

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



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## 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](http://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

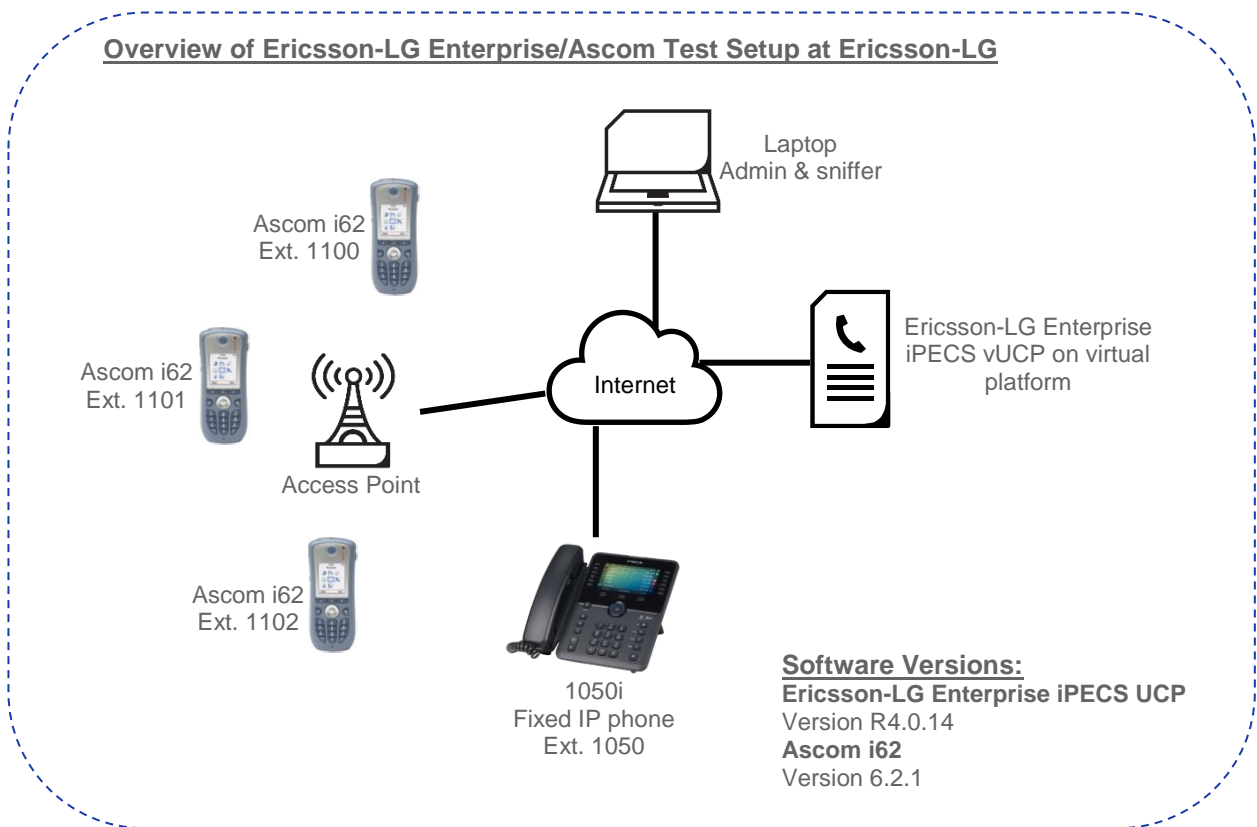
Ericsson-LG Enterprise

Seoul, Korea

## Participants

Hangsuk Cho (Ericsson-LG Enterprise, KR)

## Test Topology



# 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](mailto:interop@ascom.com) or [support@ascom.com](mailto: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](mailto: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)

