INTEROPERABILITY REPORT

Ascom i62

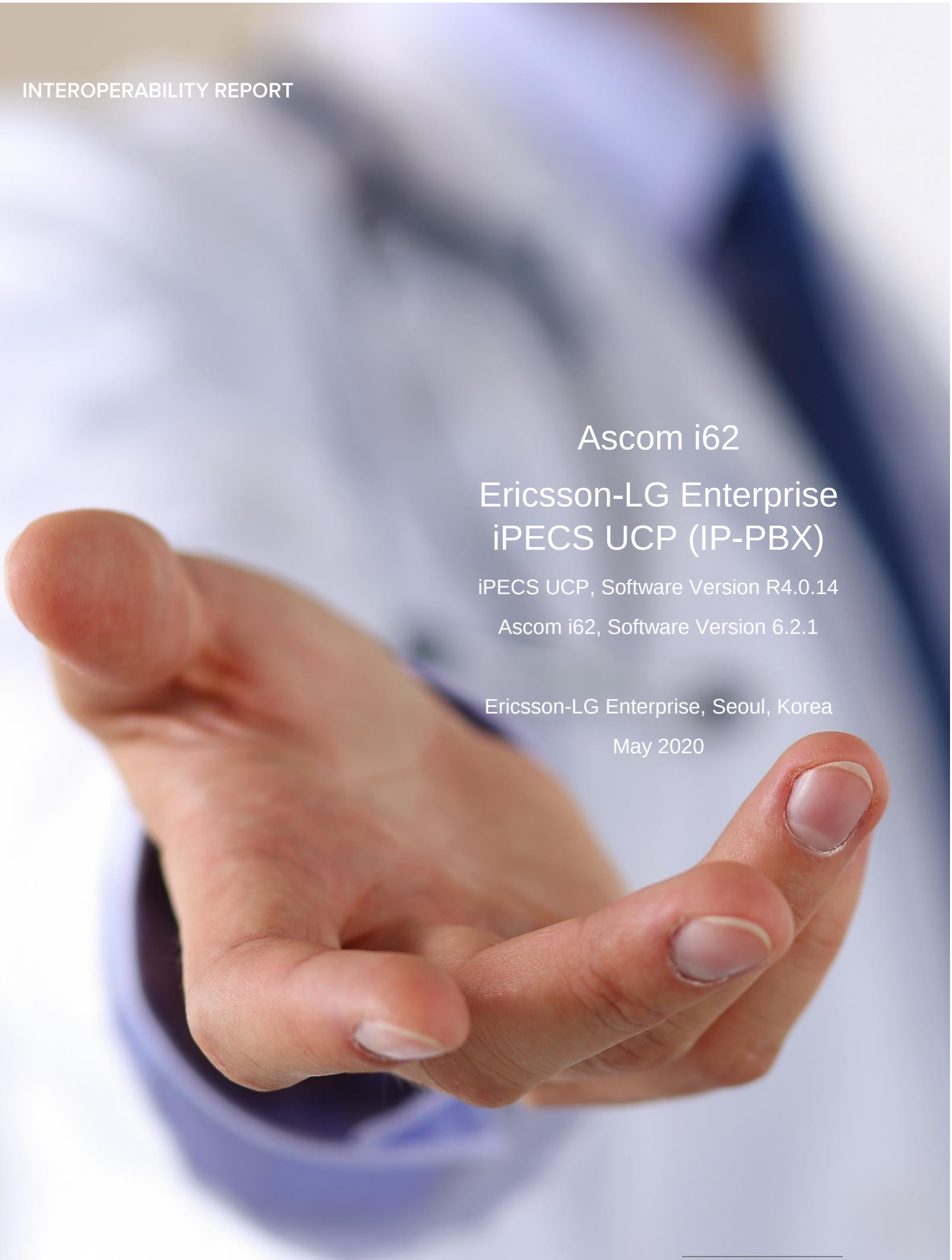
Ericsson-LG Enterprise iPECS UCP (IP-PBX)

iPECS UCP, Software Version R4.0.14

Ascom i62, Software Version 6.2.1

Ericsson-LG Enterprise, Seoul, Korea

May 2020



ascom

iPECS is an Ericsson-LG Brand

ERICSSON | LG

Contents

Introduction

This interoperability report describes test results and optimal configuration of Ascom i62 towards the Ericsson-LG Enterprise iPECS UCP. The document should be used in conjunction with configuration guide(s) from Ericsson-LG Enterprise and Ascom.

About Ascom

Ascom (www.ascom.com) is a global solutions provider focused on healthcare ICT and mobile workflow solutions. The vision of Ascom is to close digital information gaps allowing for the best possible decisions - anytime and anywhere. Ascom's mission is to provide mission-critical, real-time solutions for highly mobile, ad hoc, and time-sensitive environments. Ascom uses its unique product and solutions portfolio and software architecture capabilities to devise integration and mobilization solutions that provide truly smooth, complete and efficient workflows for healthcare as well as for industry and retail sectors.

Ascom is headquartered in Baar (Switzerland), has operating businesses in 18 countries and employs around 1,300 people worldwide. Ascom registered shares (ASCN) are listed on the SIX Swiss Exchange in Zurich.

About Ericsson-LG Enterprise

" We create innovation in business communications."

Ericsson-LG Enterprise is a leading provider of business communications solution with over 40 years of experience in the global market. Bringing its premium brand 'iPECS' in the market, Ericsson-LG Enterprise delivers a complete product lineup for Cloud and Unified Communications and Collaboration solutions from small to large-sized businesses, and establishes its strong position through advanced technology and diverse reference sites. Continuing our efforts, we aim to build the iPECS brand as the world's top-most enterprise communication solution provider.

