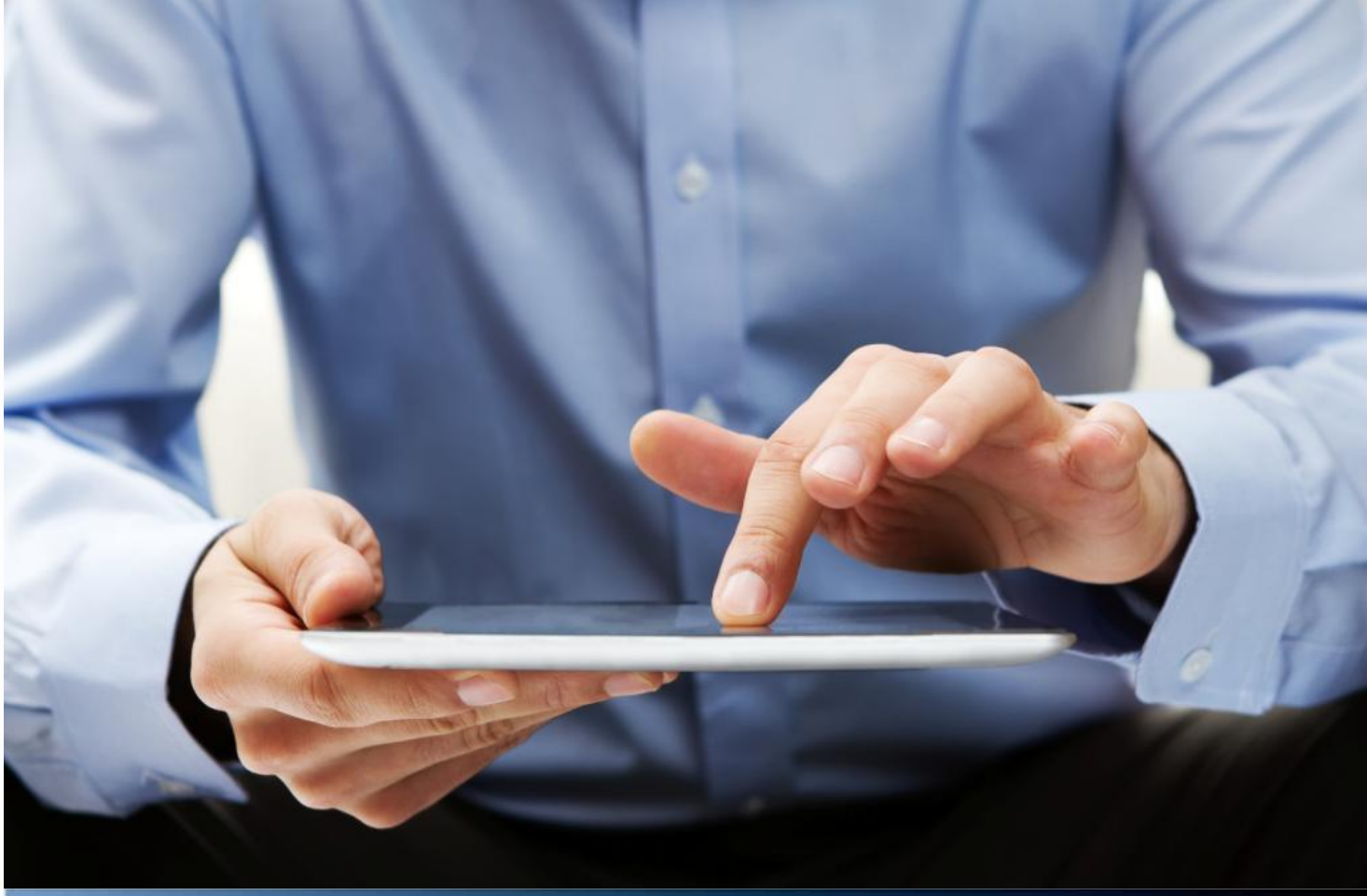

Product Description

Aastra BluStar™ for Android 1.3

Aastra BluStar for Android is a powerful Unified Communications & Collaboration (UCC) App for Android Tablets and Phones. Delivering high quality video and voice calling giving users a true mobility option. The App is directly integrated with Aastra's communication servers and the BluStar Application Server (BAS). The App is also available for use with third party communication platforms.

