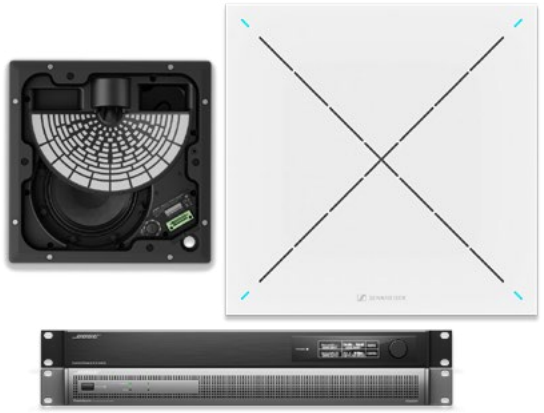
Bose Work
Conferencing Solutions

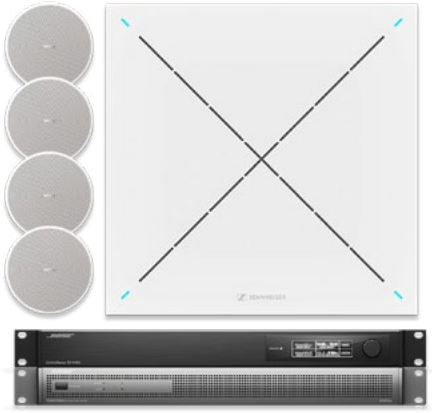
BOSE PROFESSIONAL

Application Guide

Videobar Solutions



ES1 Ceiling Audio Solution



DS4 Ceiling Audio Solution

Rev: 20220826

WHAT'S IN THIS GUIDE

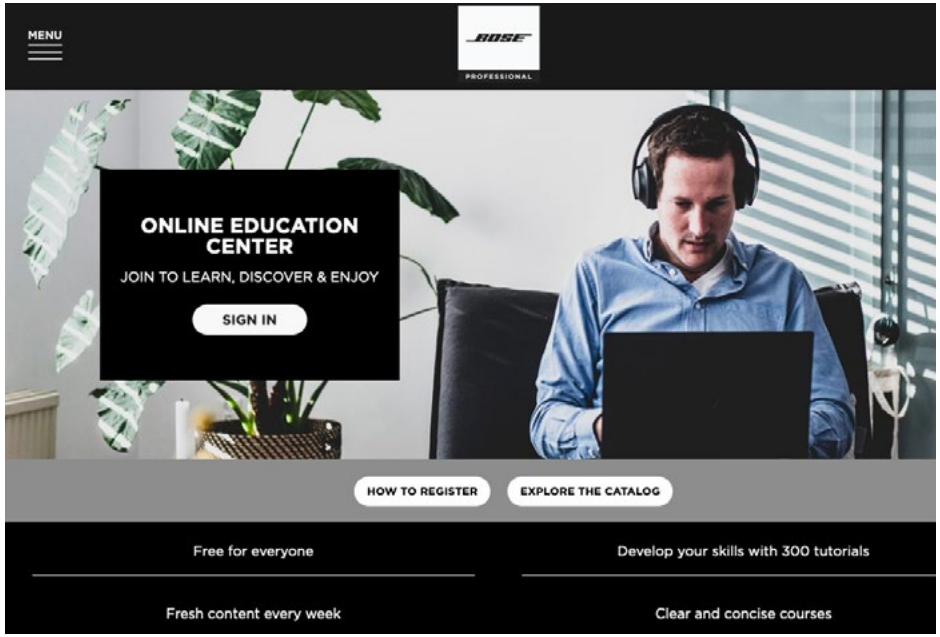
You will learn Bose Professional's approach to conferencing applications and how it is defined and segmented. Next, you will explore our conferencing solutions with system examples that focus on key features and technologies most relevant to each example. As your application or use case may vary, this guide serves as a good starting point on how to choose the right solution.

Color coding explained:

This color scheme is provided for system or application examples. It visually helps identify which of our product solutions best fits the use case.

ONLINE TECHNICAL TRAINING PROGRAMS - FREE OF CHARGE

Located at PRO.BOSE.COM/LearningCenter



Bose provides comprehensive online training programs for in-depth technical knowledge. These online courses are multimedia-rich and make learning enjoyable. They are open to the public with free registration. Bose provides multiple learning methods to best match your style. You can choose Certification, On Demand, or Webinar.

For those who prefer to gain a certificate of completion, Bose provides a step-by-step learning course with a quiz assessment. Once passed, you are granted a Bose certificate.

For those who prefer to pick and choose, Bose provides an On Demand section with micro-learning tutorials. Each is modularized so you can pick and choose what you desire to learn. You can start On Demand and easily convert to certification later.

We hope you take advantage of the technical training programs so you can become a Bose tech expert.

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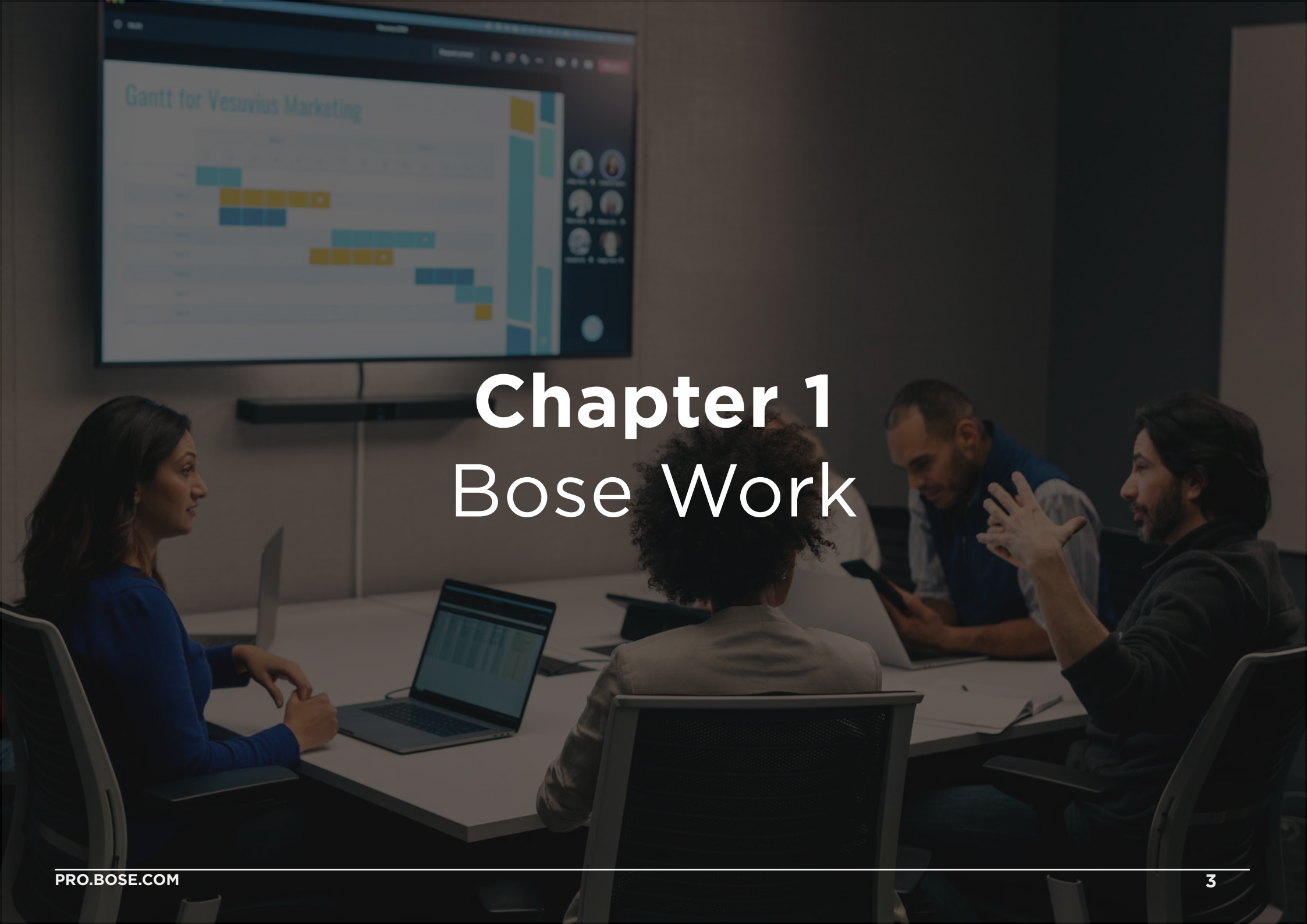


Chapter 1
Bose Work

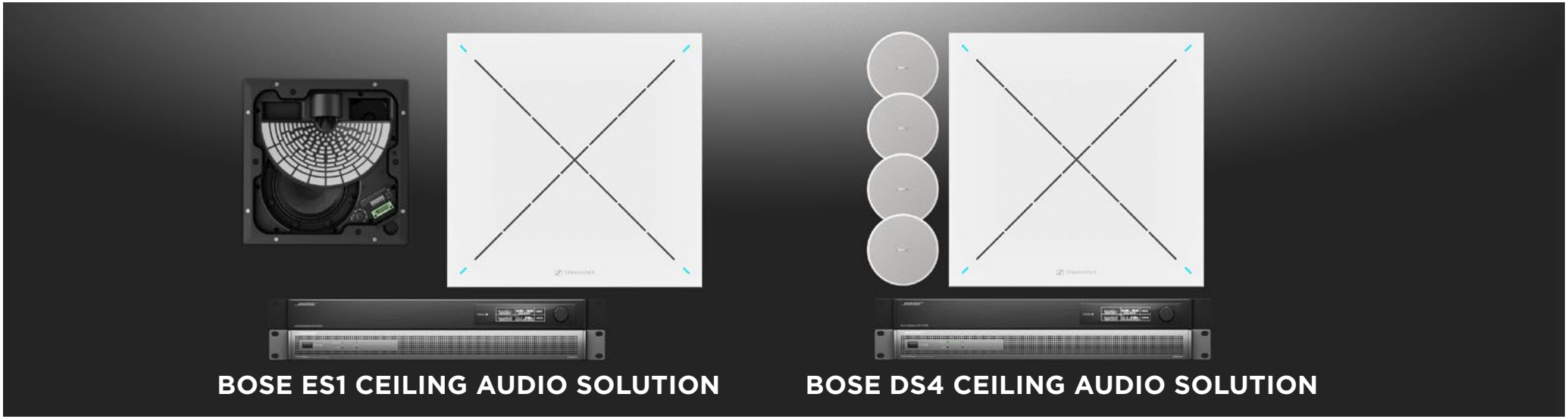
WELCOME TO BOSE WORK

Bose Work is our category of technology solutions for unified communications (UC) and conferencing. They bring the simplicity and clarity of Bose to huddle spaces, desktop and mobile conferencing, and large meeting rooms.