Website: http://www.ericssonlg-enterprise.com

Site Information

Verification site

Ericsson-LG Enterprise

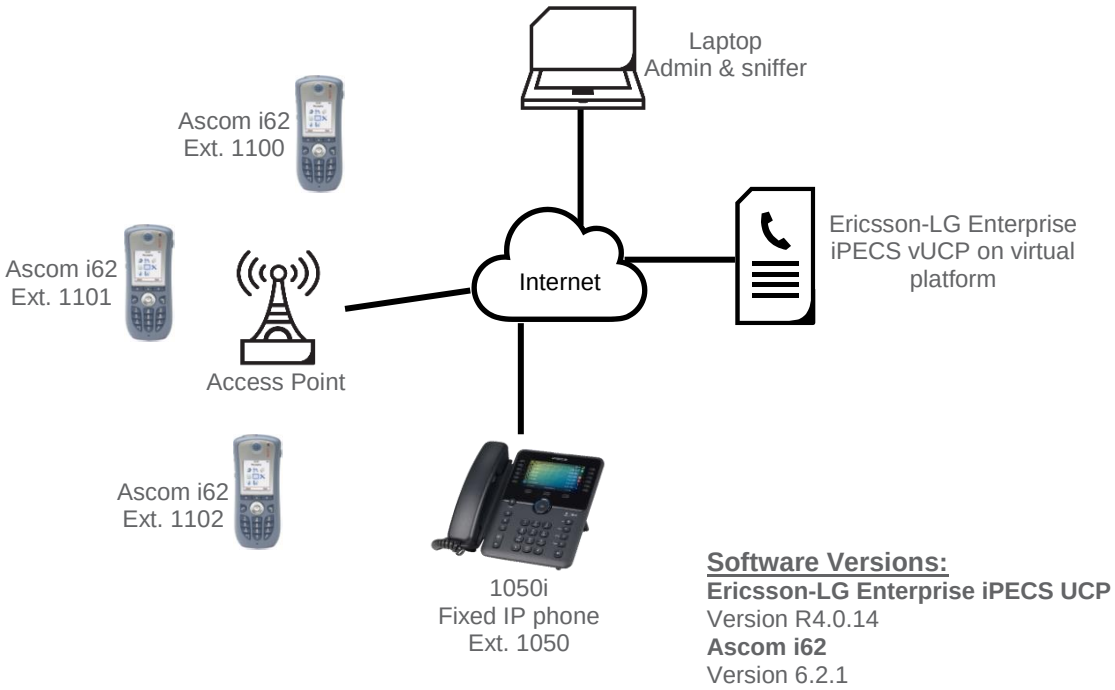
Seoul, Korea

Participants

Hangsuk Cho (Ericsson-LG Enterprise, KR)

Test Topology

Overview of Ericsson-LG Enterprise/Ascom Test Setup at Ericsson-LG



Software Versions:
Ericsson-LG Enterprise iPECS UCP
Version R4.0.14
Ascom i62
Version 6.2.1

Summary

General conclusions

Ascom interoperability verification produced good results towards Ericsson-LG Enterprise iPECS UCP version R4.0.14 with a few exceptions, refer to the "**Known Limitations**" section on page 7**.**

Ascom i62 handsets were configured to register at iPECS UCP using endpoint numbers. The codec of choice for these tests was G.711u/20ms, while DTMF signaling was transmitted according RFC 2833 or INFO message. Parameter settings are elaborated upon in the "**Appendix A: Test Configurations**" on page 8 for each platform respectively.

Compatibility information

Ericsson-LG Enterprise iPECS UCP/eMG Integration – Ascom i62

- Ericsson-LG Enterprise iPECS UCP/eMG version R4.0.14
- Ascom i62, 6.2.1

Signaling Protocol:

- SIP

Ericsson-LG Enterprise iPECS vUCP (results also valid for UCP100/600/2400 and eMG80/100/800):

- Settings are based on "Ascom VoIP Gateway: Installation and Operation Manual" (TD 92326GB), pp. 62-100

Ascom i62:

- "Endpoint ID" and "Endpoint Number" corresponds to name and number in the user object
- Default SIP settings

Test Results

Test overview

Test cases in nearly all areas with regard to Ascom i62 and Ericsson-LG Enterprise iPECS UCP passed successfully. Overall, the conclusion is that the SIP integration of Ascom i62 with UCP is very good.

Queries about licensing should be directed to Ericsson-LG Enterprise.

Please also see "**Appendix B: Detailed Verification Records**" for further details

High Level Functionality	Result R4.0.14
Basic Call	OK
DTMF	OK
Hold, Retrieve, Enquiry and Brokering	OK
Attended Transfer	OK
Blind-transfer	OK
Call Forward Unconditional	OK
Call Forward No Reply	OK
Call Forward Busy	OK
Call Waiting	OK
Message Waiting Indication	OK
Do Not Disturb	OK
Calling Line/Name Identification	OK
Connected Line/Name Identification	OK

Known limitations

- Since i62 sends REGISTER message without any display name but INVITE message includes From & Contact display name with Endpoint ID, “Do Not Overwrite Station Name” in SIP Phone Attributes(211) menu should be set to ON or OFF(INV).

- i62 rejects a SIP call over TCP with “404 Not Found” when listening port of i62 is not set to the source TCP port of i62, since iPECS sends SIP message with URI of the connected source port but i62 expects URI in Contact header which i62 includes in REGISTER message.

- i62 sends DTMF only after 200 OK received. Therefore, “Pre Audio Connection For DTMF” in SIP Phone Attributes(211) menu should be set to 200 OK for voicemail access with DTMF.

- INVITE with Replaces header is sent by PBX to update the caller information before answering the blind transfer or unscreened transfer, but i62 rejects INVITE with Replaces header with “481 Call Leg/Transaction Does Not Exist” and a transferred call is disconnected. Therefore, “INVITE(Replace) Usage” in SIP Phone Attributes(211) menu should be set to OFF.

- Since held i62 cannot hold a call, held i62 cannot make a new call before hanging up a held call. This is a PBX issue and per design.

