



GRANDSTREAM

Remote Solutions with the
UCM IP PBX Series



Grandstream's UCM series is an on-site IP PBX solution that helps organizations around the world craft customized communication solutions. The UCM has many features to allow organizations reach outside of their local area network and empower the remote users in a communications solution. Advanced concurrent registration features, OpenVPN compatibility, streamlined smart-phone integration, and powerful extension security features can all be utilize to create a network that enables remote collaboration through the UCM IP PBX series.

Concurrent Registrations

The UCM series supports concurrent extension registrations across various devices within its network. Network admins can configure how many devices a particular extension can be registered to, which makes network customization easier when implementing remote endpoints for users. A typical user within the network can utilize their same extension whether they're using a desktop phone in the office, a cordless IP phone at home, or an iOS/Android device.

This simplifies the process for callers from outside the network to reach the intended user without having to have a complicated network of several extensions all going to the same person. On top of that, this is also helpful to network administrators for configuration and ongoing management of a unified communications solution with the UCM. Adjustments to the extension's call queue, IVR, pickup group, ring group, and other functions will carry over to all the devices that an extension is registered on. This keeps a UCM's communication network streamlined, organized, and easy to manage.



Remote Home Office

OpenVPN Tunnel to UCM, All Devices Sharing EXT 800

OpenVPN Compatibility

Grandstream's UCM IP PBX series is compatible with OpenVPN, which allows it to integrate directly with a virtual private network (VPN). A network admin can configure the OpenVPN features manually or can choose to upload .ovpn and .conf files to the UCM that will automatically configure the UCM to the OpenVPN network. With this compatibility, remote clients can connect to the UCM IP PBX despite any physical difference in location by utilizing private VPN tunnels. Remote users within a company can utilize desktop phones, conferencing devices, and other solutions from their home offices or satellite locations and still be a member of the UCM's central network. Devices can have registered extensions within the UCM IP PBX and take advantage of all available features as if they were within the UCM's LAN. Lastly, utilizing a VPN provides an extremely high level of security between the remote user devices and central network as private keys prevent any outside interference.