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Contents

1 Introduction to BluStar for Android

Aastra BluStar™ for Android
Enabling Natural Communication for Mobile Users

Aastra BluStar for Android si a powerful Unified Communications & Collaboration (UCC) App for selected Android devices and is fully integrated with Aastra's communication servers, with Aastra's BluStar Application Server (BAS) and third party communication servers

Today's workers are increasingly mobile, either traveling outside of the enterprise or moving about on campus. With BluStar, mobile users don't have to give up the convenience of natural collaboration that video communication brings.

Intuitive Communication from your Tablet or Smartphone

BluStar for Android is at the cutting edge of communication technologies enabling audio and video communication from the device of choice, providing true mobility for BluStar users. Aastra's in-depth understanding of both IP telephony platforms and collaboration tools for the enterprise market has given the Apps their unique character. With video technology maturing and video becoming a mainstream form of communication today, the evolution to video in the workplace is becoming a natural continuity in enterprise development.

The Apps' intuitive user interface facilitates ease of use and helps users work together more effectively – for example, on-demand video communication with remote workers, road warriors and office based teams working on the same project. The Apps have been designed intentionally for peer-to-peer communication and avoid complex options and configuration settings providing mobile users the right level of information and communication preferences that are simple to use based on the device of choice.

BluStar for Android highlights

- High quality video & voice communications utilizing WiFi & Cellular connectivity
- Intuitive interface facilitates ease of use
- High quality video communications – peer-to-peer, H.264
- SIP softphone for voice communications
- HD audio SIP softphone supporting G.722, G.711
- Channel adaption based on quality of network connection
- Configuration download via email or configuration files
- Directory/contact integration - LDAP, AD, Exchange, Google etc.
- Multiple user accounts configurable
- Session Border Controller (SBC) support - enabling remote access

Aastra BluStar Ecosystem
The BluStar for Android App is an essential part of Aastra's Unified Communication & Collaboration portfolio – the BluStar Ecosystem. BluStar takes business communications to a new level across a choice of devices, providing a consistent user experience by using video as the key mode of communication. BluStar productivity enhancing tools provide more choice and flexibility to answer the increasingly diverse communication needs of today's modern enterprise. As a BluStar user it is possible to use video across all BluStar devices connected to the same communication server.

2 Functionality

BluStar for Android Apps have an intuitive user interface that facilitates ease of use. The Apps are designed to provide the user with the right information and options at the right time.

2.1 BluStar for Android at a Glance

Favorite Keys: Displayed on the Home Screen, up to 12 favorites for the Android Pads and 6 favorites for the Android Phones can be added for fast access to frequent contacts.


: Displays the location where you can add or remove a favorite key. Simply add desired contact from the directory or contact options.


: Opens up the Dial Pad where destination number or URI can be entered directly.

History: Displays the call log for outgoing, incoming and missed calls. Dial back directly from call logs, simply tap the name to initiate a call. Also displays missed call count indicator.

Home: Returns user to Home Screen.

Contacts: Opens the contacts tab where users can search for local or central directory entries.

2.2 Intuitive User interface

The Apps have been carefully designed to be intuitively easy to use, including a clutter free approach with minimal configuration needs. Touch sensitive icons enable users to configure, customize and become familiar with the Apps within minutes. Powerful Apps make the complexities of video and data settings a thing of the past have users making calls without the need for lengthy user and admin guides. Every option or feature is literally a finger touch away.

