innovaphone Compatibility Test Report

Vendor: *Quescom*

Model: *400 IPGSM*

Last Update: Thursday, 25 NOV 2004

H323 Device Compatibility Report / vom 29.11.04 / gedruckt am 29.11.04

(erstellt am 25.11.04 von Karsten Brauner in F:\EXPORT -KBR\QUESCOM\QUESCOM 400 COMPATIBILITY REPORT.DOC, zuletzt geändert von Karsten Brauner am 29.11.2004)

1 Background Information

2 Device Tested

Information in this chapter is derived from accompanying material and/or from visual inspection or from testing.

Sample chart

Sign	Category
Yes/ok	Yes, feature is present/ok
no	No, feature is not present/ok
n/a	Feature does not apply
nt	Not tested

Basic Device Information

Manufacturer	Quescom				
Model	Quescom 400 IPGSM				
Hardware Revision					
Firmware Revision	Core	Pilot	Call Server Master	Smart IAD	GWConfig
	3.52.004	3.51.031	3.52.003	3.51.002.024	3.51.002.015

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Serial / MAC	Q400-B4-00010493	
Documentation used	GS-Q400IPGSM351-V01.pdf, AG-Q400351-V01.pdf	
Hardware provided for testing	Quescom 400 IP/GSM Gateway	

Device Type

Applies?	Category	
n/a	IP Hardware Terminal	
n/a	IP Software Client	
n/a	IP Software Server	
n/a	IP Gateway analogue	
n/a	IP Gateway ISDN	
n/a	IP Gateway SS7	
n/a	IP Gateway V5.2	
yes	Other:	IP GSM Gateway
	Media	
yes	Audio	
no	Video	

Basic Device Characteristics

Signalling Stack

Applies?	Protocol

Signalling Stack

yes	H323
yes	H450.2 Call Transfer
n/a	H450.3 Call Diversion
yes	H450.4 Call Hold
n/a	H450.5 Call Pickup
n/a	H450.6 Call Waiting
n/a	H450.7 Message Waiting
n/a	H450.8 Name Identification
n/a	H450.9 Call Completion
n/a	H450.10 Call Offer
n/a	H450.11 Call Intrusion
nt	SIP
n/a	MGCP
n/a	Skinny

Supported codecs

Applies?	Codec
yes	G711
yes	G729
yes	G723
n/a	G726
yes	GSM

Supported codecs

yes	GSM
n/a	T.38 TCP
n/a	T.38 UDP
n/a	XPARENT
n/a	H261/H263
n/a	Supports VAD
n/a	Supports CNG
n/a	G722

Network Interface

Applies?	
yes	10 baseT
yes	100 baseT
yes	Full duplex
yes	Auto negotiation
yes	Auto sense
n/a	Hard configurable
n/a	Extra PC Port

User Interface

User Interface

Applies?					
n/a	Display alphanumeric		Lines by		columns
n/a	Display graphically		by		pixel
yes	No Display				
n/a	Alphanumeric Keyboard				
n/a	"Terminate" Key				
n/a	"R" Key				
n/a	Redial Key				
n/a	Handsfree operation				
n/a	Loudspeaker				
n/a	Headset support				
n/a	Displays Users Number				
n/a	Displays Users Name				
n/a	Displays Calling Line ID (Number)				
n/a	Displays Calling Line ID (Name)				
n/a	Displays Calling Line ID (Display Info)				
n/a	LDAP based Directory				
n/a	LDAP based CLI resolution				
n/a	Displays date and time				
n/a	User can set diversion				

User Interface

n/a	Displays diversion
n/a	Displays registration status
n/a	Supports multiple identities
n/a	Supports 3Way conferencing on its own

Management

Applies?	
yes	Admin Web Interface
nt	User Web Interface
n/a	Boots firmware from net
n/a	Boots firmware from Flash
n/a	Firmware web upgradeable
nt	Supports DHCP
no	Supports registration by serial
no	Supports H.235
nt	Supports GK Detection

3 Test Results

Information in this chapter is derived from testing.

