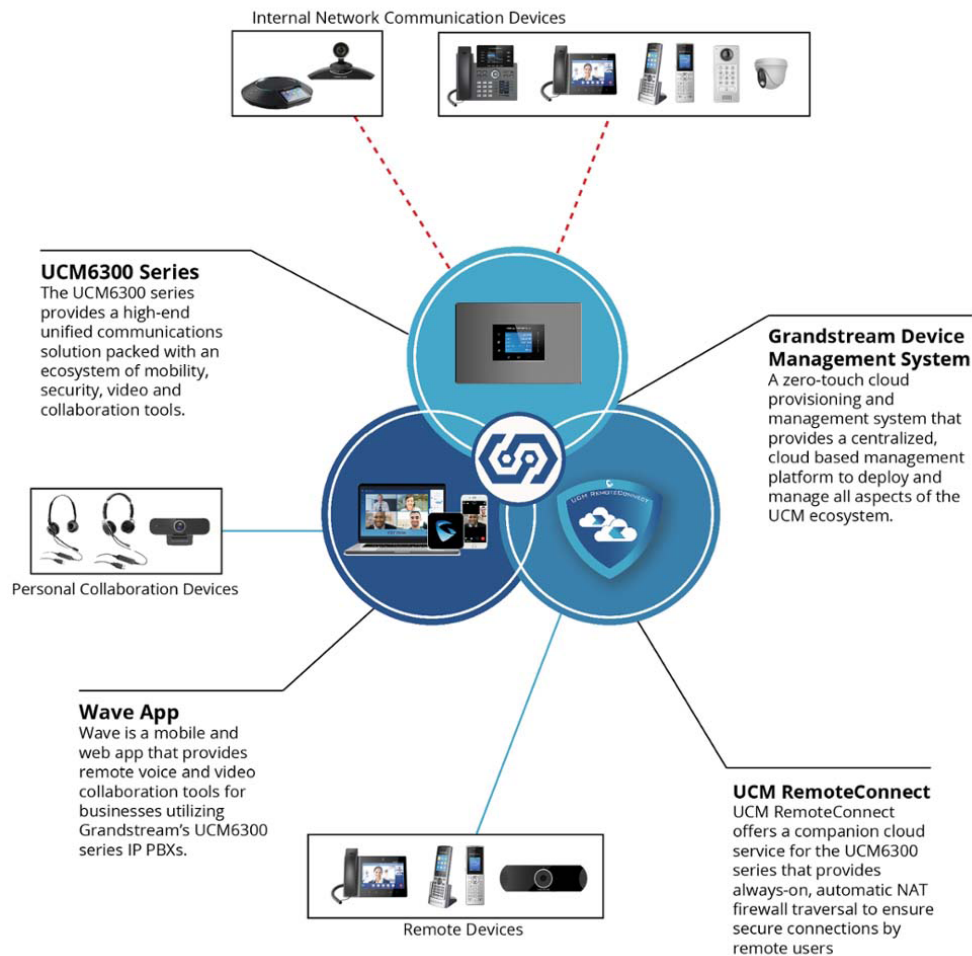GRANDSTREAM

UCM6300 Ecosystem
Buyer's Guide

Choosing Grandstream's UCM6300 Ecosystem

Grandstream's UCM6300 Ecosystem is our latest unified communications and collaboration solution. By bringing together an on-premise IP PBX, cloud-based management, robust soft-phone options, and built-in NAT firewall traversal for remote users, businesses can leverage the customizability and control of an on-premise IP PBX while having access to the flexibility and easy scaling of a cloud-based unified communications solution.

We created this guide to help you understand the benefits of Grandstream's UCM Ecosystem solution, learn how each piece of the solution comes together to contribute to the whole, and ultimately gain enough understanding of the solution to help you make a purchasing decision. Use this guide as an ongoing reference when deploying and selling the UCM6300 solution, as well as something to give clients to help them understand the benefits.

Internal Network Communication Devices

UCM6300 Series
The UCM6300 series provides a high-end unified communications solution packed with an ecosystem of mobility, security, video and collaboration tools.

Grandstream Device Management System
A zero-touch cloud provisioning and management system that provides a centralized, cloud based management platform to deploy and manage all aspects of the UCM ecosystem.