OpenVPN Connection with Concurrent Registrations



Office Network with UCM IP PBX

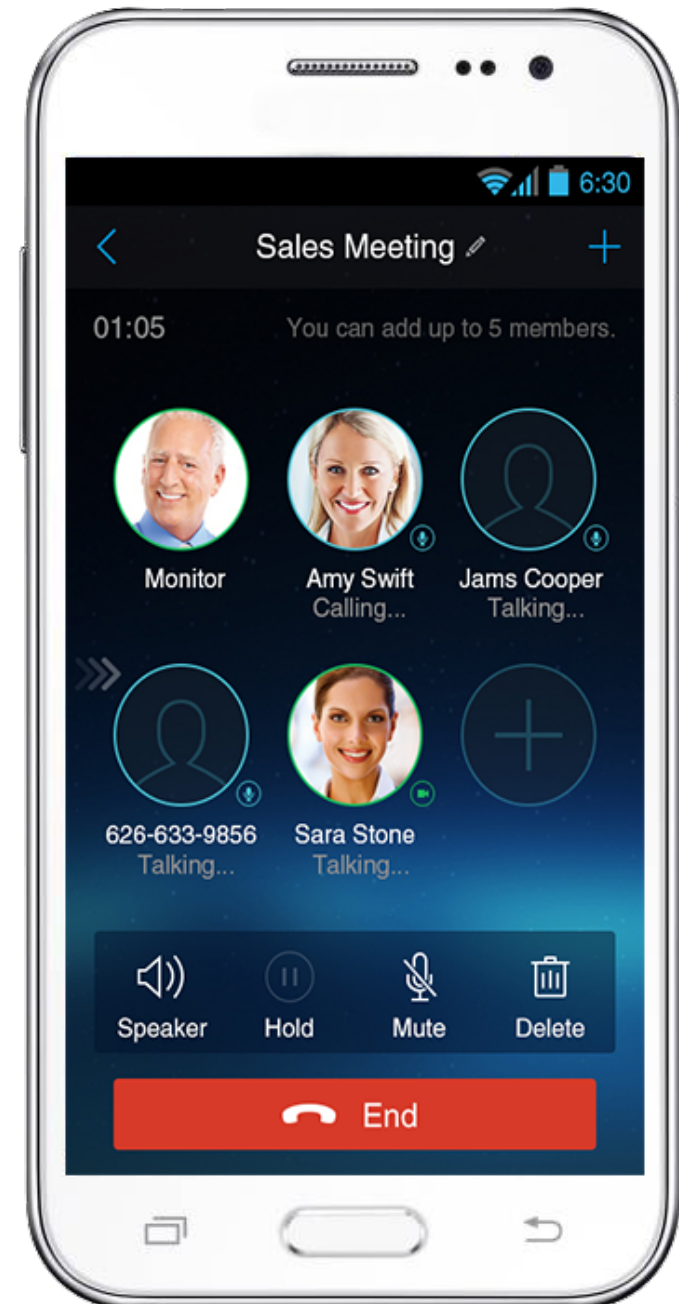
Grandstream Wave Integration

Grandstream Wave integrates with the UCM to offer a softphone telephony option that enables users to link their extensions with their smartphone device. This allows users to easily stay productive and communicate with their team while on-the-go and working remotely. By supporting up to 6 SIP accounts and 6 lines, users can be assigned their personal lines, call queues, ring group, and other extensions that have access to all the functionality provided by the UCM. Grandstream Wave even supports SIP video calling, so users can participate in on-the-go video conferencing sessions together.

Once an extension has been created for a user and an email address has been associated to it via the UCM's GUI, the system administrator can send an email to the extension's user through the GUI. The template for this email and the information it provides can be edited under the UCM's Email Settings. The user will receive an email that contains the following information to setup their Grandstream Wave account:

- LDAP Configuration
- Registration Information
- QR Code for Automatic Provisioning

Setting up the Grandstream Wave application to connect with the assigned extension can be done by editing the account settings of the application and then scanning the UCM's automated QR Code. After a few moments of provisioning, the user's smart device will now be able to access their assigned extension. Through this automated email and integration with Grandstream Wave, an organization's existing UCM network of extensions and call routes can be extended to remote users with very little effort.



Extension Security

Security is a top priority when developing a remote telephony solutions. The UCM IP PBX series supports a variety of features to help keep a UC network lock-tight, and to ensure that no one is taking advantage of the remote capabilities of a UCM solution. First, when creating a SIP extension the UCM is required to configure a SIP/IAX Password that is used for account registration authentication. When random passwords are enabled through the UCM's PBX Settings menu, the SIP/IAX Password is automatically filled with a randomly generated password whenever a new extension is created on the UCM. This random password will create an extra layer of authentication security for the extensions you configure on your UCM to prevent hackers from "stealing" extensions within your network.

Next, the network administrator can control the IP addresses that are allowed to register to certain extensions by editing the "strategy" option under the extension configuration dialog within the UCM's GUI. This is an especially important feature when configuring remote solutions for users who work out of a home office or a satellite office with IP endpoints. The IP addresses of those specific IP endpoints can be associated with their corresponding extensions, ensuring that only those endpoints will be able to utilize the remote extensions provided by the UCM. The UCM series also supports SRTP encrypted audio streams, which can be enabled through an extension's settings. Extensions can be set to support SRTP and not allow any calls without it, or to support SRTP and allow negotiation with calls without SRTP.

Remote Solutions with the UCM IP PBX Series

By utilizing these features, any UCM IP PBX and associated unified communications solution can be setup for remote use and collaboration. In addition, the UCM possess a series of security features to ensure that when utilizing remote devices calls, data, and information is safely encrypted. Concurrent registrations, Grandstream Wave integration, and OpenVPN compatibility can all be leveraged to ensure a productive and effective remote workforce.

Next, [take a look into our blog post](#) to learn about how Grandstream's other devices can be utilized to create remote solutions.