Date Test performed, by	Karsten Brauner
Vendor Contact (Name, email)	Marc Lorenzi (lorenzi@quescom.com)
Device serial number	Q400-B4-00010493
Device Firmware used	look basic device information for further details
IP200 Firmware used	04-5817
IP400 Firmware used	-

Packaging and Physical Installation		Remarks	N/A	Not passed	Passed
Packaging	Appropriate packaging				X
	Can be easily re-used later on				X
Components	No components missing	GSM Handler missing, subsequent delivery		X	
	Power supply included	internal power supply			
	Ethernet cable included				X
	Device easily assembled				X
	Plugs etc. clearly labelled				X
Go/Nogo	Device works OK (not dead on arrival)				X

Feature	Description	Remarks	Result
Setup	Register Device w/o specific configuration (requires DHCP, GK detection and "magic" alias)		
	DHCP is default	device was delivered preconfigured!	nt

	DHCP works	**nt**
	DHCP yields timeserver and time displays correctly	**nt**
	SNTP config has TZ string for timezone/dst autoconfig	**nt**
	DHCP yields correct default gateway	**nt**
	Device supports magic registration (e.g. by serial)	**nt**
	GK discovery works	**nt**
Fixed GK registrations works		**yes**
Registrations supports GK-ID		**yes**
Device registers w/o Extension (just by name)		**yes**
Device registers by extension		**no**
Device registers with H.235 password		**nt**
Device registers multiple identities		**no**
Device can configure IP address, GK attributes (gk-id, gk-ip, alias) from DHCP (vendor specific)		**nt**

Basic Call	Setup call from IP200 to device (GSM Mobile), use vad/cng if supported, verify bidirectional media channel	
	using g711a	**yes**
	using g711u	**yes**

	using g723		**yes**
	using g729		**yes**
	Device supports overlapped sending		**no**
	Device supports early media channel (before connect, e.g. "wrong number" announcement is heard)		**yes**

	Setup call from device (GSM Mobile) to IP200, use vad/cng if supported, verify bidirectional media channel		
	using g711a		**yes**
	using g711u		**yes**
	using g723		**yes**
	using g729		**yes**
	Device shows CLI #	CLI can be edited in the Gateway configuration	**yes**
	CLI name		**nt**
	CLI Display Info		**nt**
	Device shows called id #		**nt**
	Called id name		**nt**
	Voice Quality OK overall		**yes**

DTMF	DTMF tones sent correctly		**yes**
	DTMF tones received correctly (audible)		**yes**
	Device switches to DTMF mode automatically after connect		**yes**

Music on hold	Device plays music on hold when held remotely		**n/a**
	Held end hears music on hold when held by device		**n/a**

Hold/Retrieve	Device can put call on hold		**n/a**
	Device can create secondary outgoing call		**n/a**
	Device can accept a secondary incoming call		**n/a**
	Device can terminate either call and retrieve remaining call		**n/a**
	Device can toggle between both calls, media stream ok		**n/a**
	Either call can be held remotely and retrieved remotely, media stream ok		**n/a**
	Device signals call hold to GK		**n/a**

Call Transfer (with cons.)	Device can be transferred by far end (check media ok, display on all 3 phones ok)		
	A calls T, a calls b, a xfers T to b	works not	connection, no media channel (no media after changing to b call)
	A calls b, a calls T, a xfers b to T	works not	no call(a->T) possible, because block dialing is required to access the quescom
	T calls a, b calls a, a xfers T to b	works ok	
	B calls a, T calls a, a xfers b to T	works ok	

	Device can transfer both call ends (media ok, display on all 3 phones ok?).		
	T calls A, t calls b, t xfers A to b	works ok	
	T calls b, t calls A, t xfers b to A	works ok	
	A calls t, b calls t, t xfers A to b	works ok	
	B calls t, A calls t, t xfers b to A	works ok	

Call Transfer (blind)	Device can be transferred by far end (check media ok, display on all 3 phones ok)		
	A calls T, a xfers T to b	works not	connection, no media channel, no alert tone
	A calls b, a xfers b to T	works ok	
	T calls a, a xfers to b	works ok	
	Device can transfer blindly (media ok, display on all 3 phones ok?).		
	T calls A, t xfers to b	works ok	
	A calls t, t xfers to b	works ok	

