
	QX50	•	veni	ew Vo	IP Carrier Call Ros	ting Call Reco	rding NAT Traversal	RTP SSF	Advanced					
ß	Dashboard	Gal	I Rou	ting Table	Call Routing Loca	I AAA Table SIP To	unnel Class of Service							
¢ 8	Setup Extensions	Ca	all I	Routin	ng Table									Help 👻
ġ.	Interfaces	5	how	Detailed Vie	w>>> Hide disab	led records								
¢	Telephony													
0	Frewall	ØE	nable	e 🔍 Disab	le + Add / Edit	2] Duplicate 🔋 De	lete 🛧 Move Up 🗣 Mov	e Down 💥 Mo	veTo			_		
0	Network Status Maintenance	2	ID	State	Destination Number Pattern	Pattern Modification	Call Settings	Failover Reason(s)	Local Authentication	Source Number Pattern/ Caller ID Modification	Source Type	UES / URP	Metric	Description
		8	1	Disabled	8*	NDS:1	SIP sip.epygi.com	None	No	•	PEX	URP: Yes	10	Make SIP call
			2	Enabled	777		PBX	None	No			URP: No	10	Call to Extensions
			3	Enabled	00		PBX	None	No			URP: No	10	Call To Attendant
		Z	4	Enabled	9*		IP-PSTN 10.70.58.3:5060, RNSC: No	None	No		PEX	UES: 999 URP: No	10	Charter

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