Personal Collaboration Devices

Wave App
Wave is a mobile and web app that provides remote voice and video collaboration tools for businesses utilizing Grandstream's UCM6300 series IP PBXs.

UCM RemoteConnect
UCM RemoteConnect offers a companion cloud service for the UCM6300 series that provides always-on, automatic NAT firewall traversal to ensure secure connections by remote users

Remote Devices

Section One: Overview of the UCM6300 Ecosystem

The UCM6300 Ecosystem is comprised of three major solutions, the UCM6300 IP PBX, UCM RemoteConnect, and Wave. Each will be touched on in more detail later in this guide. The solution as a whole creates a hybrid communication platform in which businesses and their users can take advantage of a wide array of collaboration tools to drive productivity and efficiency. Entire organizations of users and devices, both onsite and remote, are easily brought together in one central unified collaboration network that is housed on the UCM6300 series. Remote users connect to the UCM6300 via secure cloud-based NAT firewall traversal through UCM RemoteConnect. IT teams and solution installers can also take advantage of UCM RemoteConnect to configure every aspect of an onsite UCM6300 IP PBX, entirely from the cloud.

UCM RemoteConnect is accessed through Grandstream Device Management System, our cloud-based device provisioning and management platform. As a result, every business can craft a network that is as unique as their operational requirements. Hundreds of features on both the UCM and accompanied endpoint devices can be managed and configured through a single, secure online portal. The UCM6300 Ecosystem takes this a step further, providing powerful conferencing and collaboration tools that can be accessed through desktops, mobile phones, and more. Grandstream's Wave softphone app empowers users with a variety of ways to experience high-quality video conferencing with their colleagues or clients. With Wave, users can access their extensions from their desktop or smart device, and can easily direct message their colleagues, create group chats, share files, and start video conferencing or audio conferencing rooms.

Section Two: Key Considerations for a Unified Communications Deployment

Network Customization

Being able to completely customize a communications network is a vital part of creating one. Customizing the communications network isn't only during the initial deployment but also as the organization's needs change. Having a hardware IP PBX device, like Grandstream's UCM6300 series, is vital to an organization's long-term sustainability. This series is easily accessible and requires no additional fees and charges to adjust network configurations. A perfectly crafted, tailor-made network impacts a company's overall productivity and efficiency by allowing its workers to collaborate more effectively with both each other and customers.

Cloud Management

Cloud management of an entire solution provides an installer or IT team with a distinct advantage. By centralizing the device management with an IT infrastructure, a network administrator has a streamlined way to adjust extensions, configurations, SIP accounts, IVRs, call-groups, and more, all in bulk and across several geographically separated offices at once. A cloud-based management platform should also provide the tools to set up alerts, monitor a deployment's performance, and flag any issues as they occur, allowing network admins to proactively troubleshoot problems as they occur.

Remote Work Friendly

As technology pushes forward, so does the way we work. A typical deployment no longer is isolated to a single office. Remote workers based out of their homes or traveling throughout the world in order to conduct their job functions need to be included in a deployment solution. A proper communications solution empowers both office workers and remote workers with a suite of features such as having access to their extensions from anywhere, quick communication with coworkers, easy file sharing, and video conferencing and audio conferencing capabilities. Softphone and collaboration software, such as Grandstream Wave, is a necessary aspect for a hybrid deployment like this. At the same time, features like UCM RemoteConnect's NAT firewall traversal allow remote IP devices to be directly connected to a central IP PBX deployment.

Section Three - UCM6300 Ecosystem Benefits and Advantages

As we touched on in the previous section, the UCM6300 Ecosystem has a variety of tools and features that allow it to meet key capabilities that are necessary for a modern communications deployment.

1. Wide Range of Features

Grandstream's UCM6300 series of IP PBXs empowers a business with a suite of features, tools, and capabilities to create a perfect network. Supporting up to 3000 users and 450 simultaneous calls in a hybrid network, a single UCM6300 IP PBX can support strenuous deployments without drops in performance or call quality. The UCM has many customizable properties such as:

- Customized inbound and outbound routes SIP accounts and extensions
- Call groups, queues, and call center functionality
- 5 layer interactive voice response
- Music on hold
- Built-in video conferencing and audio conferencing
- Zero-touch provisioning

This is all done through a single UCM IP PBX and requires no additional licenses or fees to gain access to these network options.