Bose Work solutions integrate seamlessly with existing UC platforms, enhancing popular third-party cloud services. They help teams collaborate more effectively, moving beyond “good enough” audio and video so interactions are natural and people can hear more, see more, understand more — and work better.

BOSE VIDEOBAR VB1

BOSE VIDEOBAR VB-S



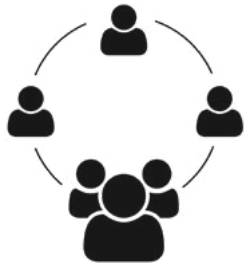
BOSE ES1 CEILING AUDIO SOLUTION

BOSE DS4 CEILING AUDIO SOLUTION

CONFERENCING DEFINED

The workplace is everywhere today. It has evolved as the business world has become more globalized and less centralized. The workplace environment now includes satellite sites, home offices, cars, and even coffee shops. This trend towards a decentralized workforce has changed how we collaborate as digital communication is quickly becoming a common alternative to sitting in the same space together.

This fast shift towards decentralization is a business challenge and is driving the demand for better conferencing and collaboration tools. Business owners, IT professionals, and facility managers from all organization sizes are seeking solutions to improve workforce agility, collaboration, and performance.



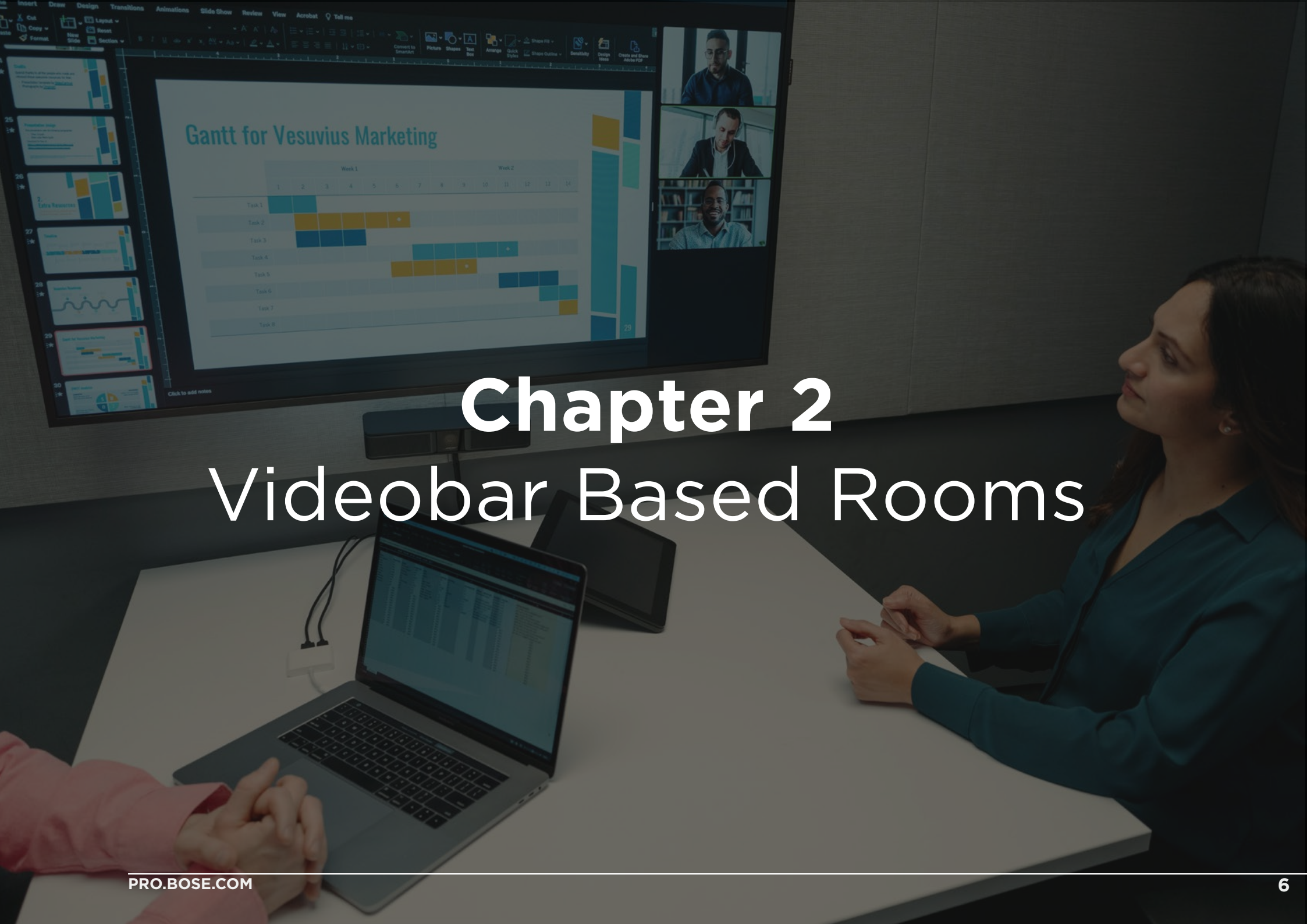
Conferencing is the market defining these improvements. It refers to analog or digital communication from one sender to many receivers in separate locations. The conferencing world has moved beyond standard audio conversations. Today's workforce and their customers alike want a more immersive way to connect, and for many, that means using video conferencing.

Video conferencing is a growing trend. It offers one-on-one or group conversations to include a face-to-face experience for everyone involved. With video conferencing, remote workers can feel like they are in the same room without having to worry about travel requirements.

Bose segments conferencing into two types of rooms or applications.

Videobar Based Rooms

Integrated Rooms



Chapter 2
Videobar Based Rooms

VIDEOBAR BASED ROOMS EXPLAINED

These spaces are the fastest-growing application types. They are intended to serve multiple use cases including conferencing. This allows for maximum flexibility and cost-effective use of space in a modern office building. These room types are small to medium in size — such as small conference rooms, huddle rooms, focus areas, and meeting booths — and are typically less than 20’ deep.

Workers can huddle immediately and reach an external audience using the conferencing system for remote colleagues and partners. Studies show workers prefer and feel more comfortable speaking up in smaller group settings, resulting in better collaboration.

Videobar system solution

With a multipurpose design, the conferencing system typically features a video display, camera, microphone, audio system, and connectivity for BYOM (Bring Your Own Meeting) support. The market desire is simple, self-contained solutions that integrate these capabilities together with easy installations.

The fastest-growing tech is the compact, all-in-one USB Videobar with sound, mic and camera integration. The Videobar devices are positioned above or below the video display with simple connections.

Small-to-Medium-Sized Conference Rooms

Huddle Rooms

Focus Areas

VIDEOBAR BASED ROOM SYSTEM TYPES EXPLAINED

Videobar based rooms are defined and segmented into three categories:

BYOM SYSTEM

The hybrid meeting is hosted on the user's own computer or smart device brought into the room, using their preferred UC conferencing service. The user's device connects to the room's audio and video peripherals so participants can collaborate. These BYOM rooms benefit users who come with familiarity of their own device.

The disadvantages are a high dependency on the user's device being prepared for connection to the room's audio and video peripherals plus proper internet connection to host the conference call.

UC ROOM SYSTEM

The video call is hosted on a purpose-built computing device that stays in the room. The internet connection and the room's audio, camera, and video peripherals are connected to it. A single UC application such as Microsoft Teams, Google Meet, or Zoom will run on the room's computer, and it does not require the user to bring their own device.

The disadvantages are the user needs to learn how to operate the system and needs to be tech savvy to troubleshoot issues when something is not working correctly.

MULTI-UC HOST PC

The video call is hosted on a multi-use computing device that stays in the room. The internet connection and the room's audio, camera, and video peripherals are connected to it. More than one UC application such as Microsoft Teams, Google Meet, and Zoom will run on the room's computer, and it does not require the user to bring their own device.

The disadvantages are the user needing to properly learn how to launch the correct UC client required for the meeting and the additional maintenance ofthe room PC.

Mono High-output Loudspeaker

4K HD Camera with Autoframing

Four-microphone Element Adaptive Array System

Front View

48 mm (1.9 in)

Attachable Tabletop Mount Included

Integrated Privacy Cover

Multicolor LED Status Bar

267 mm (10.5 in)

Rear View

Bluetooth 4.1 Connectivity Enabled

Integrated Wireless Network Card

Magnified Side View

Mounting Brackets

IR Remote Control Included

24V DC Power Port

USB-C to PC Port

BOSE VIDEOBAR VB-S: HARDWARE

The Bose Videobar VB-S is a compact, all-in-one conferencing device that's quick and easy to install, bringing premium audio and video to small spaces: meeting booths, huddle spaces, and rooms up to 3 x 3 meters (10 x 10 feet). Four beam-steering microphones automatically focus on voices in the room and reject noise. A 4K ultra-HD camera with two autoframing modes delivers crystal-clear video — helping remote participants feel like they're in the room — while signature Bose sound supports multimedia presentations, plays *Bluetooth*® audio, and ensures voices on the call sound natural. And its sleek, low-profile design helps keep your meeting space clutter-free.