- Being a SIP phone, the i62 cannot activate Call Completion Busy Subscriber(CCBS). This is a PBX issue and per design.

For additional information regarding the known limitations please contact interop@ascom.com or support@ascom.com.

For detailed verification results, refer to Appendix B: Detailed Verification Records.

Support

Product and sales support for Ascom and Ericsson-LG products is obtained through respective companies local supplier.

Technical support for the Ascom i62 wireless handsets can be obtained through the local Ascom supplier or Ascom global technical support:

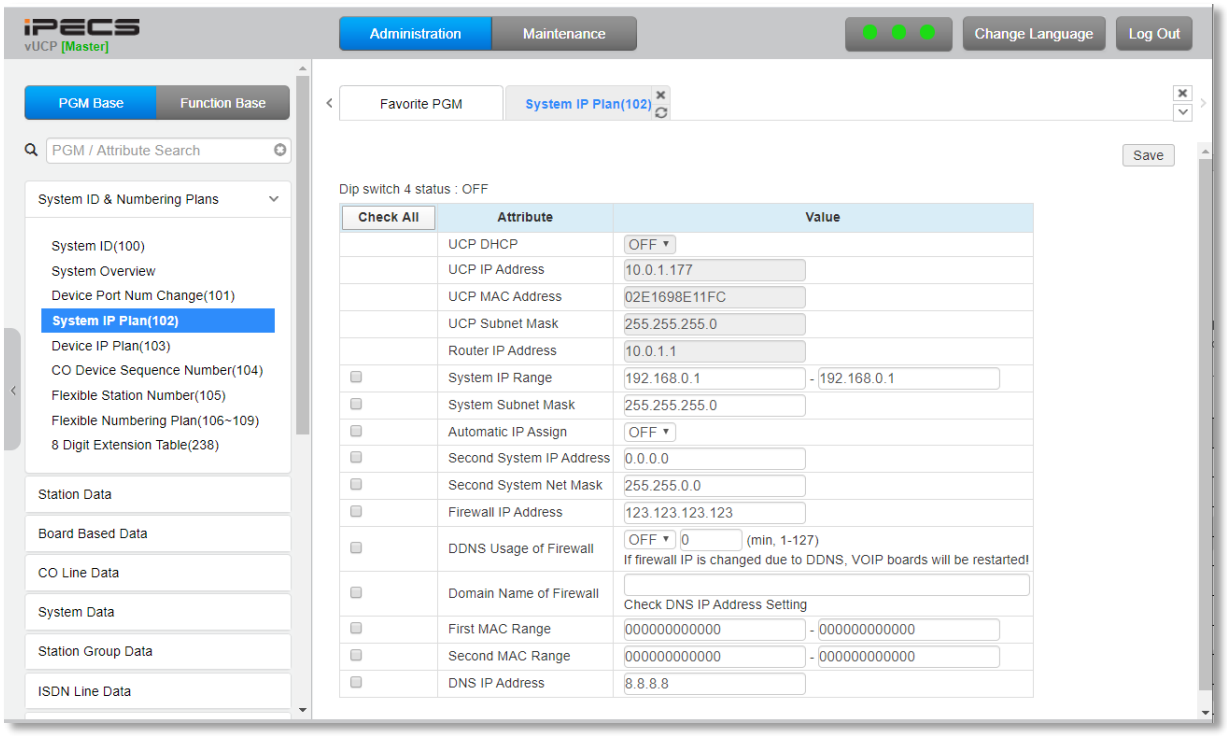
- Email: support@ascom.com
- Help desk: +46 31 559450

Appendix A: Test Configurations

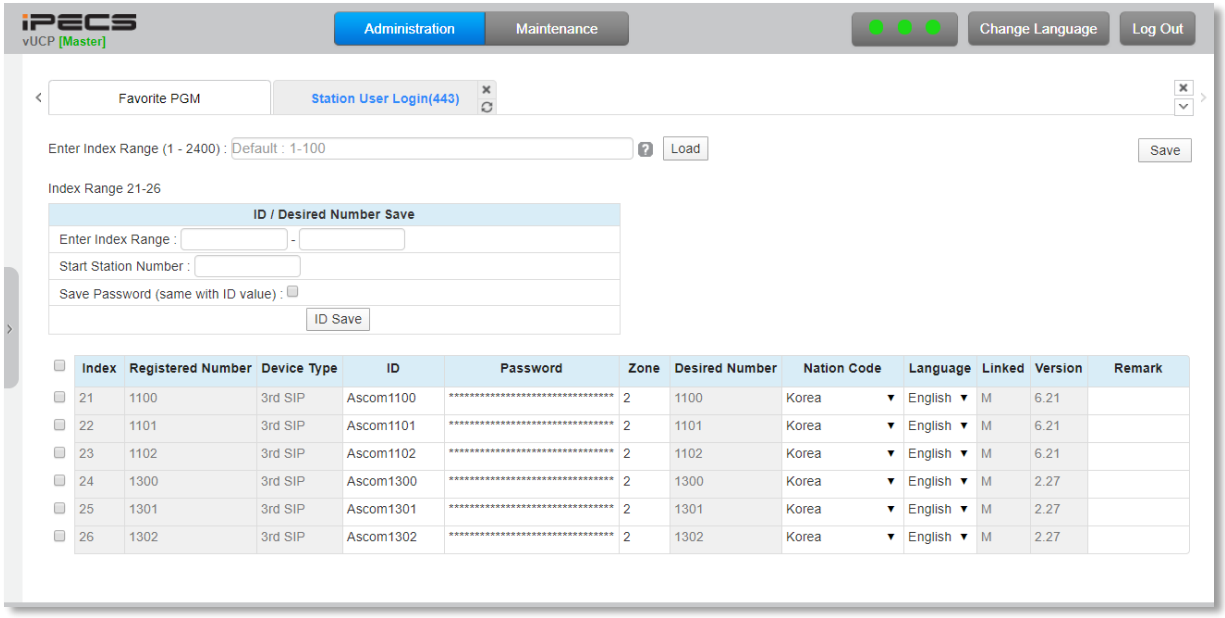
Ericsson-LG Enterprise iPECS UCP configuration

Please find the screen shots reflecting the management interface and some aspects of setting up the PBX application on iPECS UCP.