Take a tour of our UCM6300 IP PBX's GUI and see how you can leverage it for your deployments with our UCM Demo Tool.

2. Centralized Device Configuration, Management, and Monitoring

Grandstream Device Management System (GDMS), our cloud-based solution for configuring, managing, and monitoring Grandstream deployments and devices, provides a serious advantage to installers and IT teams. GDMS gives organizations the ability to provision, configure, and manage their entire deployment of Grandstream devices entirely from the cloud. With this platform, organizations can not only manage their UCM6300 IP PBX through UCM RemoteConnect but endpoints and other devices as well.

GDMS features an easy-to-utilize interface to organize devices, create and push configuration templates, edit SIP accounts, change and add devices extensions, assign SIP trunks, and so much more. All aspects of a deployment are able to able be accessed from GDMS as if the network administrator was onsite. Devices are batched by sites, groups, or models depending on network requirements. Lastly, it supports TLS encryption and two-way certificate verification, and encryption of all device information.

3. Automated NAT Firewall Traversal for Remote Devices

UCM RemoteConnect is a powerful tool for any Grandstream installer to have in their offering. It expands the UCM6300 Ecosystem with two critical functions, cloud management and NAT firewall traversal and support for remote users. Remote devices can utilize the NAT Firewall Traversal feature to seamlessly connect to a deployed UCM6300 as if the phone was deployed within the same LAN as the UCM. This allows the installer or IT manager to painlessly configure and manage the device in the same way they would for any device within the communications deployment. Best of all, it bypasses the need to set up complicated VLANs or VPNs in order to have a hybrid on-site and remote work solution. With this feature, a business can have the easy infrastructure of a cloud communications solution with the customizability and control of an on-site device.

It is important to note that UCM RemoteConnect is in Beta until early 2022 and is an auxiliary service to GDMS and will have several plan levels. The free version of UCM RemoteConnect will allow for UCM6300 IP PBX management and other key features, while advanced features and additional remote users will be available at a cost. More detailed information on pricing plans for the NAT firewall traversal feature is not available at this time and is subject to change. To learn more about UCM RemoteConnect and potential plans, **view our blog post here.**

4. Organizational Collaboration with Wave

Grandstream's Wave application delivers a collaboration platform that any organization can utilize to stay connected. Wave goes beyond a simple softphone for desktops and smart devices, it includes instant messaging, file sharing, video conferencing with a UCM6300 series IP PBX, and other collaboration features. An organization's extension and associated name/department information are dynamically updated on Wave to reflect the information in the network's IP PBX, streamlining the management process for the installer or IT team. Users can make audio or video calls to others within their organization, search by name or extension, and even create dedicated chat threads complete with presentation sharing, file sharing, and audio/video conferencing rooms. Additionally, presence indicators help employees know the current status of their coworkers from just a glance, while speed dial and BLF keys assist with rapid call management.

Section Four: Components of the UCM6300 Ecosystem
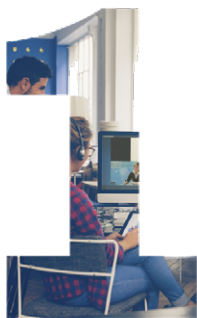
UCM6300 Series of IP PBXs

The UCM6300 series allows businesses to build powerful and scalable unified communication and collaboration solutions. This series of IP PBXs provide a platform that unifies all business communication on one centralized network, including voice, video calling, video conferencing, video surveillance, web meetings, data, analytics, mobility, facility access, intercoms and more. The UCM6300 series supports up to 3000 users and includes a built-in web meetings and video conferencing solution that allows employees to connect from the desktop, mobile, GVC series devices and IP phones.
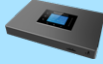
- Supports up to 3000 users and up to 450 concurrent calls
- Zero configuration provisioning of Grandstream SIP endpoints
- Built-in conferencing & meetings platform; supports desktop, Wave app, and SIP endpoints
- Wave for Android & iOS allows communication with all UCM6300 users & solutions
- API available for third-party integrations, including CRM and PMS platforms
- Advanced security protection with secure boot, unique certificate and random default password to protect calls and accounts
- Three Gigabit auto-sensing RJ45 network ports with integrated PoE+ and support NAT router
- Compatible with GDMS for cloud setup, management, and monitoring
- Based on Asterisk* version 16 open source telephony operating system

