



## VCOM System Overview for SIP



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# 1. SESSION INITIATION PROTOCOL (SIP)

## 1.1 Overview

SIP (Session Initiation Protocol) is a widely adopted signaling protocol for Internet conferencing, telephony, presence, events notification and instant messaging.

The VCOM Virtual Matrix includes an integrated SIP server which allows connection of SIP enabled VoIP peripherals directly into the Virtual Matrix from any network connection without the need for a PC. You can seamlessly connect IP phones/phone systems, analog telephone adapters (ATAs), or IP gateways into a network and using the VCOM System Administration application map your SIP peripherals to Point-to-Points, Group Calls, and/or Party Lines in any complexity.

Typically SIP devices are used with Telephone IP PBX systems to implement a traditional Telephone system whereby one user dials the number of another user and waits for the recipient to answer. VCOM however is an always on non-blocking intercom system and as such the SIP implementation has been tailored to best compliment this functionality. As such each configured SIP client becomes an extension of a VCOM port by connecting the SIP device to a dedicated virtual SIP client associated with a VCOM port.

There are many ways SIP devices can be utilized with VCOM. Below are a number of common applications:

- Interoperating ProComm and IP Phone Systems: ProComm Administrators can seamlessly bridge intercom with widely deployed IP Phone Systems which are prevalent in the governmental and defense markets;
- Interfacing Phone Lines: Analog and digital phone lines can be bridged into VCOM from any network connection using SIP-ready VoIP gateways;
- Party Line Systems: Users with simple intercommunication requirements, such as only needing to monitor or talk on one or two channels have a wide array of user interface options that do not require a PC. Options include WiFi enabled IP phones, iPhones (running softphone clients), and desktop speaker phones.
- Hoot n' Holler: VCOM is widely deployed as a next generation Hoot n' Holler system replacing private circuit leased lines from the phone companies which are expensive and can have a low quality of service. In this application most users have the simple requirement of monitoring and talking on a single party line and use an analog telephone attached to an ATA or IP phone, requiring no client-side PCs.

## **1.2 Configuring VCOM for SIP Devices**

A SIP Device is added or edited in the VCOM System Administration under 'Client Configuration' in the same fashion as a VCOM Control Panel or VCOM Device Interface. For specifics please refer to the VCOM System Administration User Guide, Section 3.3 SYSTEM CONFIGURATION - Client Configuration.

How the SIP Device connection is established can be configured in different ways to suit the application and/or the device. For specifics please refer to the VCOM System Administration User Guide, Section 3.3 SYSTEM CONFIGURATION – Options.

For SIP devices with a DTMF keypad, VCOM Talk/Listen Selectors can be assigned to activate with the DTMF access codes. For specifics please refer to the VCOM System Administration User Guide, Section 3.3 SYSTEM CONFIGURATION – Selectors Assignment.

## **1.3 Configuring SIP Devices for VCOM**

IntraCom maintains a list of detailed configuration guides for commonly used SIP devices online at [www.intracomsystem.com/VCOMsystemdownloads.htm](http://www.intracomsystem.com/VCOMsystemdownloads.htm). The following are generic guidelines for the various SIP device classes.

### ***Softphones***

Typically softphones will have an account setting or configuration area and a properties tab under which you can point your softphone to a Domain. Find this area and use your VCOM Server IP Address as the Domain, Proxy, and the Registrar address. Unless changed in the VCOM System Administration the standard SIP default port number is 5060. Set the Display Name, User Name, and Password to match the settings programmed in the 'Client Configuration' section of the VCOM System Administration for any given softphone.

### ***Hardphones and ATAs***

SIP hardphones and ATAs are configured via a web interface. You need to begin by determining the device IP Address typically by using Internet Explorer to access your router's web interface and view the list of attached devices.

Once you determine your devices IP Address input it into a web browser to access the device's configuration page. Use your VCOM Server IP Address as the Domain, Proxy, and the Registrar address. Unless changed in the VCOM System Administration the standard SIP default port number is 5060. Set the Display Name, User Name, and Password to match the settings programmed in the 'Client Configuration' section of the VCOM System Administration for any given hardphone or ATA.

## **2. SUPPORT**

Visit our web site at [www.intracomsystem.com](http://www.intracomsystem.com) for general information.

Email us at [support@intracomsystem.com](mailto:support@intracomsystem.com) for questions not addressed in the sections above or call our technical support hotline at 818-357-2347.