Dip switch 4 status : OFF

Check All	Attribute	Value
<input type="checkbox"/>	UCP DHCP	OFF ▾
<input type="checkbox"/>	UCP IP Address	10.0.1.177
<input type="checkbox"/>	UCP MAC Address	02E1698E11FC
<input type="checkbox"/>	UCP Subnet Mask	255.255.255.0
<input type="checkbox"/>	Router IP Address	10.0.1.1
<input type="checkbox"/>	System IP Range	192.168.0.1 - 192.168.0.1
<input type="checkbox"/>	System Subnet Mask	255.255.255.0
<input type="checkbox"/>	Automatic IP Assign	OFF ▾
<input type="checkbox"/>	Second System IP Address	0.0.0.0
<input type="checkbox"/>	Second System Net Mask	255.255.0.0
<input type="checkbox"/>	Firewall IP Address	123.123.123.123
<input type="checkbox"/>	DDNS Usage of Firewall	OFF ▾ 0 (min, 1-127) If firewall IP is changed due to DDNS, VOIP boards will be restarted!
<input type="checkbox"/>	Domain Name of Firewall	Check DNS IP Address Setting
<input type="checkbox"/>	First MAC Range	000000000000 - 000000000000
<input type="checkbox"/>	Second MAC Range	000000000000 - 000000000000
<input type="checkbox"/>	DNS IP Address	8.8.8.8



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
<b>CO Gateway</b>														
1	2401	1		1 - 250	Virtual VOIM	106	02e142ba8db4	10.0.1.39	LO	ON	Unicast	1.0Fc	Server	
<b>STA</b>														
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	ffefeeaffe7	192.168.125.31 129.192.201.62	R/NAPT	ON	Unicast	2.27	...	
40	41	2		1301	3rd SIP	138	ffefeeaffe6	192.168.125.32 129.192.201.62	R/NAPT	ON	Unicast	2.27	...	
41	42	2		1302	3rd SIP	138	ffefeeaffe5	192.168.125.33 129.192.201.62	R/NAPT	ON	Unicast	2.27	...	
42	43	2		1100	3rd SIP	138	ffefeeaffe4	192.168.125.28 129.192.201.62	R/NAPT	ON	Unicast	6.21	...	
43	44	2		1101	3rd SIP	138	ffefeeaffe9	192.168.125.29 129.192.201.62	R/NAT	ON	Unicast	6.21	...	
44	45	2		1102	3rd SIP	138	ffefeeaffe8	192.168.125.26 129.192.201.62	R/NAPT	ON	Unicast	6.21	...	
<b>VSF Gateway</b>														
1	3001	1		1 - 150	Virtual UVM	12	02c8b2fea452	10.0.1.189	LO	ON	Unicast	1.0Cf	MSC2K	54.180.158.101
<b>MCIM Gateway</b>														
1	3201	1		1 - 32 (Disconnected)	MCIM GW	116	b40edc2819d3	0.0.0.0	..	OFF	Multicast	..	MS828	

Station Group Data > Station Group Assignment(190)

The screenshot shows the iPECS vUCP [Master] Administration interface. The top navigation bar includes 'Administration' and 'Maintenance' tabs, along with 'Change Language' and 'Log Out' buttons. The left sidebar is expanded to 'Station Group Data', with 'Station Group Assignment(190)' selected. The main content area displays the 'Station Group Assignment' configuration page. It includes a breadcrumb trail: 'Favorite PGM' > 'Station Group Attribution' > 'Station Group Assignment'. Below this, there are input fields for 'Enter Group Number' (with a 'Load' button) and 'Group Number \*404'. There are also dropdown menus for 'Group Type' (set to 'VSF-VM') and 'Pick-up Attribute' (set to 'OFF'), along with 'Save Group Type' and 'Go to Attributes' buttons. A section titled 'Add/Delete Group Member' contains a table with columns for 'Station Range', 'Add Station Number', and 'Station Number'. The table has a 'Save / Delete' button at the bottom.

