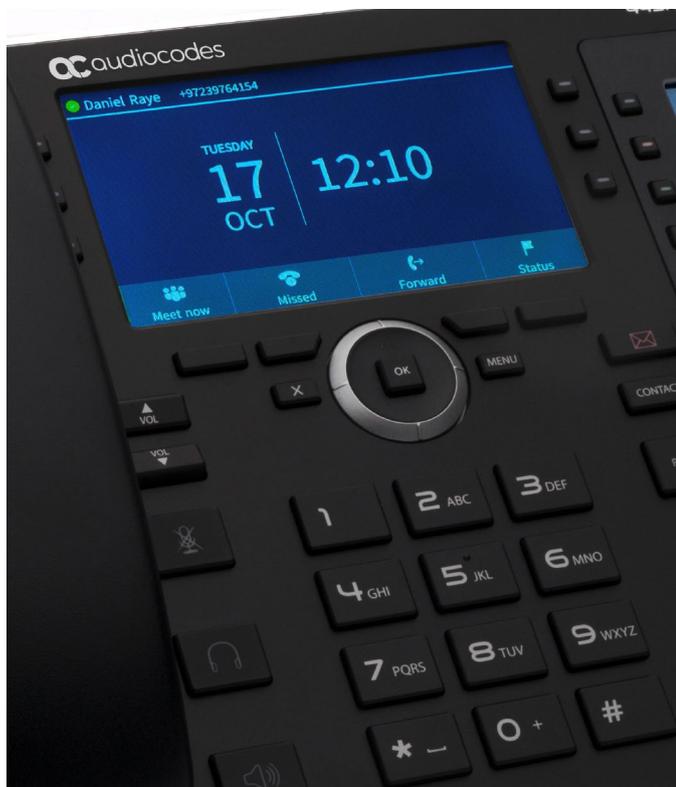


AUDIOCODES APPLICATION NOTE

The Compelling Advantages of AudioCodes' 400HD IP Phones Series



Introduction

If you are considering IP desk phones for your organizational needs, the AudioCodes 400HD Series is a serious contender since it offers compelling advantages. The 400HD series of IP phones includes a range of easy-to-use, feature-rich products for service provider hosted services, enterprise IP telephony and contact center markets. Based on the same advanced, field-proven underlying technology as our other VoIP products, AudioCodes' high quality IP phones enable systems integrators and end-customers to build end-to-end VoIP solutions.

The entire AudioCodes 400HD series of IP phones work with both Microsoft Teams (using [3PIP software](#)) and Skype for Business, allowing organizations to gradually migrate to Microsoft Teams whenever they wish. In addition, our new C450HD native Teams IP phone can switch from Microsoft Teams with a native Teams client experience to Skype for Business, and back again, with a single click.

If you are considering IP desk phones, the AudioCodes 400HD Series offers compelling advantages.

The Advantages of the AudioCodes 400HD IP Phone Series

AudioCodes' IP phones are part of our One Voice offering, in which all elements in the Voice over IP spectrum, from IP phones to session border controllers (SBCs), from gateways to monitoring systems, are offered in a One-Stop-Shop. They are designed with a user-friendly interface, better user experience and intuitive ergonomic design, manifesting itself with large buttons, a large screen, dedicated buttons for functionality and simple and intuitive operation. Our mid-range phones, the 440HD and the 445HD, offer a unique integrated LCD sidecar with 12 presence speed dials.

AudioCodes is the first vendor to support SILK and OPUS on its IP phones and session border controllers enabling end-to-end high quality.

Moreover, AudioCodes' Boss Admin functionality takes advantage of the integrated sidecar on the 440HD and 445HD, and the large touch screen on the 450HD, to replicate the simplicity of the legacy workflow. This eliminates the long and complicated process of managing and answering calls using only a main screen, where there isn't usually enough room to see all the necessary information in one place.

AudioCodes designed and built the 450HD executive phone with a large color touch screen displaying all the information a manager is ever likely to need. An optional expansion module with a color touch screen is also available. The 440HD and 445HD admin phones have an integrated sidecar for managing every aspect of each boss's call queue, allowing admin assistants to easily switch between each boss's line and their own speed dials. This makes it very straightforward to manage workflows.