UCM6300 Audio Series of IP PBXs

The UCM6300 Audio series allows businesses to build powerful and scalable unified communication and collaboration solutions. This series of IP PBXs provide a platform that unifies fundamental business communications needs, including voice, instant messaging (IM), voice meetings, audio web meetings, data, analytics, mobility, facility access, intercoms and more. The UCM6300 Audio Series supports up to 1500 users and includes a built-in instant messaging (IM), voice/web conferencing platform, and the free Wave App that allows users to communicate and collaborate from desktops, mobile devices, IP phones, and other SIP endpoints.

- Supports up to 1500 users and up to 200 concurrent calls
- Zero configuration provisioning of Grandstream SIP endpoints
- Built-in Instant Messaging (IM), Audio Conferencing & Web Meetings platform that supports access from computers, mobile devices, and SIP endpoints
- Free Wave App allows easy voice & Instant Messaging (IM) communications using desktops, Web, and Android/ iOS devices
- API available for third-party integrations, including CRM and PMS platforms
- Advanced security protection with secure boot, unique certificate and random default password to protect calls and accounts
- Three Gigabit auto-sensing RJ45 network ports with integrated PoE+ and support NAT router
- Automated NAT firewall traversal service facilitates secure remote connections
- Enhanced reliability with support for Hot Standby High-Availability and local dual deployment
- Supports Full-Band Opus voice codec, jitter resilience up to 50% packet loss
- Compatible with GDMS for cloud setup, management, and monitoring
- Based on Asterisk* version 16 open source telephony operating system

Comparison Chart of UCM6300 and UCM6300 Audio Series Models

Model	UCM6300A	UCM6302A	UCM6304A	UCM6308A	UCM6301	UCM6302	UCM6304	UCM6308
Asterisk Version	System 16	System 16	System 16	System 16	System 16	System 16	System 16	System 16
Main Processor	4-core processor	4-core processor	6-core processor	6-core processor	4-core processor	4-core processor	6-core processor	6-core processor
RAM + Flash	1GB RAM + 32GB Flash	1GB RAM + 32GB Flash	4GB RAM + 128GB Flash	4GB RAM + 128GB Flash	2GB RAM + 32GB Flash	4GB RAM + 32GB Flash	4GB RAM + 128GB Flash	4GB RAM + 128GB Flash
Max Users/Concurrent Calls	250/50	500/75	1000/150	1500/200	500/75	1000/150	2000/300	3000/450
Max concurrent SRTP calls	50	75	120	150	50	100	200	300
SFU Video Conference & Video Meetings Bridge	No	No	No	No	Up to 20x 1080p HD participants	Up to 30x 1080p HD participants	Up to 60x 1080p HD participants	Up to 80x 1080p HD participants
Voice Conference Bridge	Up to 50 participants	Up to 75 participants	Up to 120 participants	Up to 150 participants	Up to 75 participants	Up to 150 participants	Up to 200 participants	Up to 300 participants
Network Ports with PoE	3xGigabit, PoE	3xGigabit, PoE	3xGigabit, PoE	3xGigabit, PoE	3xGigabit, PoE	3xGigabit, PoE	3xGigabit, PoE	3xGigabit, PoE/ PoE+
Configurable Use of 3rd Network Port	Admin Access, HA, etc	Admin Access, HA, etc	Admin Access, HA, etc	Admin Access, HA, etc	Admin Access, HA, etc	Admin Access, HA, etc	Admin Access, HA, etc	Admin Access, HA, etc
Peripheral Ports	USB, SD	2xUSB, SD	2xUSB, SD	2xUSB, SD	USB, SD	USB, SD	2xUSB, SD	2xUSB, SD
LCD	2.8" Touch Screen	2.8" Touch Screen	2.8" Touch Screen	128x32 B&W	2.8" Touch Screen	2.8" Touch Screen	128x32 B&W	128x32 B&W
FXO/FXS Ports	0/0	2/2	4/4	8/8	1/1	2/2	4/4	8/8
Support for Wideband Codec Opus	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Voice Jitter Resilience	Yes (50% packet loss)	Yes (50% packet loss)	Yes (50% packet loss)	Yes (50% packet loss)	Yes (50% packet loss)	Yes (50% packet loss)	Yes (50% packet loss)	Yes (50% packet loss)
Video Jitter Resilience	N/A	N/A	N/A	N/A	Yes (25+% packet loss)	Yes (25+% packet loss)	Yes (25+% packet loss)	Yes (25+% packet loss)
CRM/Hospitality/Call Center Support	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Graphical Control Panel	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
High Availability Support	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Auto NAT Traversal for Remote Devices (UCM RemoteConnect)	Yes	Yes	Yes	Yesz	Yes	Yes	Yes	Yes
Wave Desktop/Mobile/Web (IM, calls, meetings, etc.)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Case Design/Material	Desktop/Plastic	Desktop/Plastic	Desktop/Plastic	Rack-Mount/Metal	Desktop/Plastic	Desktop/Plastic	Rack-Mount/Metal	Rack-Mount/Metal