Bose Videobar VB-S offers a complete conferencing solution that's so simple, you can set it up between meetings — and a meeting experience so engaging and clear, you can read the room from across the globe.

KEY FEATURES

zoom Certified

Group Mode, ideal for keeping all in-room participants in view and allows remote participants to better see and understand the conversation, whiteboard, flipchart, or other in-room objects

Individual Mode, ideal for a single presenter, frames and dynamically follows the presenter; great for teachers, training contexts, and more

Works with Microsoft Teams, Zoom, Google Meet, and more, bringing enhanced video and audio performance to popular Unified Communications platforms

A proprietary Bose transducer delivers rich, intelligible audio from a connected laptop or wireless *Bluetooth*® device for an engaging and satisfying audio experience

Includes table stand and wall-mount kit to mount easily in multiple ways; VESA display mounting accessory also available (sold separately)

Connects to existing wireless network infrastructure, making installation and troubleshooting faster and allowing for remote updates, management, and monitoring

Six-microphone Element Adaptive Array System

4K HD Camera with Autoframing

Stereo High-output Loudspeakers

Front View

48 mm (1.9 in)

Attachable Tabletop Mount Included

Multicolor LED Status Bar

Bluetooth 4.1 Connectivity Enabled

686 mm (27 in)

Rear View

Integrated Wireless Network Card

Magnified View

Magnified Side View

Magnified Side View

Gigabit Ethernet Port

24V DC Power Port

3.5 mm Audio Input

Control Input

USB-C to PC Port

HDMI Output to Display

IR Remote Control Included

BOSE VIDEOBAR VB1: HARDWARE

The Bose Videobar VB1 is an all-in-one USB conferencing device that brings premium audio and video to small meeting areas — from huddle spaces to medium-sized rooms. Be seen clearly. Be heard and understood fully. Six beam-steering microphones automatically focus on voices in the room and reject noise. A 4K ultra-HD camera with autoframing delivers crystal-clear video, helping remote participants feel like they're in the room. Proprietary Bose sound supports multimedia presentations, plays *Bluetooth*® audio, and ensures voices on the call sound natural.

Single-cable connectivity means there's no need for separate audio and video cables at the table, reducing clutter. Whether it's a quick morning check-in or a full-afternoon workshop, the Bose Videobar VB1 helps you huddle up, see more, hear more, and work better.

KEY FEATURES

Certified for Microsoft Teams

zoom Certified

Make conversations more natural with six beam-steering microphones that actively focus on voices and reject noise; and auto EQ delivers optimized audio to all participants

Communicate and be seen more clearly — a 4K ultra-HD camera with autoframing allows everyone to see and understand the presenter, whiteboard, flipchart, or other in-room objects — and feel like they're in the same room

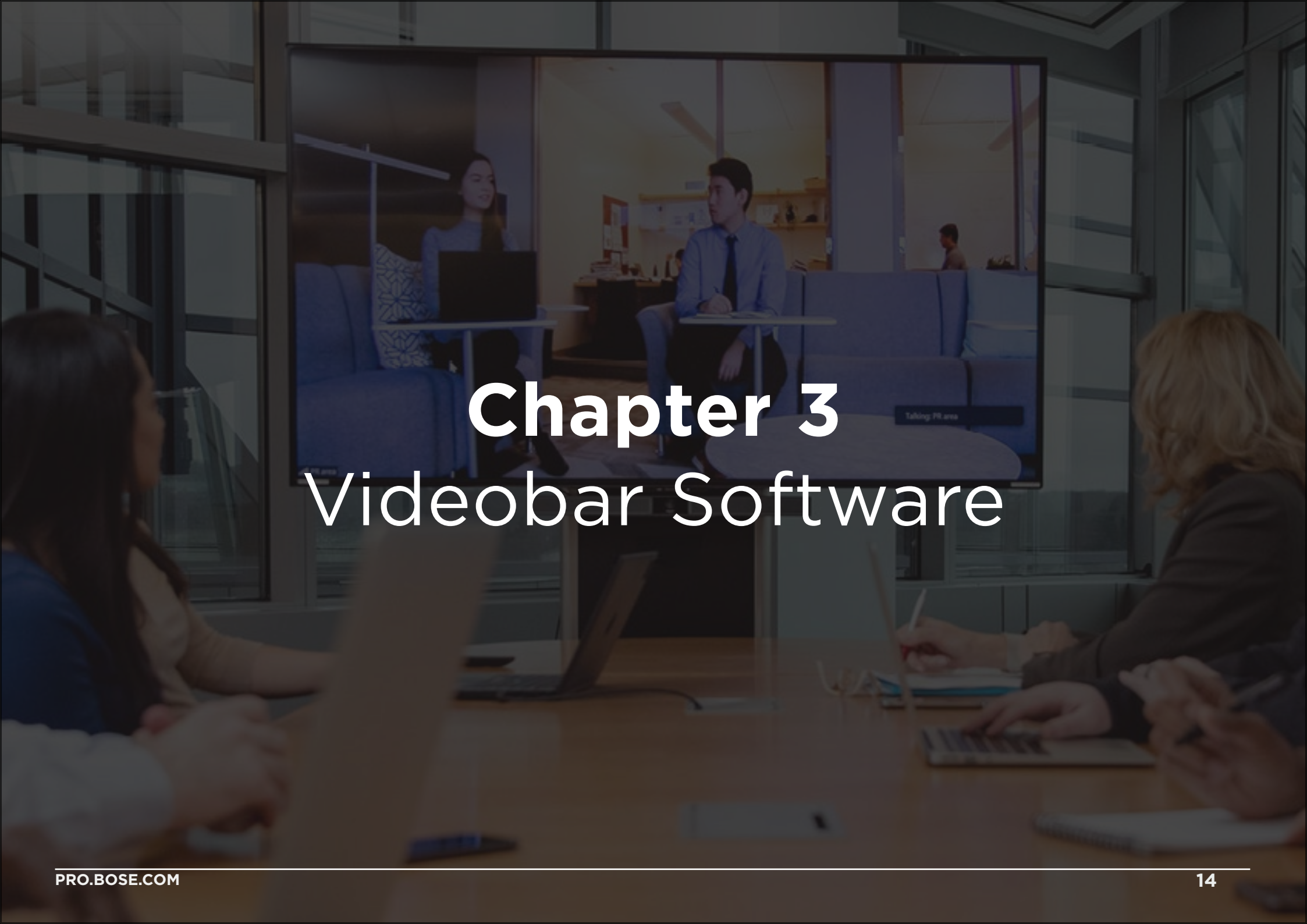
Bring enhanced video and audio performance to popular Unified Communications platforms such as Microsoft Teams, Google Meet, Zoom, and more

Support multimedia presentations with premium audio utilizing Bose-proprietary transducers that deliver room-filling sound from a USB-connected laptop or wireless *Bluetooth*® device

Clean up the conferencing experience with an elegant low-profile design that complements the room, improves aesthetics, and connects via a single USB cable, eliminating clutter

Easily mount in multiple ways with included table stand and wall-mount kit or with mounting kit accessory (sold separately)

	Bose Videobar VB-S	Bose Videobar VB1
		
Max room size	3 x 3 meters (10 x 10 feet)	6 x 6 meters (20 x 20 feet)
Autoframing modes	Individual and Group	Group
Network connection type	Wireless: Wi-Fi 802.11ac	Wired: RJ-45, 1 Gbps Ethernet Wireless: Wi-Fi 802.11ac
Display Output	N/A	HDMI 1.4b and 2.1 output
GPIO	N/A	1 control input
Power supply voltage	Input: 110 - 240 VAC, 50/60 Hz, 1.5 A max Output: 24 VDC, 1.875 A	Input: 110 - 240 VAC, 50/60 hz, 1.5 A max Output: 24 VDC, 1.875 A
Microphone configuration	4	6
Transducers	1	2
Privacy cover	Built-in camera privacy cover	Detachable camera privacy cover included
Buttons	N/A	*Bluetooth* Mute
Bluetooth	*Bluetooth* 4.2 HSP, A2DP, AVRCP, BLE	Bluetooth 4.2 HSP, A2DP, AVRCP, BLE
App compatibility	Bose Work Configuration Bose Work Managment Bose Work mobile app	Bose Work Configuration Bose Work Managment Bose Work mobile app



Chapter 3
Videobar Software

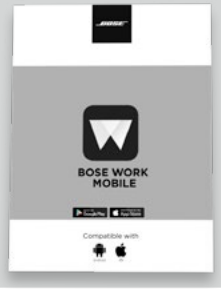
Bose provides software apps for configuration, management, and control, completely free of charge: Bose Work Configuration, Bose Work Management, and Bose Work Mobile app. Plus, Bose Work Configuration be used as a standalone app or web UI. Each of them connects and communicates differently as explained on the following page.