The Boss Admin functionality is available using any combination of the 450HD, 445HD and 440HD IP phones.

See our short videos about the 400HD series of IP phones:

[AudioCodes IP Phones - Simplicity Drives User Satisfaction](#)

[Multiple Boss Admin on AudioCodes IP Phones](#)

AudioCodes is the first vendor to support SILK and OPUS on its IP phones and session border controllers. SILK is the Skype for Business selected codec and it provides excellent voice quality even when the infrastructure doesn't support the bandwidth (mainly for home users and inter-branch calls). SILK will be discussed in more detail later in this paper.

AudioCodes Resiliency for Cloud, On-Premises or Hybrid Environments

AudioCodes does not only manufacture phones - we use our entire ecosystem to deliver a full solution using our SBCs and gateways. AudioCodes' SBCs act as a default proxy between Skype for Business IP phones and the Skype for Business, Office 365 or Teams servers. The SBCs will be used for local PSTN breakout in emergencies for inbound and outbound calls, while in normal mode they can be used as a local PSTN connection.

Skype 400HD Device Portfolio



Price

Outstanding User Experience through voice quality, intuitive design, and powerful features

Microsoft Certified



Low-cost, entry level model
Basic LCD with 4 programmable soft keys
1GB Ethernet

405HD IP Phone



Cost-effective, basic model
Basic LCD with 4 programmable soft keys
1GB Ethernet

420HD IP Phone



Advanced mid-range model
Improved Graphic LCD
256x128
Dedicated LCD displaying
12 contacts + presence
1GB Ethernet
USB Port

440HD IP Phone



Advanced mid-range color
4.3" color display (480x272)
6 softkeys + integrated
sidecar (12 contacts)
1GB Ethernet
Wifi / BT support

445HD IP Phone



High end, executive model
5" color touch screen
Wifi / BT Support
1GB Ethernet
Optional Expansion unit

C450/450HD IP Phone



Integrated Conference Solution
Scalable: 6 ppl | 12 ppl | 15 ppl
Full Meeting Management
Integrated Bluetooth
USB Port
1GB Ethernet

45x Huddle Room

AudioCodes provides **INNOVATIVE**, **MANAGED**, **RESILIENT** Phone and Room Solutions at affordable prices

The Managed IP Phone Concept

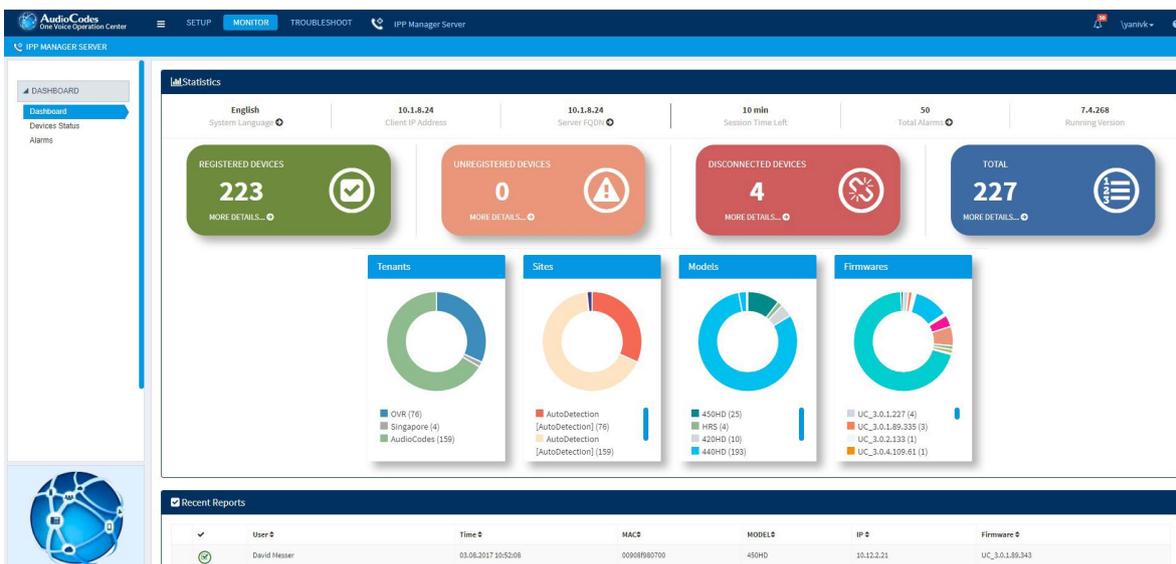
In addition, AudioCodes' IP phones are manageable devices, controlled by the IP Phone Manager in the One Voice Operation Center and now available in a free of charge version called IP Phone Manager Express. The IP Phone Manager provides a zero-touch, predefined rollout as well as a full lifecycle management of the IP phone operation. This empowers IT with a multi-tenant, on-premises or cloud-based zero-touch predefined installation and configuration platform.