System ID & Numbering Plans > System IP Plan(102)



Device Login > Station User Login(443)

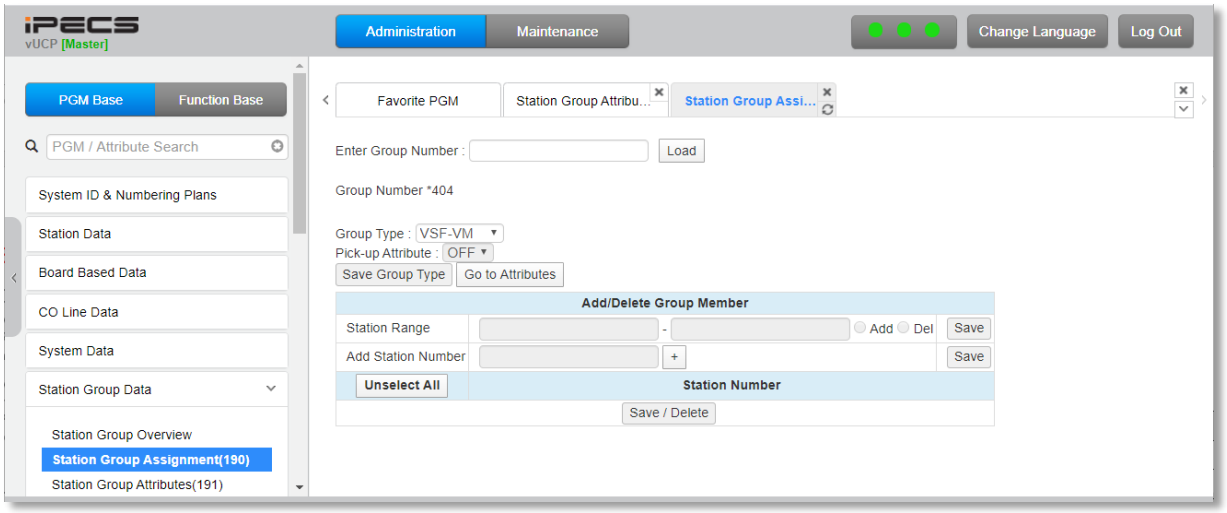


Index	Registered Number	Device Type	ID	Password	Zone	Desired Number	Nation Code	Language	Linked	Version	Remark
21	1100	3rd SIP	Ascom1100	**********	2	1100	Korea	English	M	6.21	
22	1101	3rd SIP	Ascom1101	**********	2	1101	Korea	English	M	6.21	
23	1102	3rd SIP	Ascom1102	**********	2	1102	Korea	English	M	6.21	
24	1300	3rd SIP	Ascom1300	**********	2	1300	Korea	English	M	2.27	
25	1301	3rd SIP	Ascom1301	**********	2	1301	Korea	English	M	2.27	
26	1302	3rd SIP	Ascom1302	**********	2	1302	Korea	English	M	2.27	

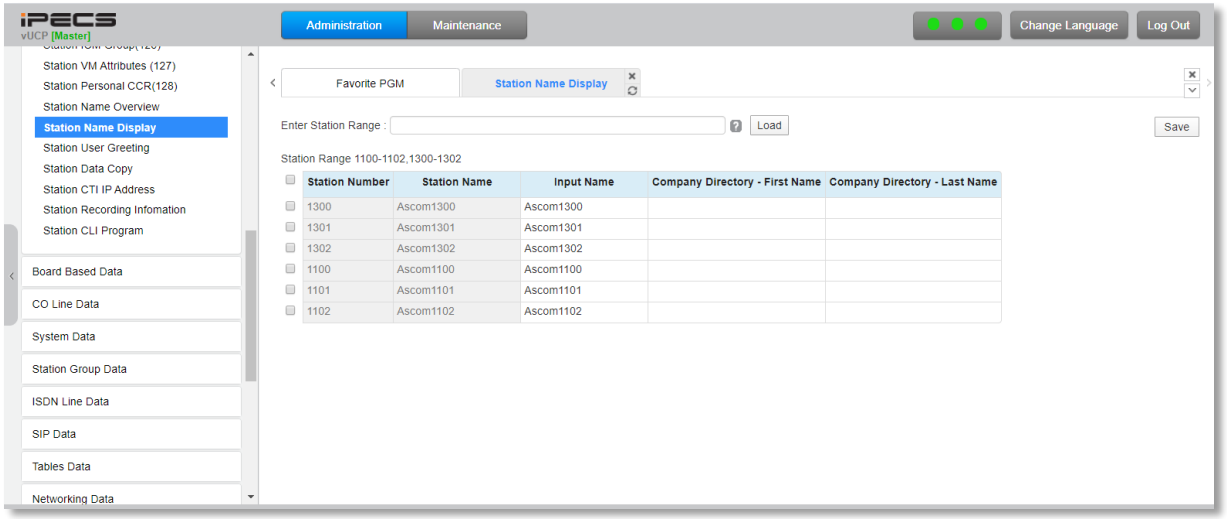
System ID & Numbering Plans > Device IP Plan(103)