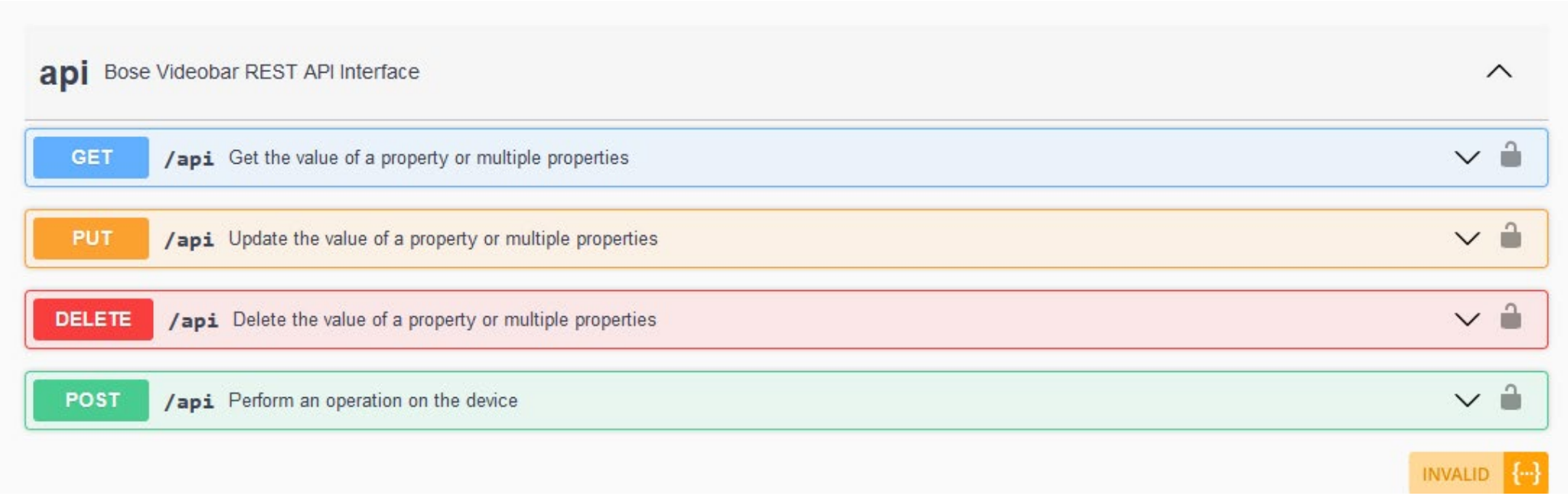
This comprehensive suite of enterprise-grade software unlocks the full potential of Bose Videobar solutions by including software for configuration, remote management, and local control of VB devices. This suite of software is regularly updated with new features and functions to stay up to date with the latest enhancements in security, functionality and performance.

This software is available for free download from PRO.BOSE.COM.

VB devices also have a full REST API to allow for creation of control software to meet your custom needs.

BOSE VIDEOBAR FAMILY: SOFTWARE SUITE

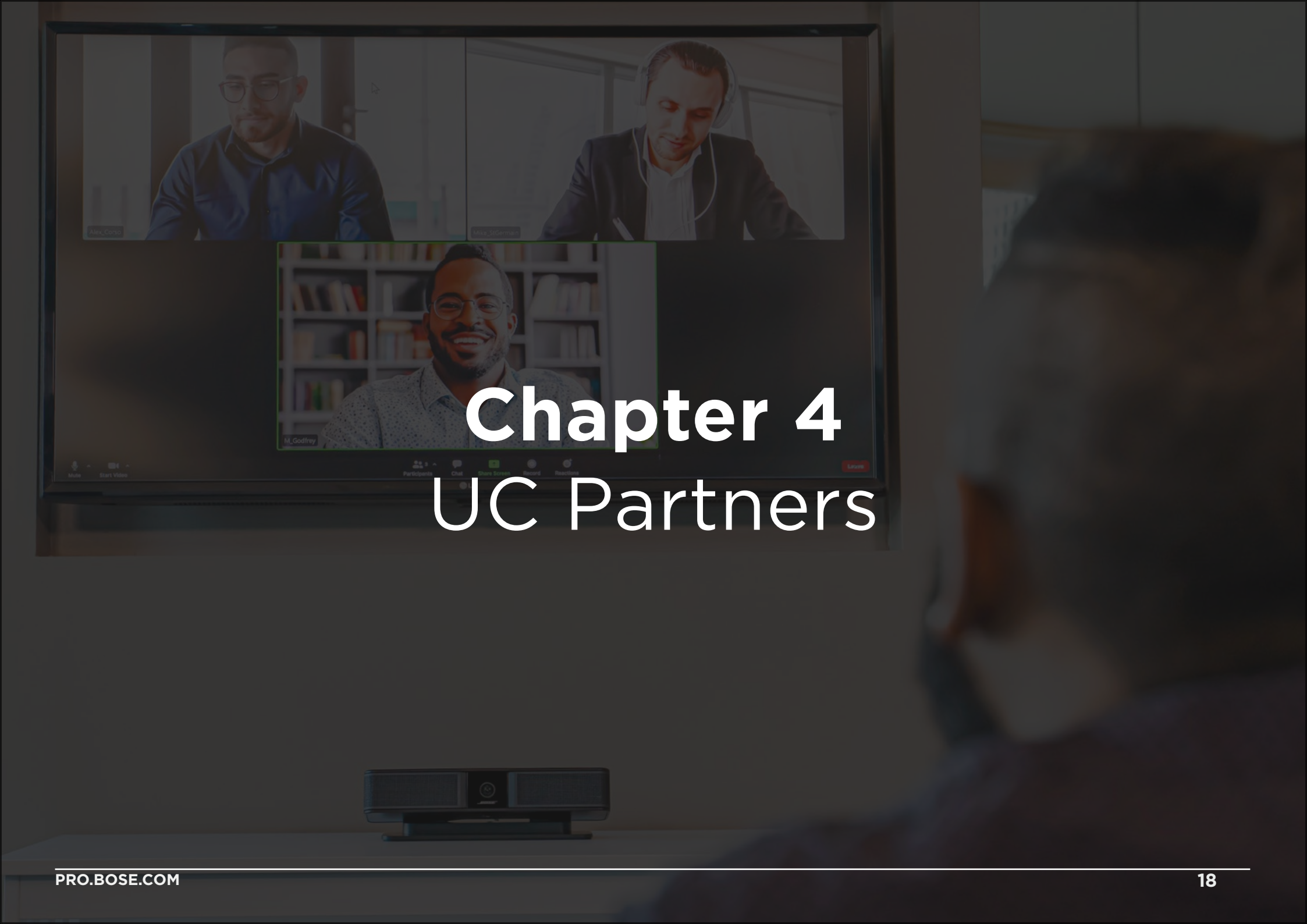
	BOSE WORK CONFIGURATION (USB APP)	BOSE WORK CONFIGURATION (WEB UI)	BOSE WORK MOBILE APP	BOSE WORK MANAGEMENT
				
Description	Provides user control of the camera and audio settings via the homepage and password-protected Administration settings	Provides administrators remote management of a single Bose Videobar	Provides user control over camera position, camera presets, autoframing, microphone mute, volume, and *Bluetooth* connectivity	Provides enterprise-level remote management and system admin access to multiple Videobar devices installed on a local network.
Intended users	System admins and users	System admins	Users	System admins
Operating system	Windows and macOS	Web browser	iOS and Android	Windows
Download location	PRO.BOSE.COM	PRO.BOSE.COM	App Store℠ or Google Play™	PRO.BOSE.COM
Connection method	USB	Wired (VB1 only) and wireless network	*Bluetooth* LE	Wired and wireless network
Remote management	No	Yes	No	Yes
Firmware updates	One device at a time	One device at a time	No	Batch updates supported
Profile upload and download	One device at a time	One device at a time	No	Single-device download. multiple-device upload



Bose Videobar devices are REST API-enabled to allow for customizable and modular third-party control. An API (Application Programing Interface) is a way for devices to communicate and control each other using a standard protocol. REST (respresentational state transfer, also known as RESTful) means that the Bose VB devices communicate in a modern, standard way that allows for easier integration with any application or device that supports REST API programming. REST APIs use a standard set of rules and come with a pre-defined command list usually in the form of a downloadable .json file. This makes controlling and monitoring Bose VB devices simpler and easier to maintain.

Interacting with a Bose Videobar can be done in four standard ways: GET, PUT, DELETE, and POST. GET is used for reading information from the device such as the state of the mute switch. PUT allows for setting a specific value of a programmable property like volume or camera position. DELETE allows for the clearing of a specific field or value within the device such as the name or the room description. Finally POST is used for discrete actions to operate the device like sending a reboot command.

Bose Professional has created two industry standard control modules for both Crestron and AMX based systems. This is just the start of control room compatibility with more being created for easier integration no matter what room you have.



Chapter 4
UC Partners

UC CERTIFICATION PARTNERS

We recognize that Bose Work's tremendous growth in the unified communications and video conferencing market would not be possible without our partners. Through our strategic partnerships, we are able to offer complete collaboration solutions our customers know and trust. Together, we ensure solutions are certified and compatible with the industry's most popular UC environments and offer superior user experiences wherever you are.
The Bose partner network is a rich ecosystem of UC providers, technology partners, and collaboration specialists.