The One Voice Operations Center (OVOC) also includes tools such as the Session Experience Manager, which monitors the network and can drill down to troubleshoot remotely where any problem may be, tracking down the root cause for the failure. It also includes the Element Management System, which allows for remote and centralized configuration of all the AudioCodes elements within the system, including the IP phones.

Standing on three pillars, the AudioCodes Managed IP Phone solution is based on a full lifecycle operation of the voice services in the networks. The first pillar is a quick and simple deployment with zero-touch installation (for large single or multi-site organizations). The second is a simple, day-to-day management platform that provides the tools to control and perform actions on an individual IP phone or for an end-user and on different segments of the network (such as physical location, subnets, VLANs or any customization). This allows for a gradual upgrade of these different segments in accordance with the organization’s needs and priorities. The management pillar implements a detection-to-correction technology which, in a single snapshot, allows users to view problems in the network and troubleshoot those problems (pillar number three) within a few clicks from a centralized and remote location. This not only saves valuable technician time and costs, but also improves the user experience and productivity.

Taken together, these three pillars create a true IT managed device that we like to call the IT phone. Thus, these pillars - known as Install IT, Manage IT and Fix IT - contribute directly to an ROI model that saves the organization considerable resources in manpower, money and time, as well additional savings in monthly OpEx.

See our video: [AudioCodes IP Phone Management Solution](#)



AudioCodes Managed IP Phone solution allows IT managers to assure the user experience right from the beginning



Quick & easy deployment

- Zero touch auto-provisioning
- Large scale (single-site & multi-site) efficient deployment
- Commission voice services to individuals or groups

Make a good first impression



Simplified operations procedures

- On-going customization for multi-tenant, multi-site, groups and individual requests
- Large scale software configuration, updates and upgrades
- End-to-end control over the entire VoIP infrastructure

Control the on-going costs



From detection to correction

- Integrated management framework simplifies support processes
- Detection and resolving of problems handled remotely
- Proactive monitoring and detection of voice issues before service is affected

Assure the user experience

Managed IP Phone Operational Efficiency Cost Savings Model

Let’s take a closer look at how the Managed IP Phone solution can bring considerable cost savings to an IT department.

Below we analyze a real-world example of a large enterprise that has deployed 20,000 IP phones amongst its employees. There are several levels to the cost savings, but it starts with the basic element of a managed IP phone solution saving countless help desk hours by providing IT with the ability to remotely detect, correct and configure IP phones, rather than having to speak with the users themselves and figure out the problem. If the average time per help desk call to figure out the problem without the managed system is conservatively estimated at 15 minutes, with the managed system that time is cut down to just a few minutes, say 3. If the cost of a help desk worker is \$50 an hour, then the savings would be reflected in the amount of help desk calls multiplied by the savings in time between 3 and 15 minutes.

Below, we look at a three-year model in which the amount of help desk calls will no doubt decrease over time as the system is used. Again, with a conservative estimate, if in the first year we can expect at least 20% of the 20,000 IP phone users to have a single help desk call, going down to 10% in year two and 5% in year three, savings can reach \$70,000 over the three-year period. In reality, the amount of help desk calls could be as much as double (\$140,000), with the savings increasing accordingly.