Order	Seq	Zone	SVC	Logical Num	Type	DEV ID	MAC Address	IP Address	Mode	ARP	Register	Version	CPU	Remark
A							CO Gateway							
1	2401	1		1 - 250	Virtual VOIM	106	02e142ba8db4	10.0.1.39	LO	ON	Unicast	1.0Fc	Server	
B							STA							
38	38	3		1050	1050I	26	b061c71c72be	150.150.149.12 129.192.201.62	R/NAT	ON	Unicast	T0.0.27	BCM11407	
39	40	2		1300	3rd SIP	138	ffeffeeaffe7	192.168.125.31 129.192.201.62	R/NAPT	ON	Unicast	2.27	...	
40	41	2		1301	3rd SIP	138	ffeffeeaffe6	192.168.125.32 129.192.201.62	R/NAPT	ON	Unicast	2.27	...	
41	42	2		1302	3rd SIP	138	ffeffeeaffe5	192.168.125.33 129.192.201.62	R/NAPT	ON	Unicast	2.27	...	
42	43	2		1100	3rd SIP	138	ffeffeeaffea	192.168.125.28 129.192.201.62	R/NAPT	ON	Unicast	6.21	...	
43	44	2		1101	3rd SIP	138	ffeffeeaffe9	192.168.125.29 129.192.201.62	R/NAT	ON	Unicast	6.21	...	
44	45	2		1102	3rd SIP	138	ffeffeeaffe8	192.168.125.26 129.192.201.62	R/NAPT	ON	Unicast	6.21	...	
C							VSF Gateway							
1	3001	1		1 - 150	Virtual UVM	12	02c8b2fea452	10.0.1.189	LO	ON	Unicast	1.0Cf	MSC2K	54.180.158.101
D							MCIM Gateway							
1	3201	1		1 - 32 (Disconnected)	MCIM GW	116	b40edc2819d3	0.0.0.0	..	OFF	Multicast	..	MS828	

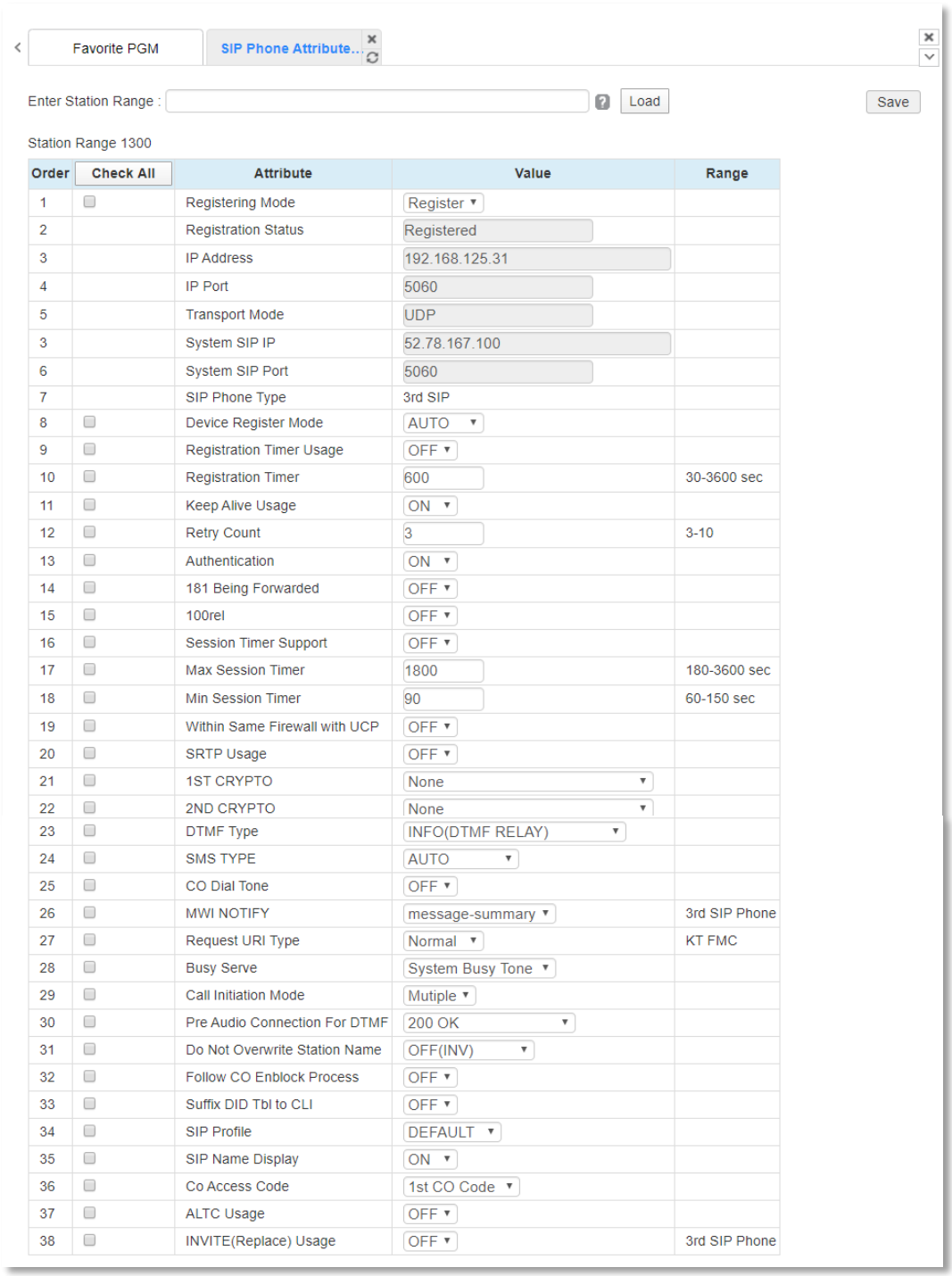
Station Group Data > Station Group Assignment(190)



Station Data > Station Name Display



SIP Data > SIP Phone Attributes(211)



Favorite PGM | SIP Phone Attribute...