UCM RemoteConnect

UCM RemoteConnect provides 99.9% reliability by running on Amazon Web Services (AWS) while offering zero-touch configuration and IT-friendly management. UCM RemoteConnect is fully integrated with the Grandstream Device Management System (GDMS) and is purchased and managed at gdms.cloud. It offers a variety of plans, including free plans that support up to unlimited users and provide cloud storage, diagnosis tools, reports and alerts. By providing a full eco-system of remote collaboration tools, services and management for the UCM6300 series, UCM RemoteConnect is the ideal platform for any organization looking to securely support remote workers.

- Remote collaboration that is secure & reliable; Cloudbased NAT firewall traversal service runs on AWS with 99% reliability
- Productive meetings, calls and conferences with the included Wave app for web and mobile
- Offers secure connections with remote SIP endpoints registered to a UCM6300 series device
- Provides built-in tools for IT-friendly secure management of remote devices
- Integrated with GDMS for centralized management of remote devices; also at ucmremoteconnect.com
- Built-in advanced system and device monitoring & diagnosis tools to actively ensure secure connections
- Provides advanced system and device reports and real-time email alerts
- Free plans available; offers cloud storage, reports, alerts & more

Grandstream Wave

Ideal for remote workers, Wave offers an easy-to-use platform to remotely join, schedule and hold meetings, calls and conferences from anywhere. It also allows UCM6300 series users to directly call other extensions, landlines, and mobile numbers. Wave is free, available for Android and iOS devices as well as Chrome and Firefox browsers, and can be quickly configured by scanning a barcode produced by the UCM6300 series. It is compatible with Grandstream's UCM RemoteConnect cloud service, which ensures a fully secure connection between Wave and the UCM6300 series by providing automatic, always-on NAT firewall traversal. Thanks to Wave, businesses can provide remote workers with a powerful mobile and web tool to meet and collaborate from anywhere, boosting productivity for dispersed organizations and remote workers.

- Supports Android & iOS devices; Chrome and Firefox browsers; Windows & Mac computers
- Remotely join meetings, calls and conferences
- Compatible with Wi-Fi and 2G/3G/4G networks
- Allows UCM6300 series users to call other extensions, landlines & mobile numbers
- Schedule and start meetings from the app
- Supports mobile devices' camera, built-in webcam & USB webcams
- Supports video resolutions up to 1080p HD
- Provides HD audio for crystal-clear meetings and calls
- Supports use with Bluetooth, USB and other headsets
- Download app & scan QR code from UCM6300 series to configure
- Compatible with UCM RemoteConnect cloud service for secure remote connections
- Basic chat features including private chat, group chat, audio conferencing and more

Section Five: Preparing for a UCM6300 Ecosystem Deployment

Before getting started with a UCM6300 Ecosystem solution, there are key aspects of a deployment that need to be examined first.

Call Volume
What are the maximum number of users and maximum amount of concurrent calls for the deployment? The UCM6300 IP PBX model that you use will drastically change depending on the answer to this question. It is important to also consider future amounts in the event that growth could warrant a more capable UCM6300 IP PBX.

On-site vs Remote Users
How many onsite users will there be vs remote users? Will they require access to their extensions from auxiliary devices like their laptops and smartphones, are will a desktop phone be enough? The amount of onsite vs remote workers will have an impact on which UCM RemoteConnect plan you choose, and also with how you'll configure Grandstream Wave. Wave not only provides users with a softphone for their desktop or smart device, but also organizational instant messaging, file sharing, video conferencing, audio conferencing, and more.