Table 1 – Cost Savings with the Managed IP Phone Solution

		Conservative model			More realistic model	
		Without IPP Manager	Using AudioCodes IPP Manager		Without IPP Manager	Using AudioCodes IPP Manager
Number of IP phones	20000	AVG time to handle a ticket in minutes:			AVG time to handle a ticket in minutes:	
Help desk cost per hour (in USD)	50	15	3		15	3
Percentage of IP phone users with a single support call in year 1	20%	\$ 50,000	\$ 10,000	40%	\$ 100,000	\$ 20,000
Percentage of IP phone users with a single support call in year 2	10%	\$ 25,000	\$ 5,000	20%	\$ 50,000	\$ 10,000
Percentage of IP phone users with a single support call in year 3	5%	\$ 12,500	\$ 2,500	10%	\$ 25,000	\$ 5,000
Total cost over 3 years		\$ 87,500	\$ 17,500		\$ 175,000	\$ 35,000
Savings			\$ 70,000			\$ 140,000
Zero-touch saving per phone		\$ 5	\$ 100,000		\$ 10	\$ 200,000
		Total TCO saving	\$ 170,000		Total TCO saving	\$ 340,000
		Saving per phone	\$ 8.50		Saving per phone	\$ 17
		Average TCO saving	\$ 255,000		Average saving per phone	\$ 12.75

But that’s only part of the savings story. The IP Phone Manager allows for zero-touch customized configuration for multisite deployments. Such customization without a central management tool would require a pre-staging service from an integrator, estimated to be around \$10 per phone. Thus, in the case of a 20,000-phone rollout, that could mean an additional \$100-200K in savings.

And finally, as mentioned above, AudioCodes IP phones support SILK, the native Skype for Business vocoder. This vocoder delivers the best end-to-end voice quality experience available, further reducing the load on the help desk by eliminating call quality complaints which are possible in VoIP networks. But beyond the user experience and business productivity enhancement, the SILK vocoder consumes up to 50% less bandwidth when compared to other IP phones’ vocoders. This directly translates into the ability to save on remote branch MPLS access capacity and costs. In some cases, where dedicated bandwidth is allocated for voice traffic, this can lead to 50% less bandwidth consumption and MPLS costs.

To summarize, the 20,000-phone enterprise operation could save as much as \$170K to \$240K over a three-year period. In addition, thousands of dollars can be saved each month due to the use of the SILK codec.

Conclusion

AudioCodes' 400HD series of IP phones provides unique benefits to those organizations deploying IP desk phones. Beyond the ergonomic, feature rich and user-friendly design, AudioCodes' Managed One Voice IP Phone solution increases user satisfaction and adoption of unified communications, and saves organizations considerable resources. When used in conjunction with AudioCodes' IP phones, the IP Phone Manager (as well the OVOC health and quality monitoring applications) provides the user with a great experience, and the need to spend hours on troubleshooting with technicians in the field is reduced.

More Information

For more information on the AudioCodes 400HD Series IP phone solution, the One Voice Operations Center and the Managed IP Phone solution, please contact your AudioCodes Account Manager or click below:

- [AudioCodes 400HD IP Phone Series](#)
- [Managed IP Phone Solution](#)
- [White Paper: Desk Phones or Softphones? It Depends: A Quick Guide to Different Needs in Different Scenarios](#)
- [One Voice Operations Center](#)

See our videos:

[AudioCodes IP Phone Management Solution](#)

[AudioCodes IP Phones - Simplicity Drives User Satisfaction](#)

[Multiple Boss Admin on AudioCodes IP Phones](#)

[Voice Dialing using AudioCodes IP Phones](#)

About AudioCodes

AudioCodes designs, develops and sells advanced Voice over IP (VoIP) and converged VoIP and Data networking products and applications to Service Providers and Enterprises. AudioCodes is a VoIP technology market leader focused on converged VoIP & data communications and its products are deployed globally in Broadband, Mobile, Cable, and Enterprise networks. <http://www.audiocodes.com>.

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