

Source: <https://www.3cx.com/voip-gateways/patton-smartnode-sn4112/>

Configuring Patton SmartNode FXO VoIP Gateway



Supported Models: Patton SmartNode SN4112 / SN4114 FXO

After you familiarize yourself with the basic concept of SIP Trunks (<https://www.3cx.com/docs/manual/sip-trunks/>) proceed to add a PSTN gateway into the PBX. All templates are designed to work with Patton SmartWare firmware and the device should run on the **“latest 6.X firmware”**.

Notes:

- Trinity Firmware/Devices are NOT supported
- The device must be local to 3CX, in the same subnet and/or locally routed subnet (including site to site VPN)
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This guide focuses on the setup of FXO (external analog). If you are looking for another PSTN technology:

- ISDN BRI go here: [Patton ISDN BRI](#)
- ISDN E1/T1/S2M go here: [Patton ISDN E1/T1](#)

Step 1: Add and Choose Device

Select Brand

Select model/device

Number of Physical PSTN Ports on device

Main Trunk No

Navigate to **“SIP Trunks”** within the 3CX Management Console and select **“Add Gateway”**:

1. Select Brand: Patton
2. Select model/device: Patton Analog FXO
3. Number of Physical PSTN Ports on device: The amount of FXO ports the device has in total (not how many ports are going to be used)
4. Main Trunk No: Define the number of your FXO lines which should act as catch all destination. Commonly your most important number of all.
5. Press **“OK”** to save the device.

Step 2: PSTN Line Setup

Trunk Details

Enter name for Trunk

Registrar/Server/Gateway Hostname or IP

Device Subnet Mask

Tone Set Selection

Number of SIM Calls

Number of Physical PSTN Ports on device

Now you need to define some device and line specific options:

1. Registrar: Enter your Patton FXO device's IP address.
(the IP address will be set to static in case DHCP is being used)
2. Subnet Mask: Enter your Network Mask size.
(if network topologies requires routing informations such as default routes, see [here](#) how to add the default route to a Patton device).
3. Tone Set: Define in which country your are using this device. If the country is not listed request from your telco the used tone set of your line.
4. Number of SIM Calls: Define how many FXO ports are going to be used. This might be equal to the amount of physical PSTN ports the device has or less.

Step 3: Port Configuration

The screenshot shows a configuration interface with tabs for 'General', 'DIDs', 'Caller ID', 'Options', 'Inbound Parameters', and 'Outbound Parameters'. The 'Options' tab is active, displaying the 'PSTN Gateway Options' section. This section contains two dropdown menus: 'Dial Delay' is set to 'Wait For Dial Tone' and 'Hunting Mode' is set to 'Normal'.

Navigate to the “**Options**” tab and in the section “**PSTN Gateway Options**”. In this section define how outbound calls should address your PSTN ports.

1. **Dial Delay:** Set how the device should detect that the line is open and ready to dial. Most configurations will work once a dial tone is detected by the PSTN gateway, however, in some cases the wait time must extend beyond this.
2. **Hunting Mode:** As all FXO ports will be placed in a hunt group, select how the Patton device should allocate the ports while placing outbound calls. Options are: “**Normal**” (always start from the first port) or opt to take a “**Cyclical**” approach (spreading the calls across all ports evenly in a round robin manner). Note: ports that are already in use will be skipped and the next available port will be used.

Step 4: Upload Configuration

The screenshot shows a dialog box titled 'Patton Analog FXO'. It contains three buttons: a grey 'Generate device config' button, a blue 'OK' button, and a dark grey 'Cancel' button.

By pressing the “Generate config file”, the 3CX Management Console will directly open the web interface of the Patton gateway on the “**Import Configuration**” page (e.g. <http://192.168.9.122/imp-cfg.html>). A configuration file is automatically downloaded which then needs to be saved and uploaded onto the Patton device by using the browse and import button.

[Import Firmware](#) | **[Import Configuration](#)** | [Import Licenses](#) | [Export Configuration](#)

If you have previously exported the system configuration to a file then you can submit that file to restore the system settings.

 This operation will erase whatever startup settings you currently have in the system.

(1) Download Configuration

Select file containing new startup configuration:

Patton-FXO.gwcfg

The device will reboot in order to apply the configuration. After this the **“Port/Trunk”** status on the Management Console should change from RED to GREEN.

SIP Trunks

Search ...

Name	Host	Type	Sim Calls	Main Trunk No
 Patton Analog FXO	192.168.9.122	Analog	4	0000

Step 5: Inbound Rules

Analog lines (FXO) can present the calling number but not the called number. Therefore each FXO port is reflected with a fixed DID number. This is allowing you to individually route calls received from FXO port 0 to destination A while calls to FXO port 1 are routed differently (and so on). The mapping is as follows:

- FXO Port 0/0 indicates the dialed number: 000000
- FXO Port 0/1 indicates the dialed number: 000001
- FXO Port 0/2 indicates the dialed number: 000002
- FXO Port 0/3 indicates the dialed number: 000003

General **DIDs** Caller ID

DIDs

[+ Add DID](#)

DID/DDI Number

000000
000001
000003
000004

Create those DIDs within the gateway to allow calls to be routed based on the port the call was received on. General information on how to manage inbound calls can be found here: <https://www.3cx.com/docs/manual/inbound-rules/>.

Step 6: Add Outbound Rules

To create “**Outbound Rules**” read Chapter 13 of the admin manual: [Outbound rules - Routing outgoing calls](#).