2.3 Video & Voice Communication

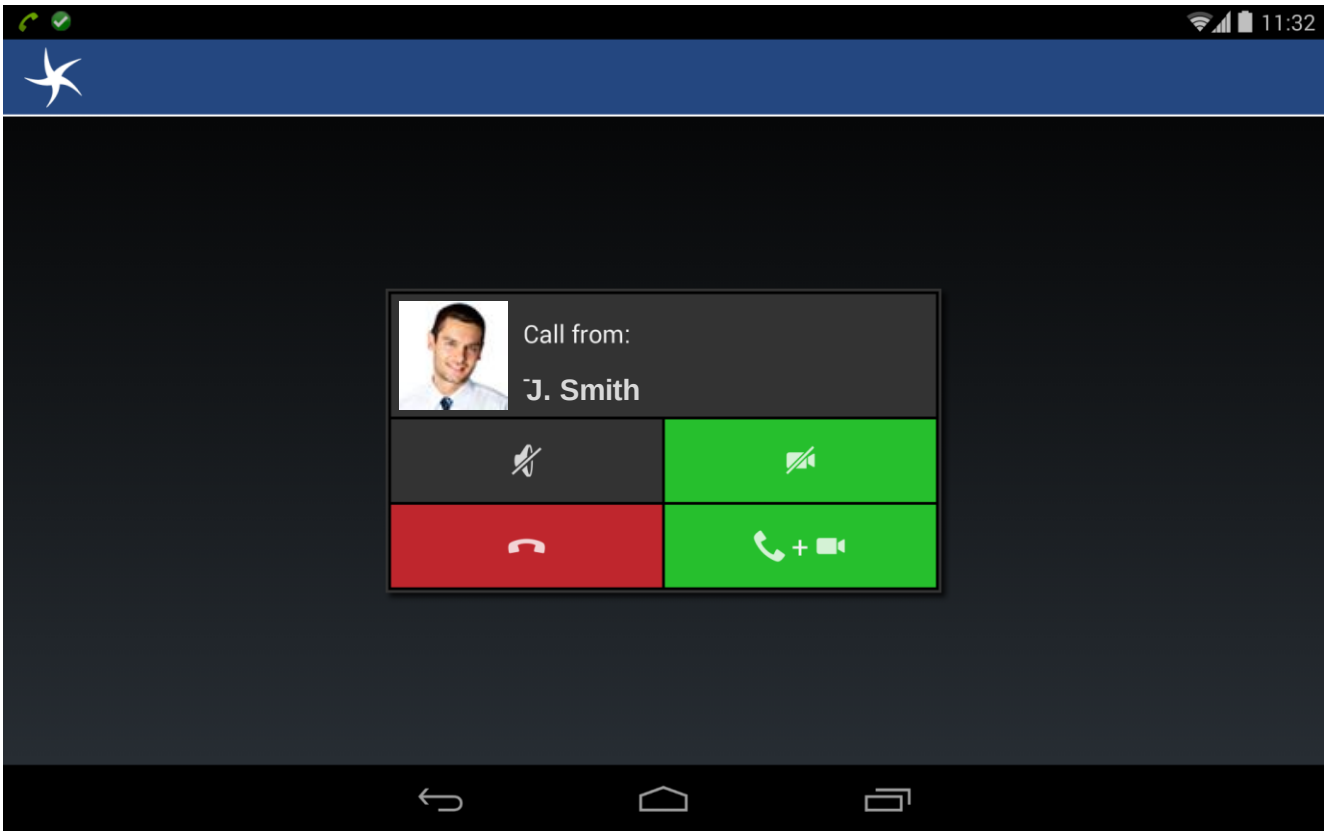
2.3.1 Call Handling

The BluStar Apps provide users with high quality peer-to-peer video calling. Users can choose to originate or receive video or voice only calls. By default, calls will establish a video session to users with video enabled. Preferred communication method can easily be chosen by selecting to make or receive the call with voice only. The user can effectively communicate across all BluStar Ecosystem devices connected to the same communication server.

Make calls: A call can be initiated in several ways:

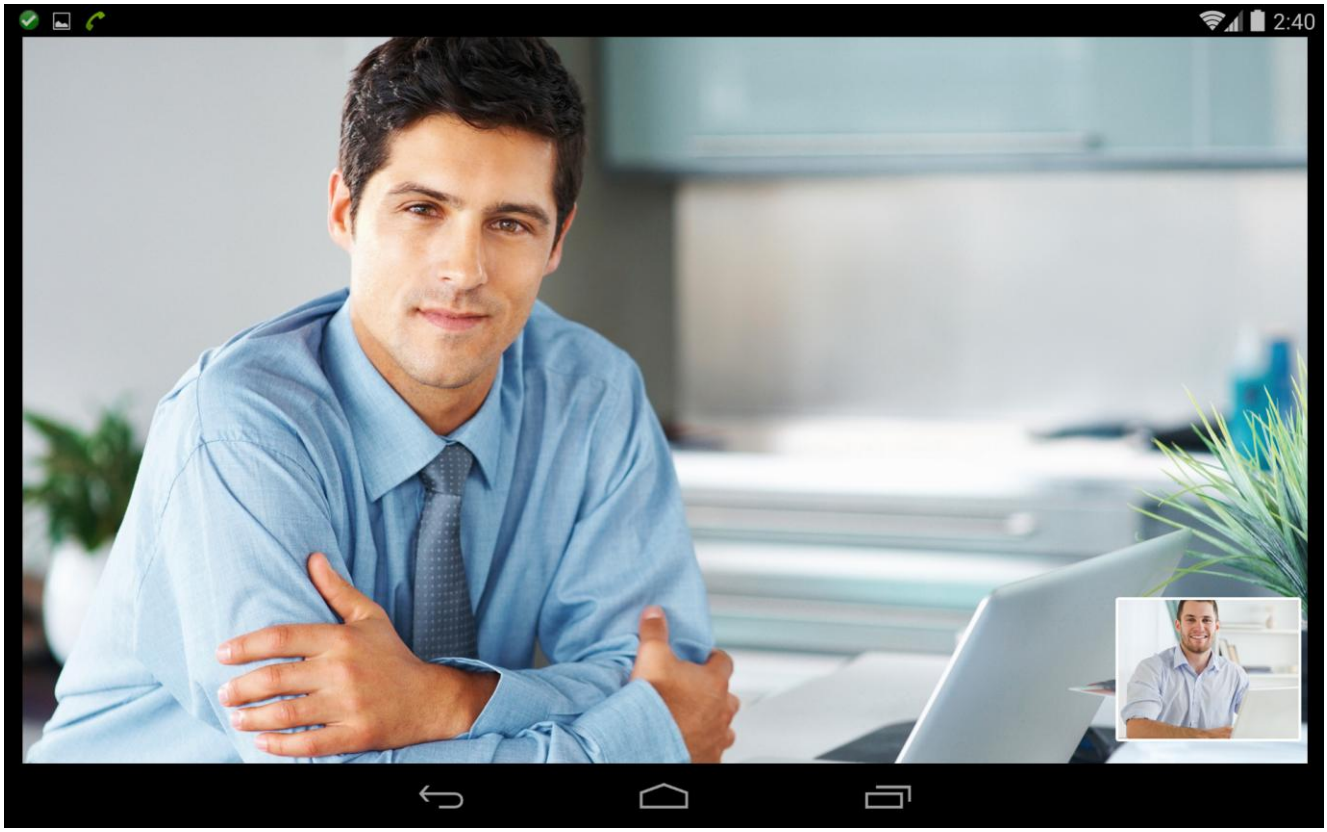
- Type a phone number or SIP URI from the Dial Pad
- From the Home Screen via configured favorites
- From Search Tab results – tapping contact or directory results visible
- From History Tab – tapping any entry visible

Receive calls: The user can choose to answer with video enabled; answer without video (voice only); ignore or silence the ringing tone.



2.3.2 Video Calling with Picture in Picture

Peer-to-peer video calling can be in portrait or landscape orientations, with or without call control keys to maximize video image displayed. Simply rotate and tap the screen to switch modes.



2.3.3 Incall features

BluStar for Android gives the user the option to transfer a call unattended to a third party. Further more users can put a call on hold and retrieve it e.g. while searching for a document or customer project file on the PC.

2.3.4 Video Settings

BluStar for Android removes the complexity of defining and configuring video and data settings by supporting advanced features that manage these settings dynamically. The Apps support video transmit and receive rates in the range of 768kbps to 128kbps and support dynamic channel adaption to adjust requested bandwidth based on network performance. With the additional flexibility of asymmetrical bandwidth support for transmit and receive directions, the Apps are capable of adjusting to most network connection topologies. These advanced video features help users enjoy the best user experience practical that the network connection allows.

2.3.5 Notifications and Alerts

Missed call: Missed calls are displayed as a notification (number of missed calls) attached to the conversation history tab icon. They are also listed in the Android notification bar at the top of the screen.

Voice mail: Alerts for new voice mails will be displayed in the Android notification bar at the top of the screen.

2.3.6 Audio Device Settings & Supported Codecs

BluStar for Android utilizes the built-in device capabilities for speakerphone audio processing and delivers quality hands free operation. Codec selection via device settings allows users to select their preferred codec while also being able to support a wide range of codecs negotiated via normal SIP SDP methods.

BluStar for Android supports the following codecs:

- G.722
- G.711 a-law/u-law (PCMA/PCMU)

2.3.7 Dial Pad DTMF Handling

A traditional dial pad allows for phone number and text URI dialing with full QWERTY touch keyboard. Alternatively users can initiate calls from Contacts, Directory, Favorites and the Call History lists.