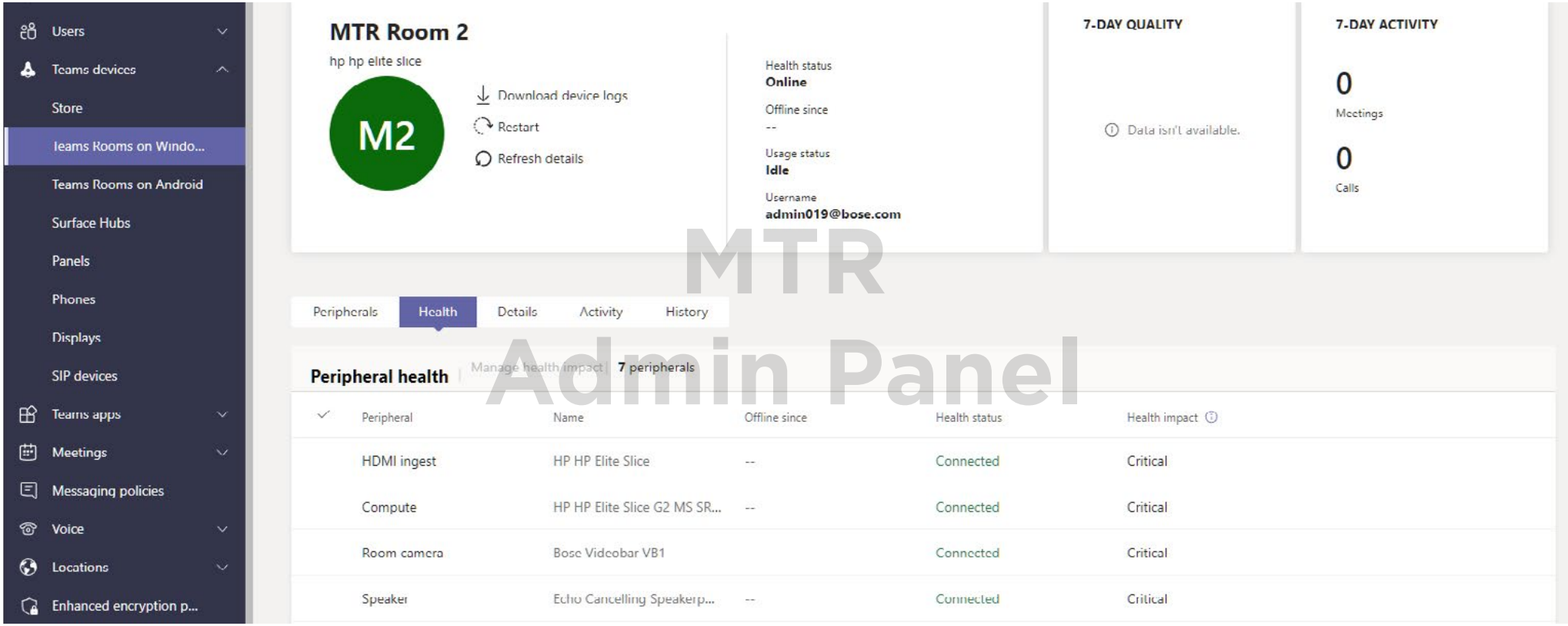
Why is UC Certification Important?

Certification ensures third-party devices such as the Bose Videobar properly function and are fully compatible with their UC service. Each device must meet a stringent process defined below:

Rooms Solution Certification

This UC provider certification tests and verifies the third-party devices that make up a complete room system are compatible with seamless end-user operation. To be "rooms-certified" means the third-party conferencing device is registered on an approved whitelist.

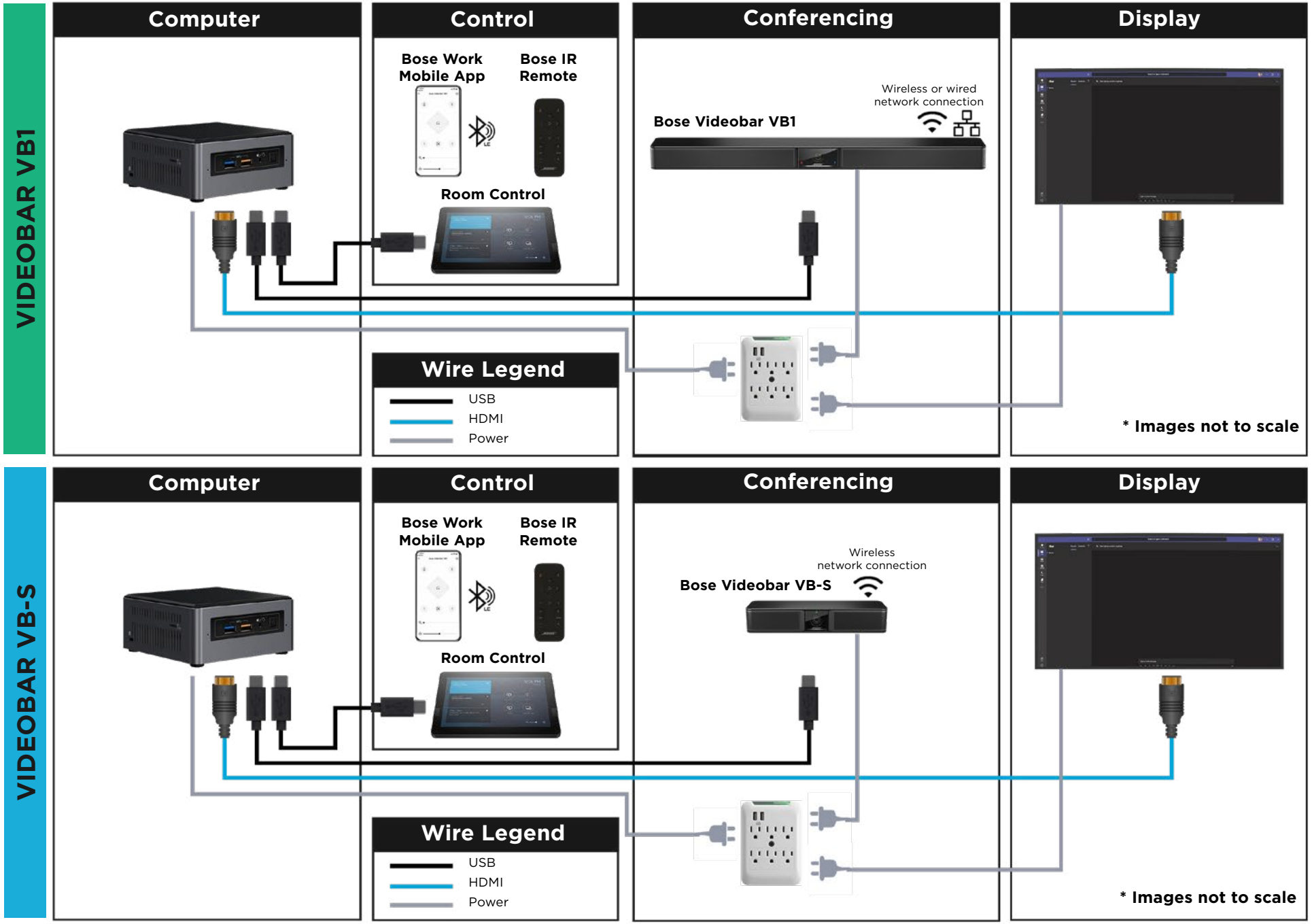
This provides enhanced system features such as: automatic firmware management, telemetry information (people-counting, room occupancy, camera zoom activity), additional control properties for end-user control (zoom, autoframing, camera presets), and no need for hardware provisioning.



Both the Bose VB1 and VB-S devices can be integrated into Microsoft Teams Room (MTR) solutions. MTR systems are unique and have a few considerations when creating and connecting hardware.

Using a Bose Videobar in an MTR system allows for full device management through the MTR admin panel. Apart from first-time setup with the Bose Work Configuration app, all device management and firmware updates can be achieved from the MTR admin panel to keep your room management workflow simple and short. This advantage does come with a consideration that all network ports on USB peripheral devices like Bose Videobar devices will be disabled. This means that you MUST use the MTR admin panel and NOT Bose Work Management to manage your devices.

This also means that the VB-S may be more applicable to MTR systems in smaller rooms where the VB1's additional network ports are no longer needed.


