Valcom SIP devices can integrate with Avaya Aura® Communication Manager and Avaya Aura® Session Manager as SIP endpoints. Some devices are single-channel (using one SIP extension), while other devices can be configured with up to 8 extension numbers (in Station mode) or up to 100 extension numbers (in Trunk mode). The following information illustrates the minimum configuration for a Valcom SIP device to register on an Avaya Aura® Communication Manager and Avaya Aura® Session Manager version 6.3.

1. Valcom uses UDP to communicate with Session Manager. To confirm UDP is enabled, log on to the Avaya System Manager web page and navigate to Elements ➔ Routing ➔ SIP Entities. On the SIP Entities page, select the Session Manager to which the SIP device will register. On the SIP Entities Detail page for the Session Manager, verify in the Port section that UDP protocol is available. If not, click the Add button to open an additional line and add it to the list. The default SIP port is 5060, although this can be changed to a different value if necessary. The Default Domain value should be chosen appropriate to your environment. The screen capture below shows a Session Manager configured to communicate on UDP port 5060.

2. Create new Endpoints for each SIP extension that will be assigned to the Valcom SIP device.
   A. The following instructions are for creating a single SIP extension. For multi-channel devices, Communication Manager provides a method to add multiple extensions in one step. Skip to section 2.B for instructions on adding multiple extensions to one Valcom device.

   In System Manager, navigate to Elements ➔ Communication Manager ➔ Endpoints ➔ Manage Endpoints. Click the “New” button to add a single endpoint.
On the New Endpoint page, enter the required information for System, Template, Port and Extension. Fill in other items as necessary for your system. For our example, the 9620SIP_DEFAULT_CM_6_3 template was selected. A description of the Valcom device was entered in the optional Name field. For the extension, 3027 was chosen from the list of available numbers. Enter a numeric Security Code. Note that this code will be used for the Communication Profile password (in Step 4) and will be used by the Valcom SIP device as its “Secret” to register the extension with Session Manager. Click the Commit button to create the new endpoint.

B. For Valcom multi-channel devices that can use more than one SIP extension, Communication Manager provides a method to add multiple extensions at one time.

In System Manager, navigate to Elements ⇒ Communication Manager ⇒ Endpoints ⇒ Manage Endpoints. To simplify creating multiple Endpoints, use the “More Actions” button, and choose “Bulk Add Endpoints”.

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In the Bulk Add Endpoints page, choose the System where the endpoints will be created from the drop-down list. Choose an appropriate Template. For our example, the 9620SIP_DEFAULT_CM_6_3 template is selected. For the Endpoint Name Prefix, enter a descriptive name. The extension number will be appended to the prefix entered. In the Enter Extensions box, enter the extension numbers that will be assigned to the new endpoints. A consecutive range can be specified using a colon (:) separator. Non-consecutive numbers can be entered using a comma separator. In our example, a range of endpoints beginning with 3011 and ending with 3018 will be created. Click the Now button to create the new endpoints, or click the Schedule button to defer processing until a maintenance window.

**Bulk Add Endpoints**

- **System**: CommunicationManager1
- **Template**: 9620SIP_DEFAULT_CM_6_3
- **Endpoint Name Prefix**: PagePro Ch-

*Required*
After the Endpoints are created, navigate back to the Manage Endpoints page and edit each endpoint to add the Security Code. In the Endpoint List, check the box for one of the new Endpoints, and then click on the Edit button.

On the Edit Endpoint page, add a numeric Security Code. Note that this code will be used for the Communication Profile password (in Step 4) and will be used by the Valcom SIP device as its “Secret” to register the extension with Session Manager.

3. Create a new user for the PagePro IP. In System Manager, navigate to Users \ User Management \ Manage Users. On the User Management screen, click the New button to add a user. If this Valcom device will have more than one SIP extension assigned, create one user for each SIP extension.
On the Identity tab of the User Profile Edit page, fill in the First Name and Last Name fields with appropriate values. The Login Name should be the new user ID, followed by the domain this user account will be used in. Select Basic for the Authentication Type.

4. On the Communication Profile tab, edit the Communication Profile Password. This should be the same as the Security Code entered for the Endpoint configuration in Step 2 above, and is used by the Valcom SIP device to register with Session Manager.
5. In the Communication Address section, click on New to enter details for the SIP extensions that will be assigned to the Valcom SIP device.

Choose Avaya SIP for the Type, enter the SIP extension for Handle and choose the appropriate Domain from the drop-down list. Click the Add button when finished.

![Communication Address](image)

6. Click the checkbox for Session Manager Profile and complete the required fields. At a minimum, the Primary Session Manager and Home Location must be selected. Fill in other fields as appropriate for your Aura installation, particularly the Application Sequences.

![Session Manager Profile](image)
7. Click the checkbox for CM Endpoint Profile and complete the required fields. Choose the correct Communication Manager server in the System list. For Profile Type, select Endpoint. Check the Use Existing Endpoints checkbox, and then enter one of the new extension numbers that was previously created. The Template, Security Code and Port should fill in automatically after selecting the existing Extension. Click the Commit button when all selections have been entered.

8. Using the Valcom VIP-102B programming tool, complete the usual entries for IP address, Group Membership, Relays, etc. for the SIP device. On the SIP tab, enter the values created on the Avaya system to enable the Valcom SIP device to register and receive calls. Multi-channel devices can have up to 8 sub-tabs corresponding to each of the Endpoints created on the Communication Manager.

For the Phone Number, enter one of the Endpoint extensions created in Step 2. The Authentication Name is the same as the Phone Number. The Secret is the numeric value entered for the Communication Profile Password in Step 4 and Security Code in Step 2. In the SIP Servers area, enter the name or IP address of the Session Manager server where the PagePro IP will register. If the UDP port was changed from the default (5060, in Step 1), enter the same value in the Port column. Click the Register checkbox. For multi-channel devices, repeat this process for each sub-tab on the SIP main tab, changing the Phone Number/Authentication Name and Secret as necessary for each Endpoint that was created.
After making all required settings, update the Valcom device and allow it to reboot to make the changes effective.

9. To verify successful registration, navigate in System Manager to Elements ⇒ Session Manager ⇒ System Status ⇒ User Registrations. Verify the User created previously is shown as registered to the Primary server.