Dial Pad supported DTMF types are SIP Info and RFC2833.

2.3.8 Redial from dial Pad

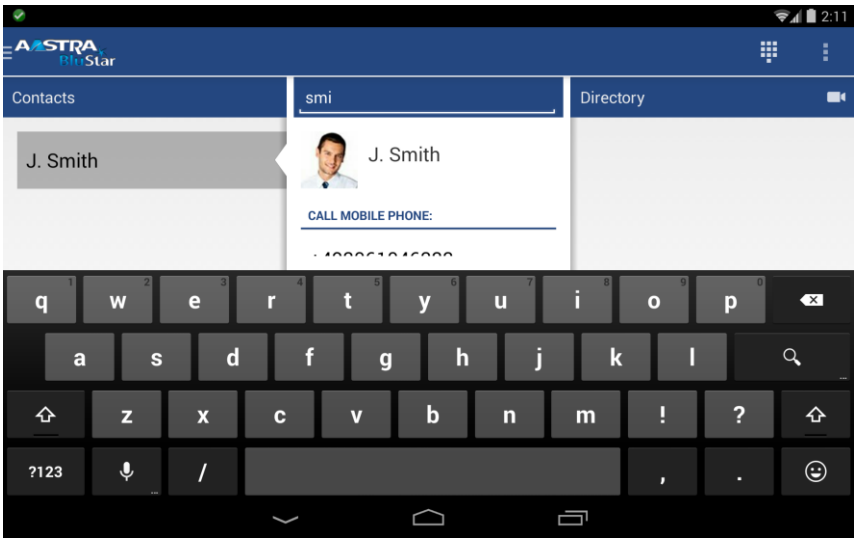
Users can easily re-call the last called number /URI by pressing the green key twice. Once to recall the last dialed contact and a second time in order to start dialing.

2.4 Directory & Contacts Management

The BluStar Apps have the ability to utilize contact information from multiple sources and map those sources to contacts and/or directory lists used by BluStar, enabling users to have traditional corporate

directories as well as personal contacts. The BluStar Apps support integration with Exchange, LDAP and Active Directory as well as integration of contacts via Google as the devices do this natively. The BluStar Apps do not provide an additional source for adding and editing contacts but rather utilize the existing features of the Android as well as sourcing directory information from other sources such as LDAP.

The BluStar Apps enable users to define what source is used for the directory and for contacts. In addition, there is a Video Filter field that when activated scans the directory for entries that match the video filter. This is typically used when only a subset of users have video enabled devices and therefore allows searches for video capable users. This requires such field settings to be defined and populated in the directory source, e.g. setup in the corporate LDAP directory. The video filter feature is activated on the Search Tab by tapping the video camera icon next to the directory heading and is only available with LDAP directories.



Dynamic search on first and last names enables rapid results

2.4.1 Directory Integration

Directory information can be integrated in BluStar from the following sources:

- Exchange
- LDAP (Generic or Active directory)

The preferred directory source can be configured via the Options/Search page. If LDAP is selected, then the BluStar Apps prompt for the necessary configuration data.

Exchange setting allows users to utilize exchange contacts folders commonly associated with Outlook and assign those entries to the “Directory” used in the BluStar Apps. Configuration of the Exchange account is inherited from the device settings for the mail application on The Android device. It is typically found under Settings/Accounts.

2.4.1.1 Cache Directory

A local cache mechanism is used to store directory entries, where searching can be done locally rather than communicating with the external directories. This allows for searches if a connection to the external directory could not be established. The local cache would typically be used when WiFi connection is off network, say a local Hot Spot, rather than from the corporate LAN. This snapshot of the LDAP directory is stored to enable lookups even when off network. Similarly the Exchange directory is stored on the device also.

2.4.1 Contact Integration

BluStar builds on the existing Android contacts management options managed via the settings option built into Android. Within settings users configure Exchange accounts, syncing contacts from Google, Yahoo, Outlook and Windows contacts. They are displayed as local contacts in the BluStar App since the Android OS manages those sources.