Station Data > Station Name Display

The screenshot shows the iPECS vUCP [Master] Administration interface. The top navigation bar includes 'Administration' and 'Maintenance' tabs, along with 'Change Language' and 'Log Out' buttons. The left sidebar is expanded to 'Station Data', with 'Station Name Display' selected. The main content area displays the 'Station Name Display' configuration page. It includes a breadcrumb trail: 'Favorite PGM' > 'Station Name Display'. Below this, there is an 'Enter Station Range' input field with a 'Load' button and a 'Save' button. The page shows a table with the following data:

Station Number	Station Name	Input Name	Company Directory - First Name	Company Directory - Last Name
<input type="checkbox"/> 1300	Ascom1300	Ascom1300		
<input type="checkbox"/> 1301	Ascom1301	Ascom1301		
<input type="checkbox"/> 1302	Ascom1302	Ascom1302		
<input type="checkbox"/> 1100	Ascom1100	Ascom1100		
<input type="checkbox"/> 1101	Ascom1101	Ascom1101		
<input type="checkbox"/> 1102	Ascom1102	Ascom1102		

SIP Data > SIP Phone Attributes(211)

Favorite PGM
SIP Phone Attribute... x
x

Enter Station Range :  ? Load Save

Station Range 1300

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

**Edit parameters for 1100**

Device type:

Parameter definition:

Name	Value	
Network name	5G	?
DHCP mode	On	?
802.11 protocol	802.11a/n	?
SSID	ISE_eminryu_20170818_5G	?
Security mode	WPA-PSK & WPA2-PSK	?
WPA-PSK passphrase	*****	?
Voice power save mode	U-APSD	?
802.11a/n channels	Advanced	?
Advanced: 802.11 channels	149	?
World mode regulatory domain	World mode (802.11d)	?
Transmission power	Automatic	?
IP DSCP for voice	0x2E (46) - Expedited Forwarding	?
IP DSCP for signaling	0x1A (26) - Assured Forwarding 31	?
TSPEC Call Admission Control	Off	?
Transmit gratuitous ARP	No	?
Deauthenticate on roam	No	?
Roaming methodology	802.11 roaming	?
Maximum transfer unit	1400	?
Aruba 800 controller compability	No	?
Check IP connectivity after roaming	No	?

OK Cancel

VoIP parameter settings

Device type:

Parameter definition:

Name	Value	
Replace Call Rejected with User Busy	No	?
ICE negotiation	No	?
VoIP protocol	SIP	?
Codec configuration	G.711 u-law	?
Codec packetization time configuration	20	?
Offer Secure RTP	No	?
Internal call number length	0	?
Endpoint number	1100	?
Endpoint ID	Ascom1100	?

OK Cancel

SIP settings

**Edit parameters for 1100** [X]

Device type:

Parameter definition:

Name	Value	
SIP Transport	UDP	?
Outbound proxy mode	No	?
Primary SIP proxy	123.123.123.123	?
Secondary SIP proxy	0.0.0.0	?
Listening port	5060	?
SIP proxy ID		?
SIP proxy password	*****	?
Send DTMF using RFC 2833 or SIP INFO	SIP INFO	?
Hold type	Inactive	?
Registration identity	Endpoint number	?
Authentication identity	Endpoint ID	?
Call forward locally	Yes	?
MOH locally	Yes	?
Hold on Transfer	No	?
Direct signaling	No	?
SIP Register Expiration	300	?
SIP Message behavior	Ignore	?
Disable PRACK	Yes	?
Far-End NAT Traversal	Enabled	?

OK Cancel

Message Waiting Indication settings

The screenshot shows a configuration window titled "Edit parameters for 1100". At the top, "Device type" is set to "i62 Messenger" and "Parameter definition" is "14.352". A tree view on the left shows the "Message centre" category selected. The main area contains a table with the following data:

Name	Value
Message Centre number	*404
Voice mail number	*404
Voice mail call clears MWI	No

At the bottom right, there are "OK" and "Cancel" buttons.

## Appendix B: Detailed Verification Records

### Ascom i62 with iPECS UCP/eMG R4.0.14

Pass	61
Fail	1
See Comments	19
Not Tested	29
<b>Total</b>	<b>110</b>

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