Enter Station Range : Load Save

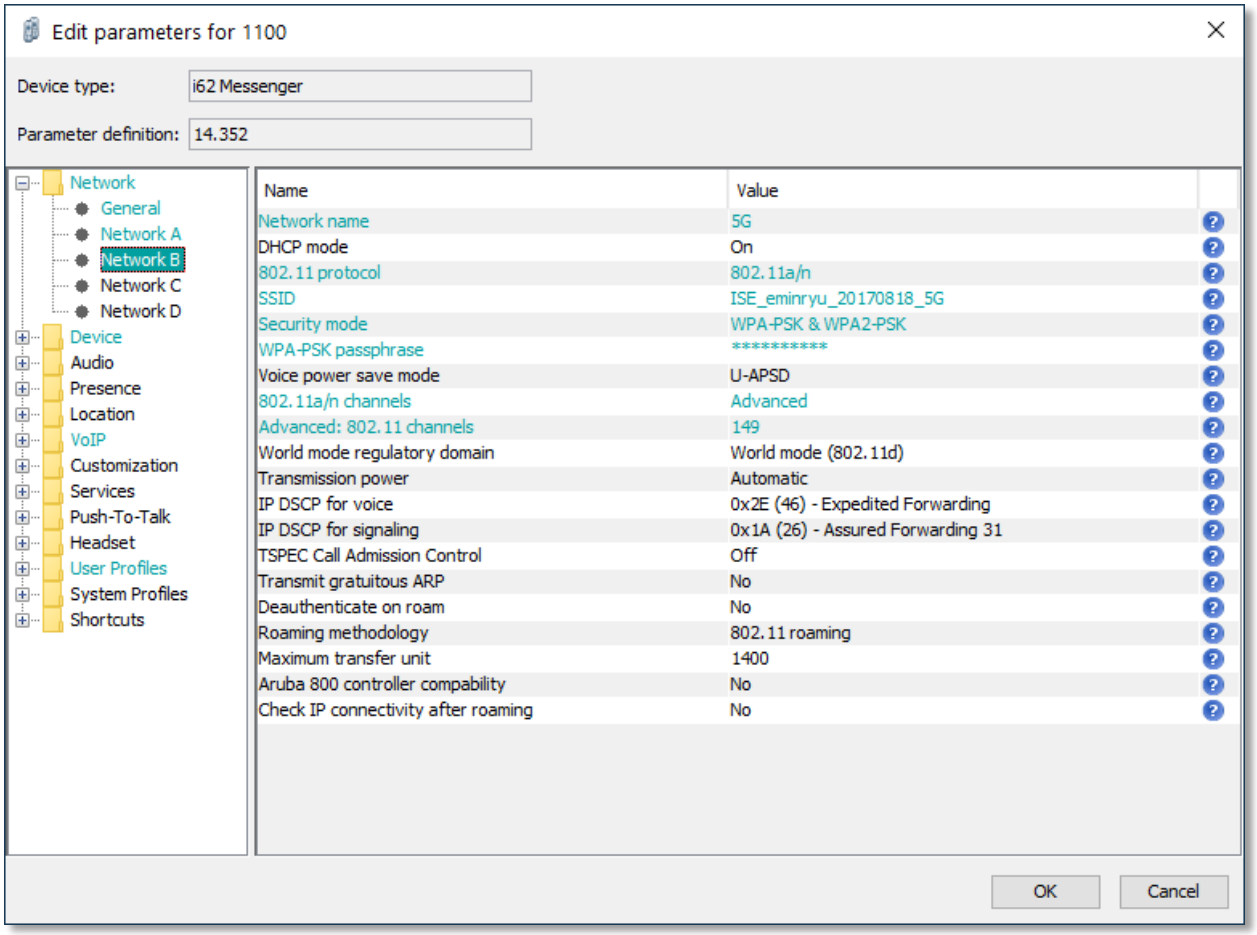
Station Range 1300

Order	Check All	Attribute	Value	Range
1		Registering Mode	Register	
2		Registration Status	Registered	
3		IP Address	192.168.125.31	
4		IP Port	5060	
5		Transport Mode	UDP	
3		System SIP IP	52.78.167.100	
6		System SIP Port	5060	
7		SIP Phone Type	3rd SIP	
8		Device Register Mode	AUTO	
9		Registration Timer Usage	OFF	
10		Registration Timer	600	30-3600 sec
11		Keep Alive Usage	ON	
12		Retry Count	3	3-10
13		Authentication	ON	
14		181 Being Forwarded	OFF	
15		100rel	OFF	
16		Session Timer Support	OFF	
17		Max Session Timer	1800	180-3600 sec
18		Min Session Timer	90	60-150 sec
19		Within Same Firewall with UCP	OFF	
20		SRTP Usage	OFF	
21		1ST CRYPTO	None	
22		2ND CRYPTO	None	
23		DTMF Type	INFO(DTMF RELAY)	
24		SMS TYPE	AUTO	
25		CO Dial Tone	OFF	
26		MWI NOTIFY	message-summary	3rd SIP Phone
27		Request URI Type	Normal	KT FMC
28		Busy Serve	System Busy Tone	
29		Call Initiation Mode	Mutiple	
30		Pre Audio Connection For DTMF	200 OK	
31		Do Not Overwrite Station Name	OFF(INV)	
32		Follow CO Enblock Process	OFF	
33		Suffix DID Tbl to CLI	OFF	
34		SIP Profile	DEFAULT	
35		SIP Name Display	ON	
36		Co Access Code	1st CO Code	
37		ALTC Usage	OFF	
38		INVITE(Replace) Usage	OFF	3rd SIP Phone