Organization's Call Configuration Requirements
How will calls inside and outside the network find their way from extension to extension? Understanding how internal and external users direct their calls around the network is a vital part of deploying the UCM6300 Ecosystem. Consider physically mapping out how calls will be filtered around the organization from department to department. A UCM IP PBX has a variety of ways to help direct calls, such as IVRs, call queues, direct extension dialing, ring groups, and more. On top of this, with UCM RemoteConnect and Grandstream Wave external users can be added to this equation.

Video Conferencing and Collaboration
Is video collaboration and conferencing between users within the deployment an important function of the solution? The UCM6300 series has an audio-only line and a video-capable line. The number of users who rely on video collaboration, converence and feed viewing can impact which model is chosen. Additionally, heavily remote deployments will most likely rely on video collaboration more so than other deployments. In which case Grandstream Wave provides an ideal turn-key solution for the organization.

Section Six: Deployment Scenarios

Businesses

Offices large and small can utilize the UCM6300 Ecosystem to create a more flexible working environment and keep all users connected despite geographical separation. A typical office deployment for the UCM6300 Ecosystem is a single office with several remote workers, or even one or two satellite offices. The central UCM IP PBX is utilized to organize the network with detailed call routes and interactive voice response for inbound callers to connect to sales, support, or another department. Setting up a call queue to help manage periods of higher call volume, and a detailed network of extensions for internal users to be able to easily communicate with each other. Remote users can easily be added to the network with UCM RemoteConnect and have their devices configured from the cloud with GDMS, and Wave can be leveraged for organizational messaging, video conferencing, and collaboration.

- A single network across all workspace locations simplifies backend configuration, which allows for quicker communication between colleagues and incoming callers

- Cloud-based configuration enables IT teams to easily add devices and adjust communication infrastructure to keep the business organized and current

- With built-in and softphone video conferencing, team members can quickly and easily create a virtual collaboration space to meet and work face-to-face

- Audio only series provides a more cost-effective and essentials based IP PBX for smaller offices and businesses that do not require video capabilities

Government

From villages to small cities, the UCM6300 Ecosystem can interconnect various local government institutions to one central network to help officials operate more effectively. Smaller governmental bodies such as towns typically have many separate locations that need to be combined into a single communications network. Police and fire departments, legislative offices, parks and recreation, electric, sanitation, and other branches of a local government can all be brought together with UCM RemoteConnect. This not only makes working together less complicated, but it helps local residents easily get connected to the branch or individual they need to with an interconnected IVR and call queue system.

- UCM RemoteConnect links various government workers throughout a municipality while keeping this connection encrypted and secure

- Inbound routes, IVRs, and call queues can be customized to streamline local residents' ability to get connected with various municipality departments

- Wave provides government workers with a way to stay mobile throughout their municipality while having access to their extension via a softphone app on their smart device

- For smaller governments, the UCM audio series provides a flexible and practical IP PBX with full call handling and routing capabilities

Call Centers

The UCM6300 Ecosystem can be leveraged for hybrid call center solutions, allowing agents to be located remotely and still have access to advanced call handling capabilities and features. Remote call center employees are a popular solution for companies that require a customer-facing representative without needing a full troubleshooting and call center solution. Even insurance companies are leaning more and more toward employing remote representatives based out of their homes to field and triage customer calls. With Wave, these users wouldn't even require a physical phone in order to be connected to a call center ring group/call queue. Once they have the Wave desktop app download to their laptop or desktop, they would only need to follow simple instructions to connect to a UCM6300 IP PBX through UCM RemoteConnect, where they could be assigned an extension and get connected.

- Remote agents can operate out of home offices just as effectively as being onsite, lowering operating costs and broadening talent pools for the business

- High-volume agents can keep all activities on one device by using Wave on their laptop or desktop, which still provides access to advanced call handling features

- Cloud-based configuration through GDMS and UCM RemoteConnect allows for turn-key deployments, remote agents only need to plug in the device and connect it to the internet

- UCM6300 Audio Series provides an audio-exclusive IP PBX for call centers while still providing full integration and advantages of the UCM6300 Ecosystem