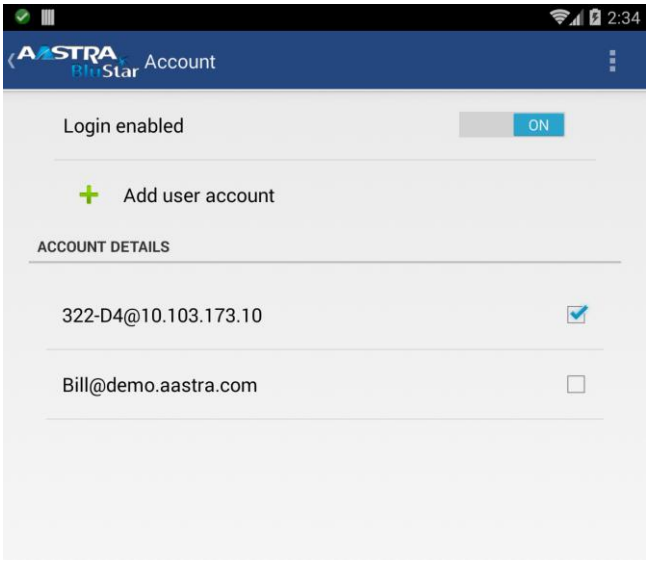
2.4.2 Progressive Search

Searching within the BluStar Apps is intuitive; enter search criteria in the search field, the search result will be shown based on matching results Contact & Directory sources. Character matching is simultaneously against First and Last names.

The search is progressive, as characters are entered, the search results are narrowed and results displayed in the contact/directory lists.

2.5 Multiple User Accounts

The BluStar Apps support multiple user accounts, with one account active at any given time. The configuration and account details are unique to each account and this allows a device to be shared or for a user to have accounts registered off multiple communication servers.



2.6 Supported Languages

Aastra BluStar Apps user interface supports the following languages:
English, French, German, Italian, Spanish and Dutch.

2.7 Configuration

Aastra BluStar Apps support configuration options that make deployment and configuration within an enterprise easy to manage and control. Individual users can enter the necessary configuration parameters via the intuitive options menu or can have the parameters set automatically.

Configuration download via email allows administrators to email the configuration file to the user's device. With a simple click of the attached configuration file, the BluStar Apps will apply the configuration parameters.

For administrators wishing to use centrally stored configuration files for end user devices, the same email configuration method can trigger individual devices to download configuration files via HTTP, HTTPS, FTP or TFTP. The configuration file formats are consistent with other Aastra SIP devices and clients, including aastra.cfg, MAC.cfg and device specific **blustarios**.cfg files as well as the user.cfg. Additionally a configuration popup to enter the basic parameters is available on startup if no configuration is saved yet.

2.8 Maintenance

To simplify the maintenance process for system administrators and support personnel there is a Support section in the Options menu. It provides users the ability to send traces, monitor call statistics and issue reporting options facilitate product support.

2.8.1 Error reporting

The "Report an issue" feature is available to let users report faults in the BluStar App to a predefined mail address. Sending of an email with captured error traces is dependent on an email account being active on the device.

3 Supported Devices & Android OS releases

Minimum Android version is Android 4.1. Due to the requirements towards camera quality and performance of the device, not all Android devices can generally be supported. Please contact the Product Management for detailed information on supported devices or refer to the according release documentation. Currently supported devices are:

- Google Nexus 4/5/7/10
- Samsung Galaxy S4
- HTC One
- Sony Xperia Z1
- Samsung Galaxy Note 3

4 Network Integration

4.1 System Architecture

The BluStar for Android Apps are SIP user agents that connect directly to the communication server or BAS. Signaling and media rely on the device having data connectivity to an IP network and can operate on private or public IP networks. At start up, the Apps register with the communication server or BAS using SIP and require a user license on the server. Media (RTP) between the App and the terminating end point is routed directly between endpoints, while signaling is routed and negotiated using SIP via the communication server or BAS.