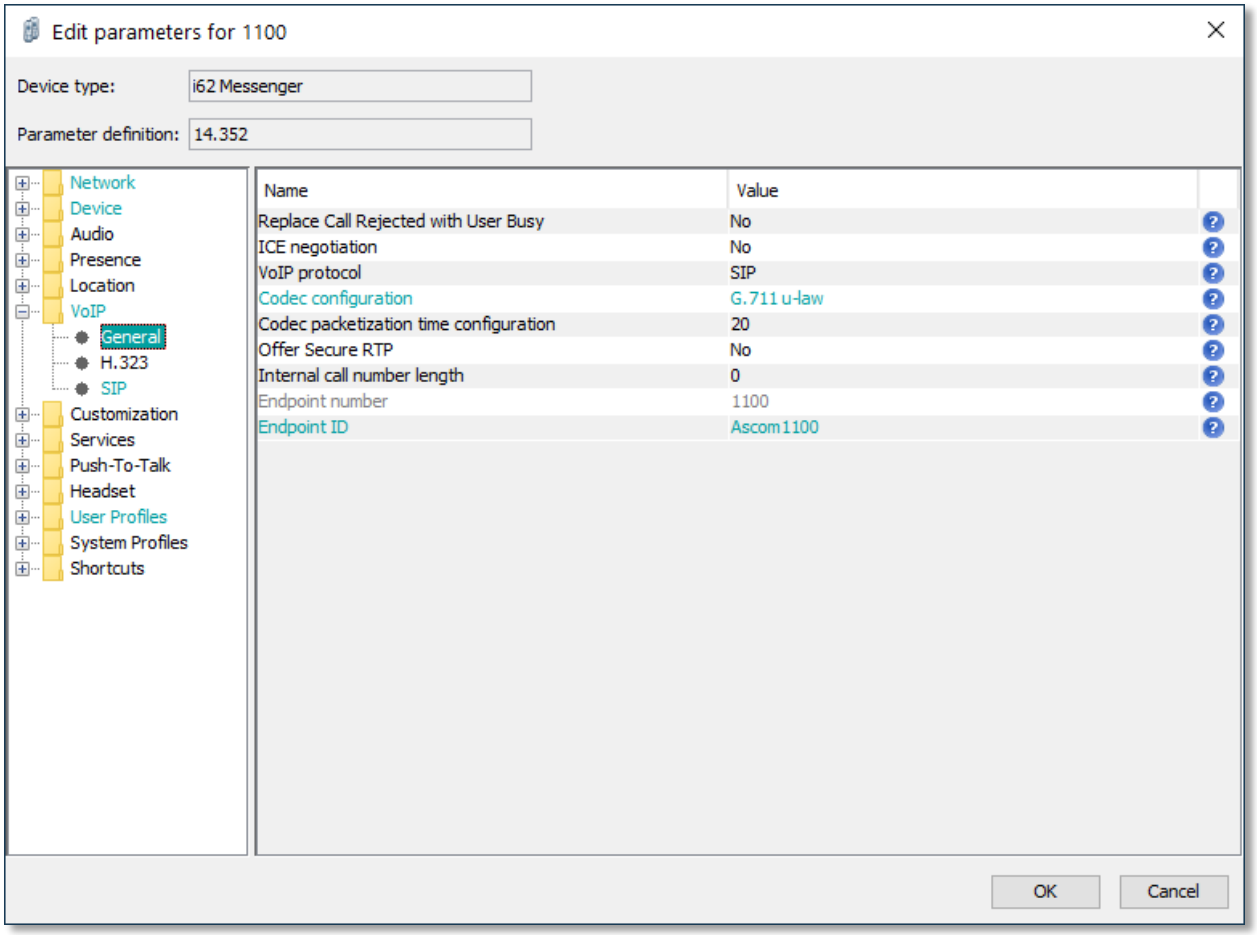
Please refer to Ericsson-LG Enterprise's documentation for further details about iPECS UCP configuration and licensing.