VIDEOBAR VB1
Computer
Control
Conferencing
Display
Bose Work Mobile App
Bose IR Remote
Room Control
Wireless or wired network connection
Bose Videobar VB1
Wire Legend
USB
HDMI
Power
* Images not to scale
VIDEOBAR VB-S
Computer
Control
Conferencing
Display
Bose Work Mobile App
Bose IR Remote
Room Control
Wireless network connection
Bose Videobar VB-S
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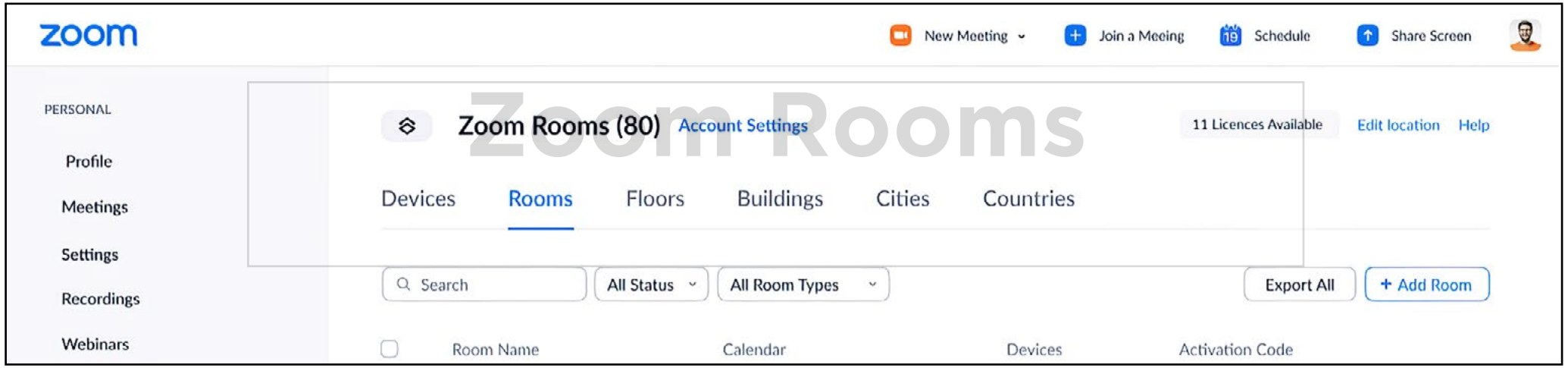
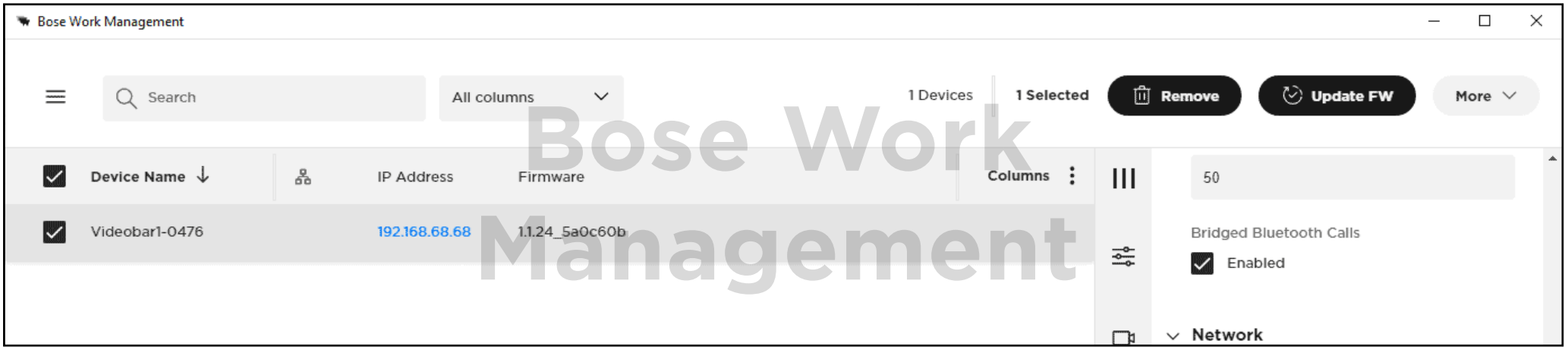
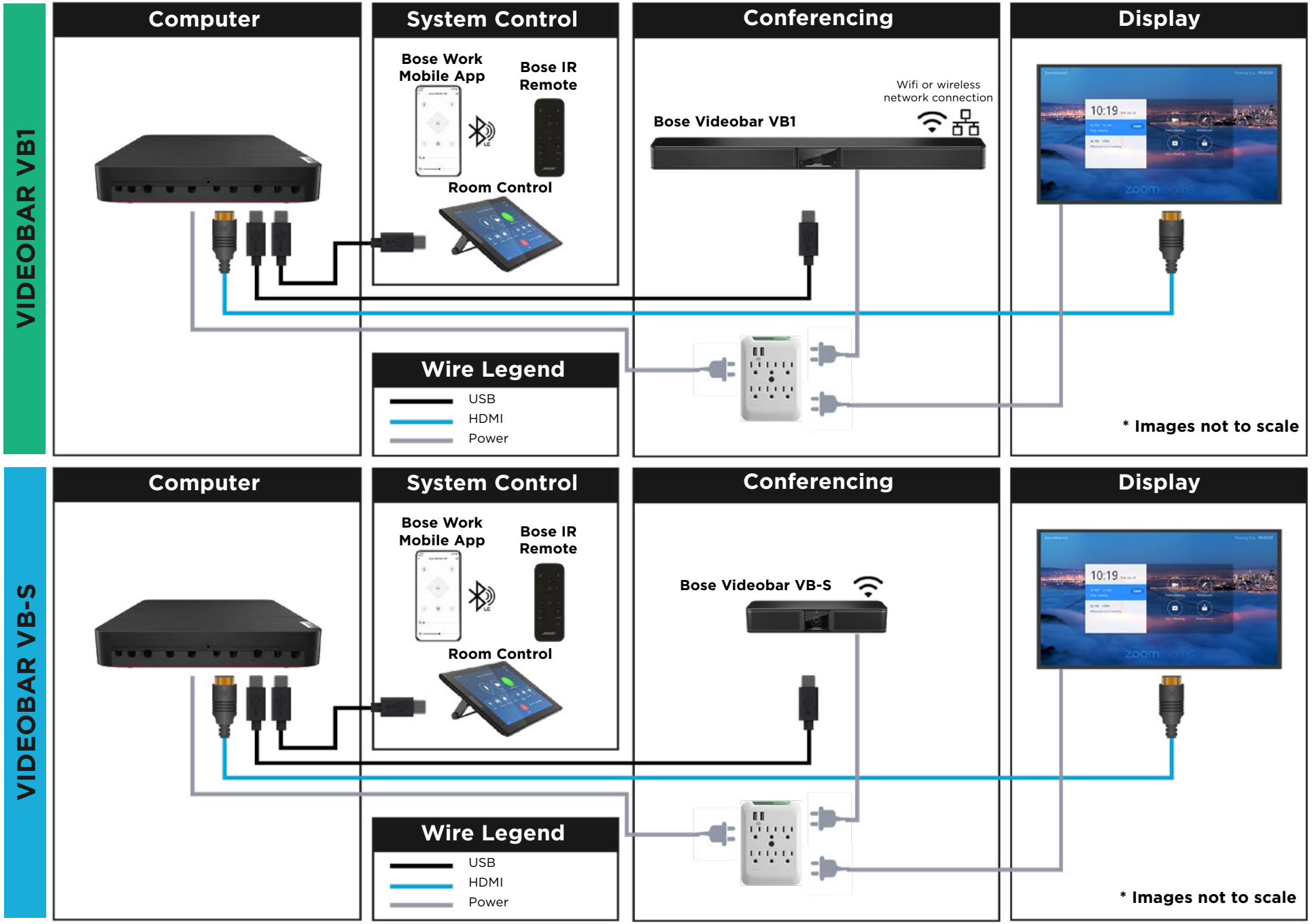


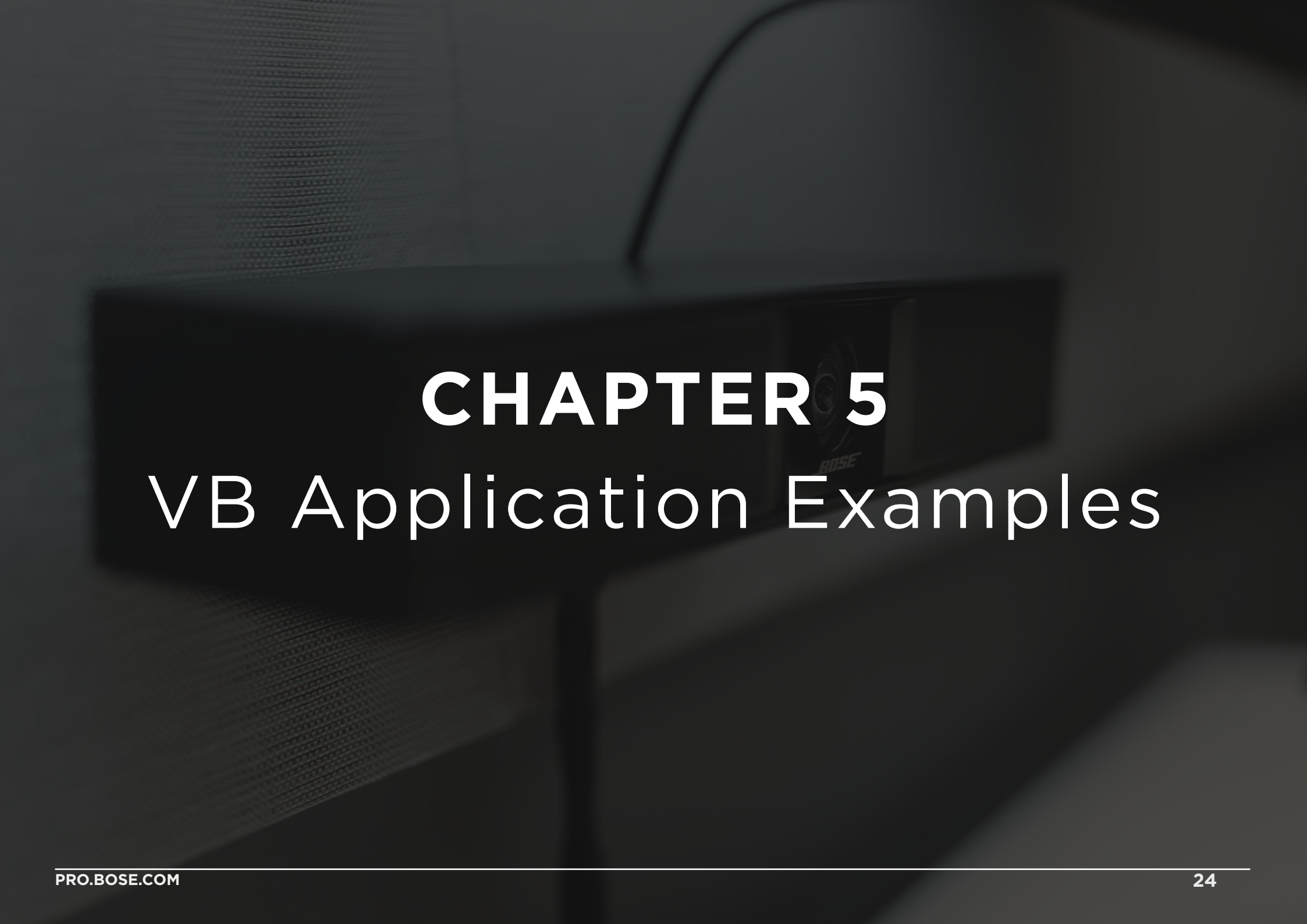


Bose Videobar devices are a great fit for a Zoom Rooms system. Zoom Rooms solutions allow for seamless touchscreen-controlled meetings and do not have the same considerations to take into account like MTR-based rooms do.