4.2 Network connectivity

4.2.1 WiFi

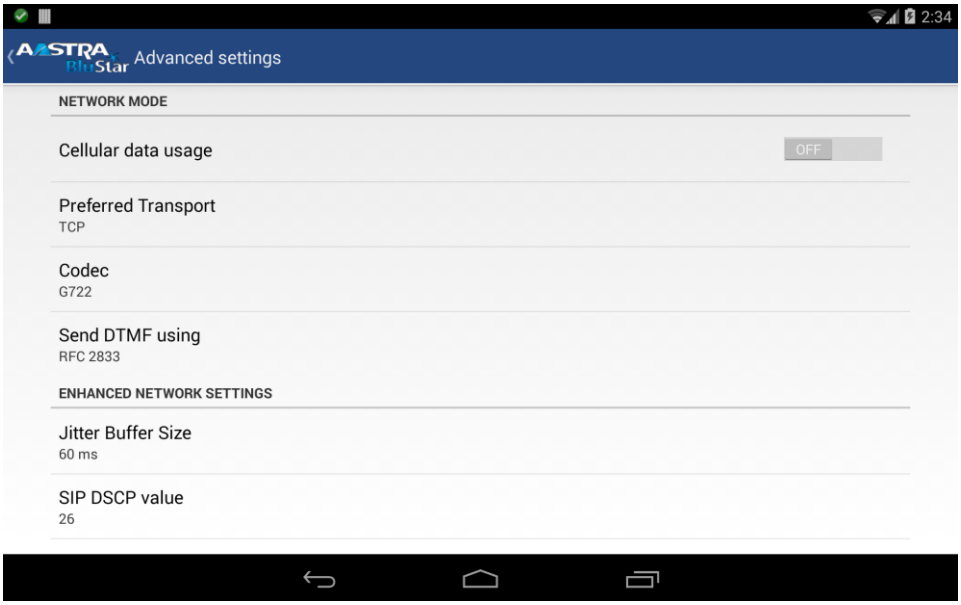
WiFi connections are managed via existing device capabilities. The BluStar Apps utilize the existing network connection and have no configuration related to WiFi. Aastra recommends the use of a professionally deployed WiFi infrastructure for Voice/Real-time communication for optimal results and user experience.

4.2.2 Cellular

BluStar for Android Apps are primarily designed to be deployed behind WiFi networks. However, the cellular data connection from supporting Android devices can be used with the BluStar Apps. Bandwidth and data profiles of cellular networks and their availability (which are outside the control of Aastra) could result in poor user experience for video calling. Aastra recommends WiFi connections and would be unable to support quality of service (QOS) issues for cellular deployments. Users need to be aware of potential data charges that may be applicable for data usage.

4.2.3 Network Settings

The default Network settings listed enable most deployments to work without change. However some network administrators may recommend changes to these fields or configure them to suit local environments. You can adjust the settings under Options/Settings/Advanced Settings



4.2.4 Session Border Controller Support

The BluStar Apps support connectivity through a Session Border Controller (SBC) to provide the user with the same voice and video functionality from anywhere without being connected to the corporate network. The client can use an SBC by either configuring an outbound proxy or use the full DNS host name of the communication server in the SIP URI and make sure to use an official host name that can be resolved by the public DNS servers outside of the office network. The outbound proxy can be set from the User account tab under the Options menu.

5 Supported Communication Servers

The BluStar for Android App is supported with the following Aastra communication servers:

- MX-ONE 5.0 SP5 onwards
- Aastra 5000 R6.1 onwards
- Aastra 400 R3.1 onwards
- BAS 4.2 onwards

The BluStar Apps support an in App upgrade (purchase event in coordination with the App store) to unlock the App so it will register with non-Aastra communication servers. Aastra BluStar for Android is SIP standards based but Aastra provides no guarantee of interoperability. The in App purchase does not cover any associated costs of licenses for the third party communication server.

6 Licensing

BluStar for Android Apps are available to download from the Apple App store. When connected to Aastra communication servers a license on the communication server is required.

The licensing options are based on functionality and volume and are handled by the communication server.

7 Download Information

The BluStar for Android Apps are available for download from the App Store. Listed under business category, search key words Aastra and/or BluStar. When connected to an Aastra Communication Server a license on the communication server is required. When not connected to a licensed Aastra Communication Server, the App will not work.

8 Acronyms

AD	Active Directory
BAS	BluStar Application Server
DNS	Domain Name System
DTMF	Dual Tone Multiple-Frequency
HD	High Definition
iLBC	Internet Low Bitrate Codec
IP	Internet Protocol
kbps	Kilobits Per Second
LDAP	Lightweight Directory Access Protocol
OS	Operating System
PCMA	Pulse code Modulation µ-law
PCMU	Pulse code Modulation A-law
RFC	Request For Comments
RTP	Real-time Transport Protocol
SBC	Session Border Controller
SIP	Session Initiation Protocol
SP	Service Pack
UCC	Unified Communication and Collaboration
URI	Unified Resource Identifier
VPN	Virtual Private Network

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