Ascom i62 configuration

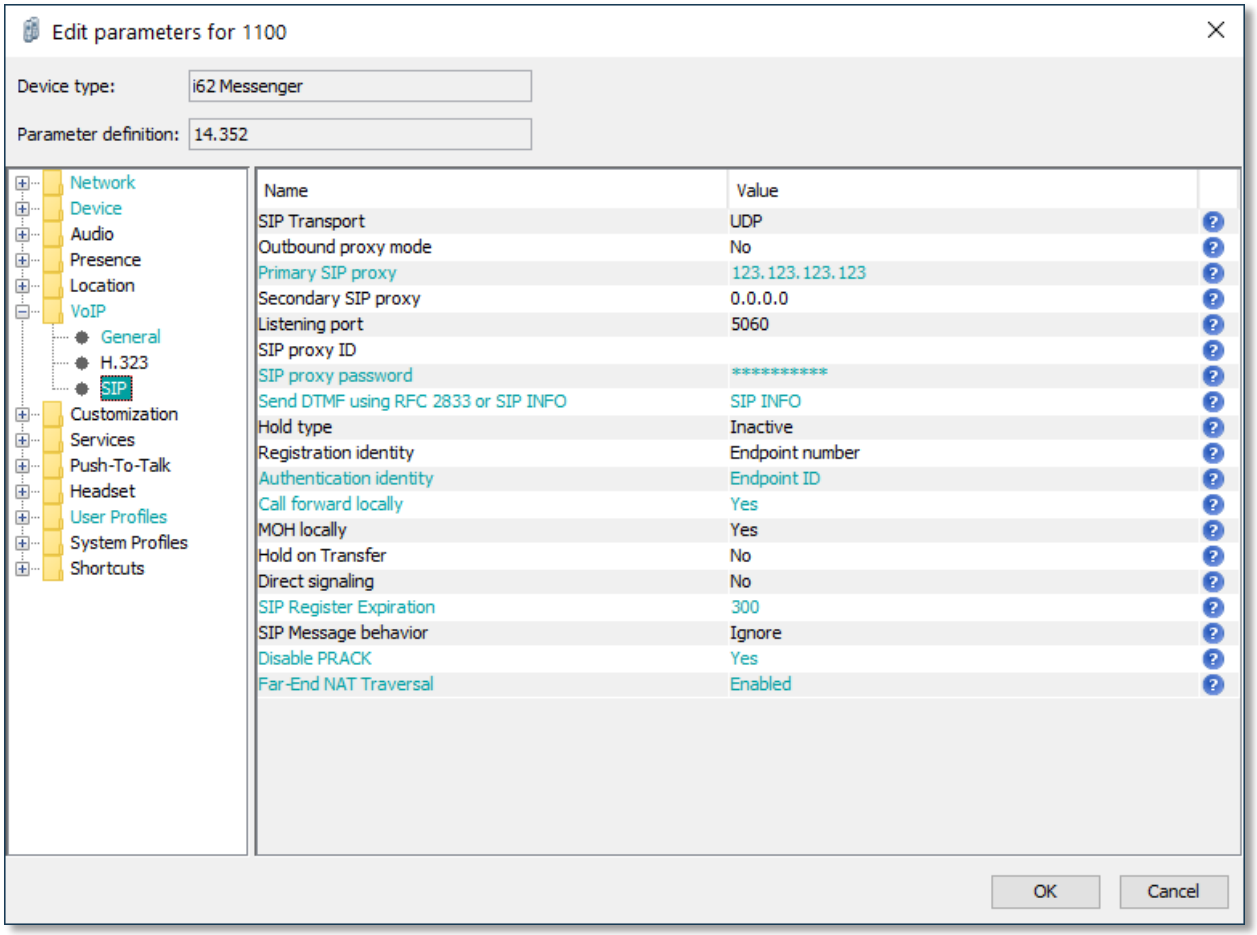
Ascom i62 WiFi network settings



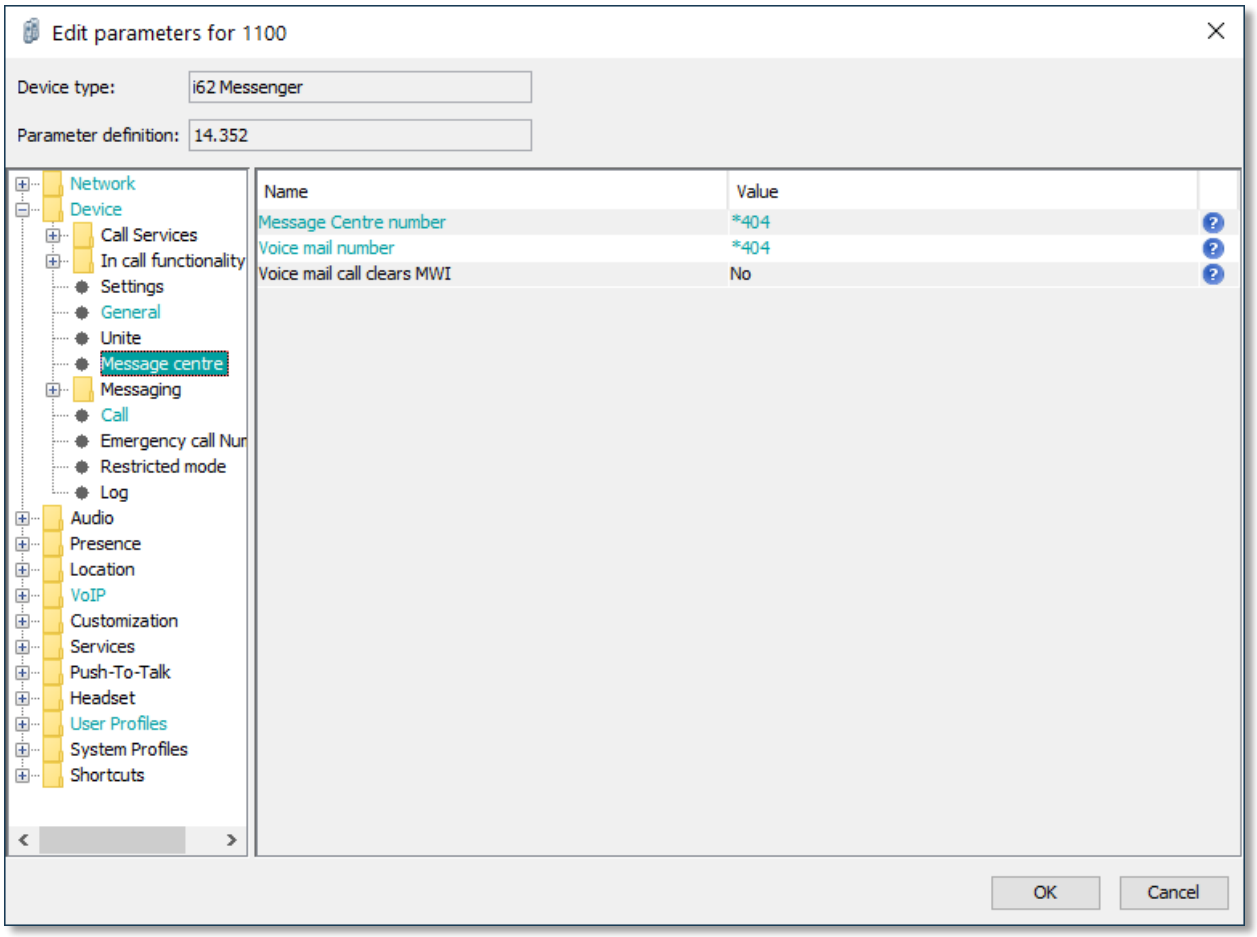
VoIP parameter settings



SIP settings



Message Waiting Indication settings



Appendix B: Detailed Verification Records

Ascom i62 with iPECS UCP/eMG R4.0.14

Pass	61
Fail	1
See Comments	19
Not Tested	29
Total	110

Refer to the attached Excel file for detailed verification results.

Refer to the verification specification for explicit information regarding each verification case.
The specification can be found here (requires login):
https://www.ascom-ws.com/AscomPartnerWeb/en/startpage/Sales-tools/Interoperability/Templates/

Document History

Rev	Date	Author	Description
PA1	2020-05-12	HS. Cho	Draft version
PA2	2020-05-22	SEMW	New cover page, minor adjustments after internal review
RevA	2020-05-25	SEMW	Final version