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SIP based VoIP server for BioStation A2 & FaceStation 2

Configuration Guide

The BioStation A2 videophone feature is now available with the release of BioStar 2.3. To use the videophone, you need a firmware version of 1.2 or later and a SIP-based VoIP server. Please refer to the attached document regarding the setup and configuration of a SIP-based VoIP Server.

The VoIP feature is also possible with FaceStation 2 which was introduced with BioStar 2.4.1. [sip_server_configuration_guide_for_a2.pdf](#)

Officially only local Asterisk VoIP server is supported. We don't guarantee usability with other services currently.

Following codecs are utilized:
Video: VP8, H264 with resolutions up to 1080P, MPEG4
Optimized for H.264 codec

Video call is possible when the user calls from the device. You will need a SIP client that supports the feature.

Utilized Protocols

Internal tests were done with a PC app of Linphone and MicroSIP.

We cannot guarantee that the feature will work for SIP phones (hardware) because SIP Phones do not support all SIP versions.

If you would like to use a hardware SIP phone, make sure that the below protocols are supported.

- Session Initiation Protocol, RFC 3261

- 8. General User Agent behaviour
- 9. Cancelling a request
- 10. Registrations
- 12. Dialogs
- 13. Initiating a session
- 14. Modifying an existing session

- 15. Terminating a session
- 17. Transactions
- 18. Transports
- 22.4 The Digest Authentication Scheme

- Session Initiation Protocol (SIP): Locating SIP Servers, RFC 3263
- Session Description Protocol, RFC 4566
- An Offer/Answer Model with the Session Description Protocol (SDP), RFC 3264
- An Extension to the Session Initiation Protocol (SIP), RFC 3581 (use of rport parameter)
- Session Initiation Protocol (SIP) INFO Method and Package Framework, RFC 6086

- 4. The INFO Method

- The Session Initiation Protocol (SIP) Refer Method, RFC 3515

- 2. The REFER Method

- Session Description Protocol (SDP) Security Descriptions for Media Streams, RFC 4568
- Managing Client-Initiated Connections in the Session Initiation Protocol (+sip.instance parameter), RFC 5626
- Connection reuse in the Session Initiation Protocol (alias parameter), RFC 5923
- Correct Transaction Handling for 2xx Response to Session Initiation Protocol (SIP) INVITE Requests, RFC 6026
- A privacy mechanism for the Session Initiation Protocol, RFC 3323
- Private Extensions to the Session Initiation Protocol (SIP) for Asserted Identity within Trusted Networks, RFC 3325
- Interactive Connectivity Establishment (ICE), RFC 5245
- Traversal Using Relays around NAT (TURN): Relay Extensions to Session Traversal Utilities for NAT (STUN), RFC 5766
- Session Traversal Utilities for NAT (STUN), RFC 5389
- Traversal Using Relays around NAT (TURN) Resolution Mechanism, RFC 5928
- Re-INVITE and Target-Refresh Request Handling, RFC 6141, chpt. 5 only
- Reliability of Provisional Responses in the Session Initiation Protocol (SIP), RFC 3262

Comparison of Interphone Options

If you're familiar with BioStation T2's videophone functionality, refer to the details below to understand the difference between BioStation T2 and BioStation A2 videophone.

With BioStation T2, you have three different options to use the videophone:

1) BioStar Videophone

This is a standalone software application made by Suprema and communicates with BioStation T2 through Suprema's proprietary protocol. Even though you can't use BioStation T2 with other 3rd party phones like SIP-based phones or analog phones, it's a good option for small-sized companies just for simple communication and door control.

2) VoIP

You can also use BioStation T2 with a SIP-based VoIP server. This is a good option for mid and large-sized companies, because you can utilize the existing VoIP infrastructure. Even though SIP protocol

supports video streaming, BioStation T2 does not support video streaming and only supports audio. The main difficulties for using VoIP is you have to install VoIP server if you do not have the existing VoIP infrastructure. One of the most popular SIP-based VoIP server is Asterisk server <http://www.asterisk.org/>.

3) Analog videophone

You can use Commax's analog videophone with BioStation T2.

With BioStation A2, you have only one option to use the Videophone:

1) VoIP

You can use BioStation A2 with a SIP-based VoIP server. Unlike BioStation T2, BioStation A2 supports video streaming as well. We have tested BioStation A2 with Asterisk Server and mobile and Windows SIP clients.

Refer to the image below to understand the different options for interphones:

	Analogue	VoIP	Software
BioStation T2	Analogue Interphone	VoIP Interphone	BioStar Videophone
BioStation2	Analogue Interphone	✗	✗
BioStation A2	✗	VoIP Interphone	✗

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