Using a Bose Videobar device in a Zoom Room means that you can take advantage of the Bose Work Management application. Once first-time setup is completed with the Bose Work Configuration app, the Zoom Rooms admin panel only manages the scheduling and compute devices of the Zoom Rooms. This means you will use Bose Work Management to easily identify and manage all Bose Videobar devices throughout your organization. This also means that in VB-S rooms, a wireless connection will be required for management. If this is not possible, the VB1 can be used instead with is wired Ethernet port.

ZOOM ROOMS SOLUTIONS: SYSTEM DIAGRAMS





CHAPTER 5
VB Application Examples

BOSE VIDEOBAR VB-S: MOBILE CONFERENCE CARTS

BOSE VIDEOBAR VB-S: MOBILE CONFERENCE CARTS

Mobility is crucial around an office environment. A growing trend is carts that allow conferencing systems to be easily moved around the facility to turn any place into a meeting space. Users want a self-contained system that can be wheeled into an area so a video conference can happen promptly with no technical difficulties.

These systems include everything integrated into the mobile cart. The video display, host PC, user controls, microphone, camera, and loudspeakers are all included. These solutions provide maximum flexibility and offer cost-saving measures when a traditional huddle or conference room may not be an option.

The Bose Videobar VB-S incorporates technology that makes it a great solution for mobile conference carts. These features spotlight why:

1. **The slim design with optional mounting system** is so compact that it fits on a cart shelf, or you can remove the tabletop mount and install it under or above the video display using its optional mounting accessories

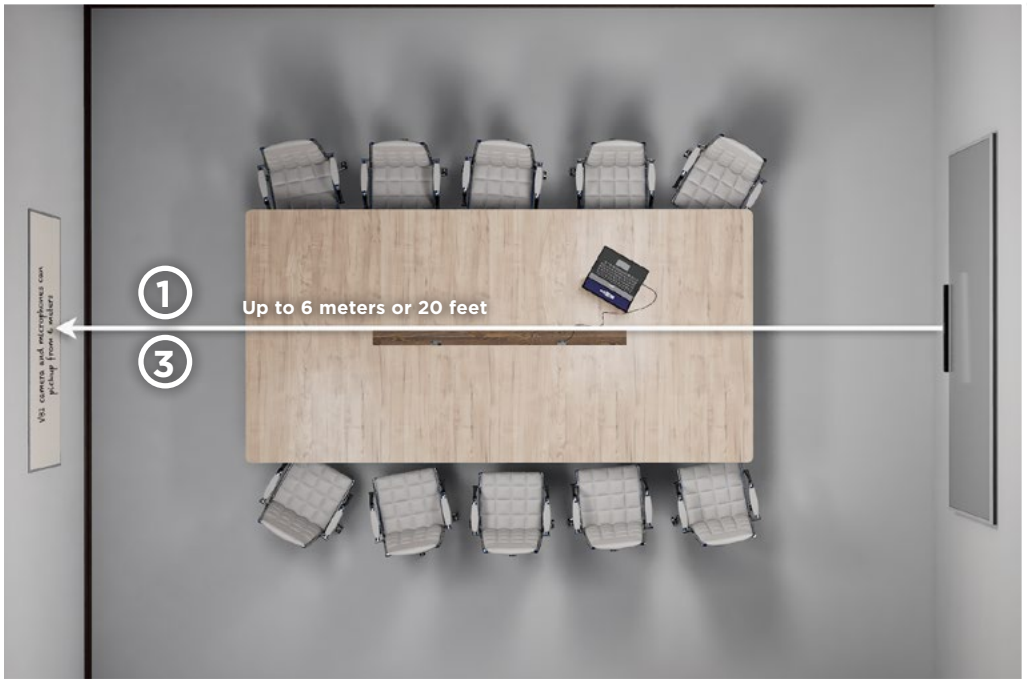
2. **Onboard Wi-Fi card** allows wireless network connection. Once AC-powered, the VB-S will connect to your organization's Wi-Fi network

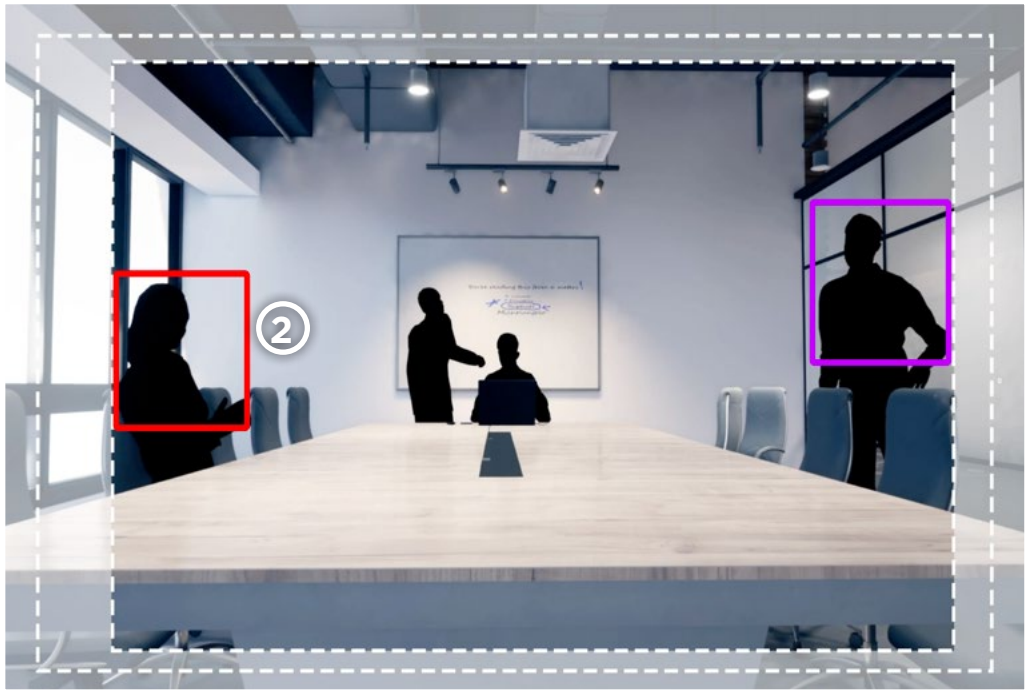
3. **Just plug it in. AC power** is the only hardwired connection required. The rest of the system is self-contained so you can host a video conference anywhere in your facility

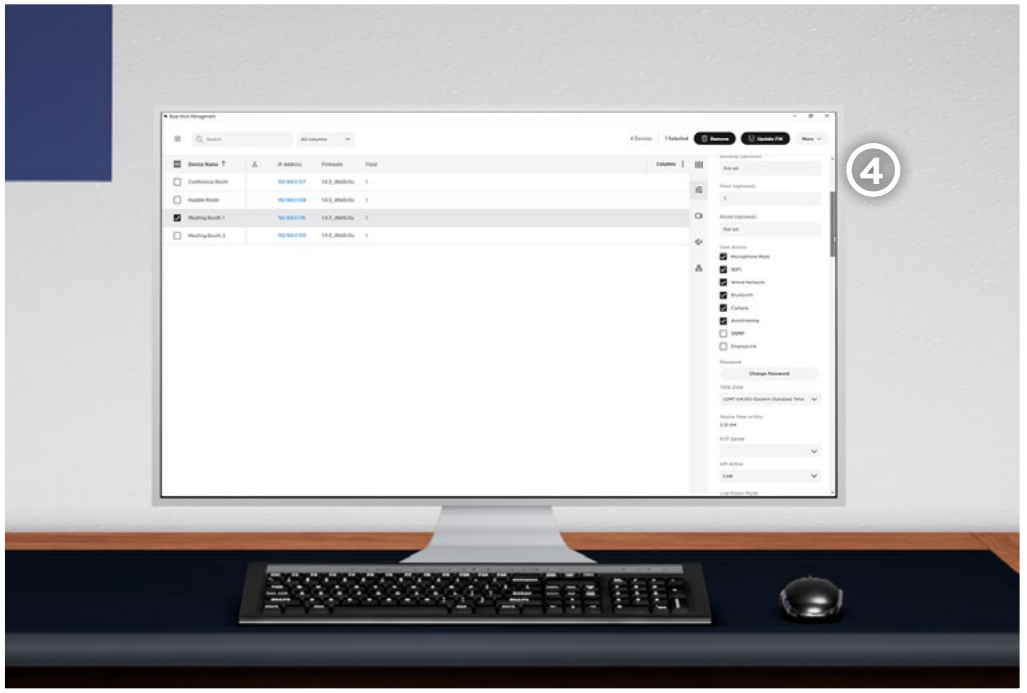
4. **The powerful, clear RaceTrack loudspeaker** gives you amazing audio performance for its size. Bose-proprietary RaceTrack technology allows for a larger loudspeaker driver to be placed in a smaller form factor, giving in-room participants that sense of presence that clear sound provides

5. **Unparalleled microphone performance** is accomplished by the wide pickup pattern of the beam-steering microphone arrays. Whether you are in a corner, a large, open space, or a small room, the Bose Videobar VB-S is the perfect device to complete a mobile conferencing cart

BOSE VIDEOBAR VB1: MEDIUM CONFERENCE ROOMS







BOSE VIDEOBAR VB1: MEDIUM CONFERENCE ROOMS

Bose Videobar based conferencing systems are being used in larger spaces that go beyond their intended use such as small-to-medium sized conference rooms. These conference rooms are the most demanding spaces for Bose Videobar based conferencing systems due to the number of participants and room space. They typically facilitate up to ten people with a room depth up to six meters or 20 feet. Most compact USB conferencing devices are not designed for these use cases, and become a list of compromises:

Limited voice pickup for half the room as the internal microphones do not adequately pick up people at the other end of the room, so a supplement microphone is installed typically on the table. This adds complexity, table noise, and a point of failure.

