Sangoma s206: A Cheap Desktop VoIP Phone That Makes Opus Calls to Comrex Codecs

Introduction

Hacking around with VoIP hardware is a fun thing for us at Comrex. Recently, we noticed the **Sangoma s206** for sale online at a really low price (USD $58 at voipsupply.com as of March, 2019) and saw that it offered both Opus and G.722 encoding.

We were intrigued enough to buy one and take it for a spin. Within a few minutes of setting it up, we were making wideband calls to our ACCESS and BRIC-Link codecs.

We immediately recognized that this phone might make a good option for people who want a wired "batphone" on their desks to make calls via codecs.

So here's a **four-step cheat sheet** on how to get it going.

Instructions

We didn't bother registering the phone to a SIP provider, but that's certainly possible if you want to call from the codec into the phone.

Out of the box, the phone connected outbound fine via G.722, and it only took a quick configuration change to make it prefer the better-sounding Opus encoder.

Step 1: Plug the phone into an internet connection that supports PoE.
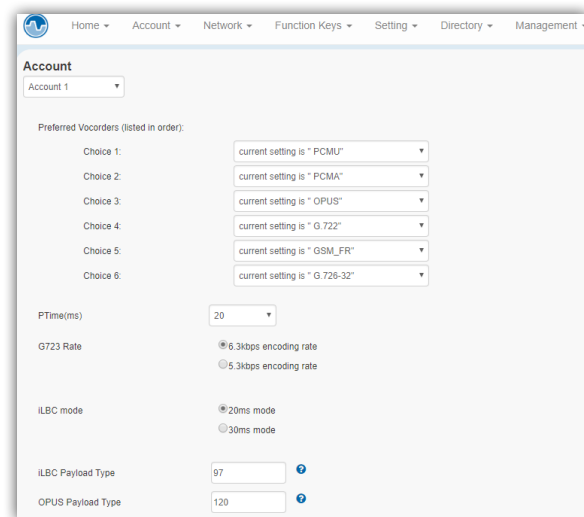
The phone doesn't ship with a power supply, so it needs to get its power from the network.

Step 2: Make sure your phone is running the latest firmware from the Sangoma website.

The firmware that shipped with our phone didn't connect correctly, so we had to update it. (Our working firmware update was 3.0.4.59.) You'll need to access the web interface on the phone for that.

Get the DHCP IP address the phone uses by selecting **Menu->Status->Network->IPV4**. Open that address on a browser (user/password = admin/admin), then navigate to **Management->Upgrade** and send it the latest firmware file.

The phone will reboot after the upgrade. After it reboots, re-log into the web interface and choose **Account->Codec**. Change the entry on "Choice 3" to Opus. Change "Choice 4" to G.722. It should look like this:
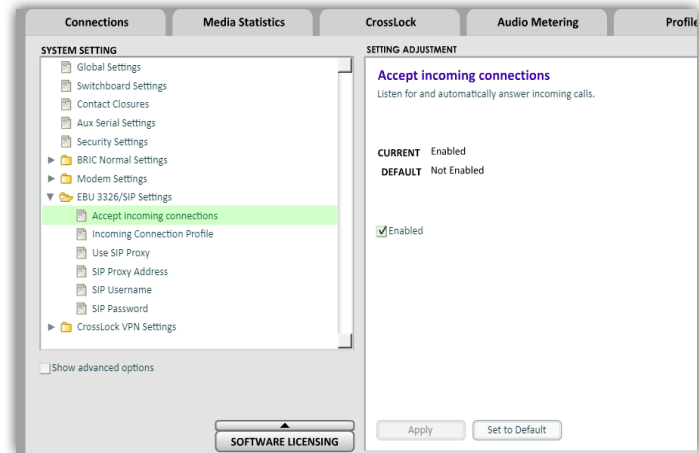

Select "SaveSet" at the bottom to save the changes.

Put Comrex On The Line.
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Step 3: Configure your Comrex codec to accept SIP calls.

Note if you use FieldTap or other smartphone apps this should already be set, so you can move on to Step 4.
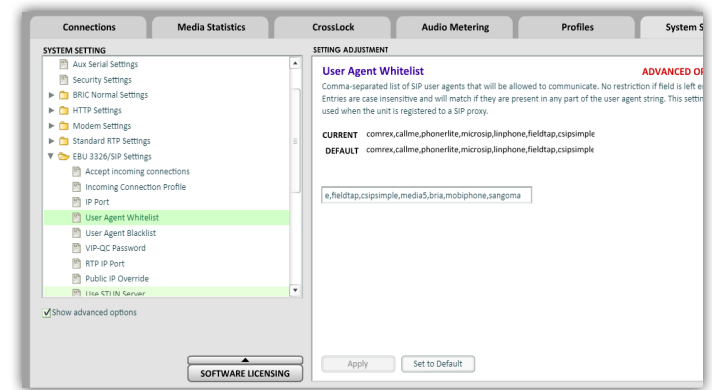
On the codec's web GUI page, go to:
System Settings->EBU 3326/SIP Settings and set "Accept Incoming Connections" to "Enabled".

Click "Apply" to save the change.

Step 4: Add the phone type to your SIP Whitelist (which is used to reject VoIP robo-calls).

Check "Show Advanced Options" on the left side of the screen and go to **EBU 3326/SIP settings->User Agent Whitelist**. Scroll to the end of the text field, add a comma after the last entry, and type "sangoma".

Click "Apply" to save the change.

You should now be able to directly dial a codec's IP address from your phone's keypad. Use the * button in place of the dot (e.g., 70*25*155*142).

Press "Send" (which will appear as one of the soft key options) and you should connect to the codec in low-delay, wideband Opus!