Call Forwarding	Device displays current call forwarding (interrogation)		n/a
	CFU		n/a
	CFNR		n/a

	CFB		**n/a**
	Device can set call forwarding	service routes can be set	**yes**

Directory	Device built-in directory		
	Exists	only user directory, no phone book	**yes**
	Can be dialled from		**no**
	Does CLI resolution		**no**

Hands free	Loudspeaker operation works fine		**n/a**
	Hands free works fine		**n/a**
	Volume adjustable during call		**n/a**

Keys	Device has speed dial keys		**n/a**
	Device has programmable function keys		**n/a**

Ethernet	PC port		
	Exists		**n/a**
	Does auto sense		**n/a**
	Does auto neg		**n/a**
	Can be fixed		**n/a**
	Does basically work		**n/a**

	Voice quality OK under heavy load		**n/a**
	PC Connectivity OK under heavy load		**n/a**
	spare wire		**n/a**
	phantom		**n/a**
	Device can set TOS for local VoIP		**n/a**
	Device does not set TOS for PC traffic		**n/a**
	Device can use 803.2pq fpr local VoIP		**n/a**
	Device does not use 803.2pq for PC traffic		**n/a**

Various Remarks	

Language	Remarks	User Interface	Web Interface	Admin Manual	User Manual
German					**X**
English		**nt**	**X**	**X**	**X**
French				**X**	**X**
Dutch					
Italian					

Spanish				
Swedish				
Danish				
Norwegian				
Finnish				
Other				

4 Various Remarks

The Quescom 400 (q400) was delivered pre-configured. The Following description should be helpful when installing a new q400 without any configuration.

The configuration website can be reached by IP address, e.g. http://IP.Address/QPortal . The Quescom MMC can also be used, please look at the manual mentioned at the beginning of this report. Authentificate now with the administrators login (already filled in) and the standard password "quescom". You'll see the main page, which is divided into 6 sections, "User", "Objects", "Services", "Licenses and Profiles" and "Logs". Descriptions about each single point can be found at the administrators manual (AG-Q400351-V01.pdf).

Following there are some "core"-parameters, that need to be set.

Objects:

- ?? Foreign Gatekeeper
  - o Insert Gatekeeper IP Address and H.323 ID for Gatekeeper settings
  - o Choose a default SmartIAD and a VoIP Profile like RAS or NORAS (maybe you need to create the profiles first, look at the following points)
- ?? Device Group
  - o Load the Gatekeeper name, as given above, into the objects list

Services:

- ?? Create at least 2 services

- o VoIP outgoing
- o GSM incoming

?? VoIP outgoing

- o Set Origin (Foreign GK) and Destination (compat)
- o Called Prefix Number should be a wild card (*) for all numbers
- o Service Type is VoIP
- o Set all others as you prefer it

?? GSM incoming

- o Set Origin (SmartIAD) and Destination (Foreign GK)
- o Called Prefix Number should be a wild card (*) for all numbers
- o Service Type is VoIP
- o Set all others as you prefer it

License & Profiles

?? VoIP Profile

- o Create a profile for the foreign gatekeeper, RAS was used here
  - ?? Set parameters like frames sizes or fast start options, depending on the used gatekeeper

Things like the PIN and other GSM relating settings can easily edited in the quescom MMC. Be sure to change the PIN numbers before inserting the GSM Cards because the default is 0000 and won't work with most GSM Cards. So change ist first or remember your PUK.

If these parameters are set, you should be able to place a call over the IP/GSM Interface.

5 Summary

In this test only the performance and usability of the VoIP/GSM Interface was tested. The Quescom Q400 is able to do a lot more but this was not the focus of this test. The IP/GSM Gateway is a nice product for people who have many outgoing calls to mobile users. It helps reducing the costs of PSTN -> GSM calls.

The Quescom Q400 IP/GSM may be a specific device but a great enhancement for those who need such a special equipment.