Poor sound levels as the internal loudspeaker output is not loud enough for larger spaces, so the users must deal with either audio that's too quiet to understand or distortion when the volume is too high.

Grainy image of half the room as the internal cameras are not intended for longer distances.

The Bose Videobar VB1 sets a new standard for the size of room in which an all-in-one solution can perform without compromises. These are the main features that expand its use into these larger spaces:

1. **4K digital zoom** allows remote participants to read text written on whiteboards from up to six meters or 20 feet. They can see the entire meeting space clearly

2. **Autoframing** allows the VB1 to automatically pan, tilt and zoom to keep all meeting participants in frame during your meeting

3. **Microphone pickup distance** can capture voices 20 feet (6 meters) away clearly and consistently due to the adaptive beam-steering microphone array. No supplemental microphone is required

4. **Remote management** allows system administrators to diagnose, update, and maintain the Bose Videobar VB1 wherever it is installed. With both wireless or physical network connections, all features of the VB1 can be remotely monitored and changed. The VB1 can be easily restored to preconfigured settings or even factory-reset to maintain scheduled meetings on time without administrators having to be present in the room

HOW TO CHOOSE BETWEEN THE VB1 AND VB-S

This selection guide helps define which Bose Videobar is best suited based upon the three most typical system configurations in the conferencing room. The choices are Bring Your Own Meeting (BYOM), Multi-UC Host PC, or Room Kit Solution. To understand the three configuration types, please refer to pages 7 and 8.

Product Selection Guide

Bose Videobar VB-S

Bose Videobar VB1

BYOM

Is your space smaller than under 13’ x 13’ (4m x 4m)?* **Yes**

- Does your space require wired control?** **No**
  - Does your space require a one-cable solution?*** **No** → **Bose VB-S**
  - Does your space require a one-cable solution?*** **Yes** → **Bose VB1**
- Does your space require wired control?** **Yes** → **Bose VB1**

Is your space smaller than under 13’ x 13’ (4m x 4m)?* **No** → **Bose VB1**

UC Room Kit

Is your space smaller than under 13’ x 13’ (4m x 4m)?* **Yes** → **Bose VB-S**

Is your space smaller than under 13’ x 13’ (4m x 4m)?* **No** → **Bose VB1**

Multi-UC Host PC

Is your space smaller than under 13’ x 13’ (4m x 4m)?* **Yes**

- Does your space require wired control?** **No** → **Bose VB-S**
- Does your space require wired control?** **Yes** → **Bose VB1**

Is your space smaller than under 13’ x 13’ (4m x 4m)?* **No** → **Bose VB1**

* If your space is larger than 20’ x 20’ (6m x 6m) a Bose Videobar product is not recommended. Please see the Bose ES1 or DS4 solutions for larger spaces.
** Wired control refers to both remote device management and third-party, in-room control systems. The VB-S is still compatible with these systems over Wi-Fi.
*** One-cable solution refers to the VB1 DisplayLink technology that allow for a single cable to provide audio, video, and camera connection. If you are planning on implementing a USB hub or wireless solution like Barco ClickShare with a VB-S, then choose “No”.

Chapter 6
Integrated Rooms

INTEGRATED ROOMS EXPLAINED

These spaces are purpose-built with audio and video conferencing in mind. Businesses continue to deploy a handful of high-end large conference rooms or boardrooms packed with the latest technology. These spaces are commonly designed to accomodate more than 12 people and require more complex equipment for effective large group participation.

Though common in corporate conference rooms, integrated conference systems can also be found in lecture halls, classrooms, distance learning, court rooms, government buildings, or any other application requiring two-way real-time communication.

Integrated system solution

A typical system includes sophisticated cable infrastructure with integrated devices such as large video displays, microphones, loudspeakers, automated lighting, and advanced system controls mounted into the ceiling, walls, and tables. They also require an equipment rack to house computers, system controllers, signal processors, amplifiers, network equipment and more.

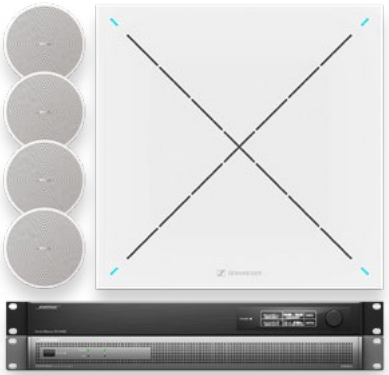
Due to their complexity, they require skilled specialists to properly design, program and install the system with routine maintenance.

Large Conference Rooms

Executive Boardrooms

Conference Suites

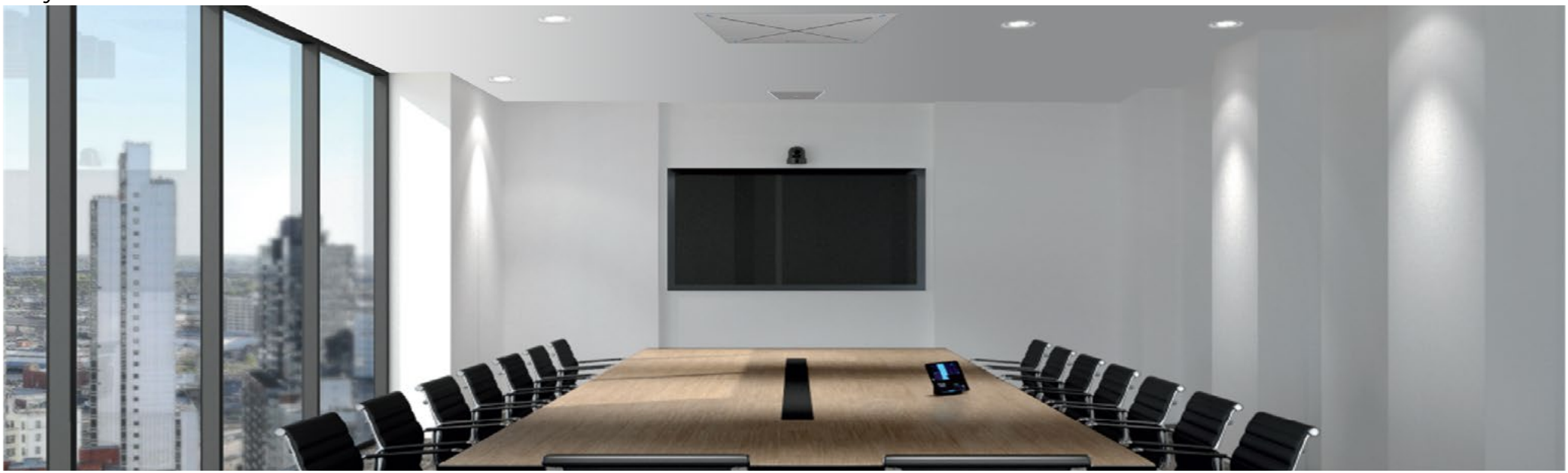
Bose ES1 Ceiling Audio Solution



Bose DS4 Ceiling Audio Solution

Clear the conference table for better collaboration. Part of the Bose Work family of a products, the Bose Ceiling Audio Solutions are complete conferencing systems for fully integrated meeting rooms. They combine the premium performance of Bose loudspeakers and Sennheiser TeamConnect Ceiling 2 microphone — along with a Bose amplifier and DSP — to deliver a seamless meeting experience that empowers productivity. They're complete room audio solutions, ready for quick deployment and configuration of the electronics, reducing installation time.

A Bose Ceiling Audio Solution is more than fully integrated — it's truly seamless. Completely out of the way. With fewer devices on walls and tabletops, meeting participants can stand, sit, or move around the room freely with the confidence that they'll hear and be heard.



KEY FEATURES

Certified for Microsoft Teams and compatible with Zoom. Plus, certified for use with Avaya® and Cisco® VoIP systems

Deliver a truly integrated premium conferencing solution, combining Bose loudspeakers, Sennheiser TeamConnect Ceiling 2 microphone, ControlSpace EX-440C processor, and PowerSpace P2600A amplifier

Choose from two systems — the innovative Bose ES1 system, featuring one EdgeMax EM180 loudspeaker, or the more conventional Bose DS4 system, featuring four DesignMax DM2C-LP loudspeakers

Clean up the conferencing experience with fewer devices on walls or tabletops, giving people the freedom to focus on work, the flexibility to sit or stand anywhere in the room, and the confidence that they'll hear and be heard clearly

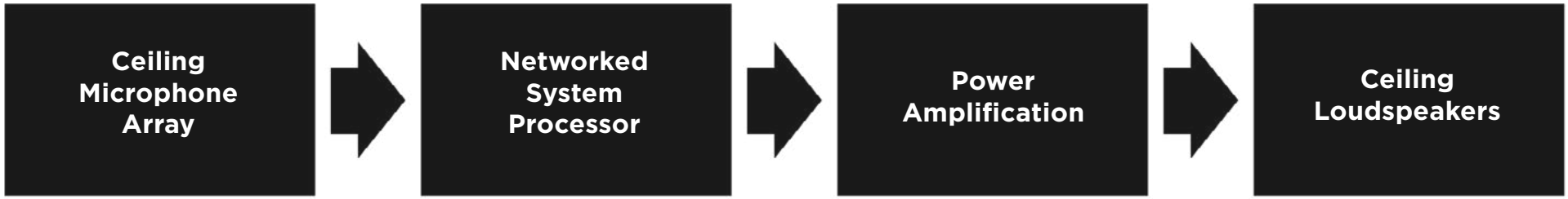
Bring clarity and intelligibility to large meeting rooms with superior echo-cancelling technology, so remote meeting participants can communicate freely and feel like they're in the room

Deploy quickly with reference configurations that help reduce installation time

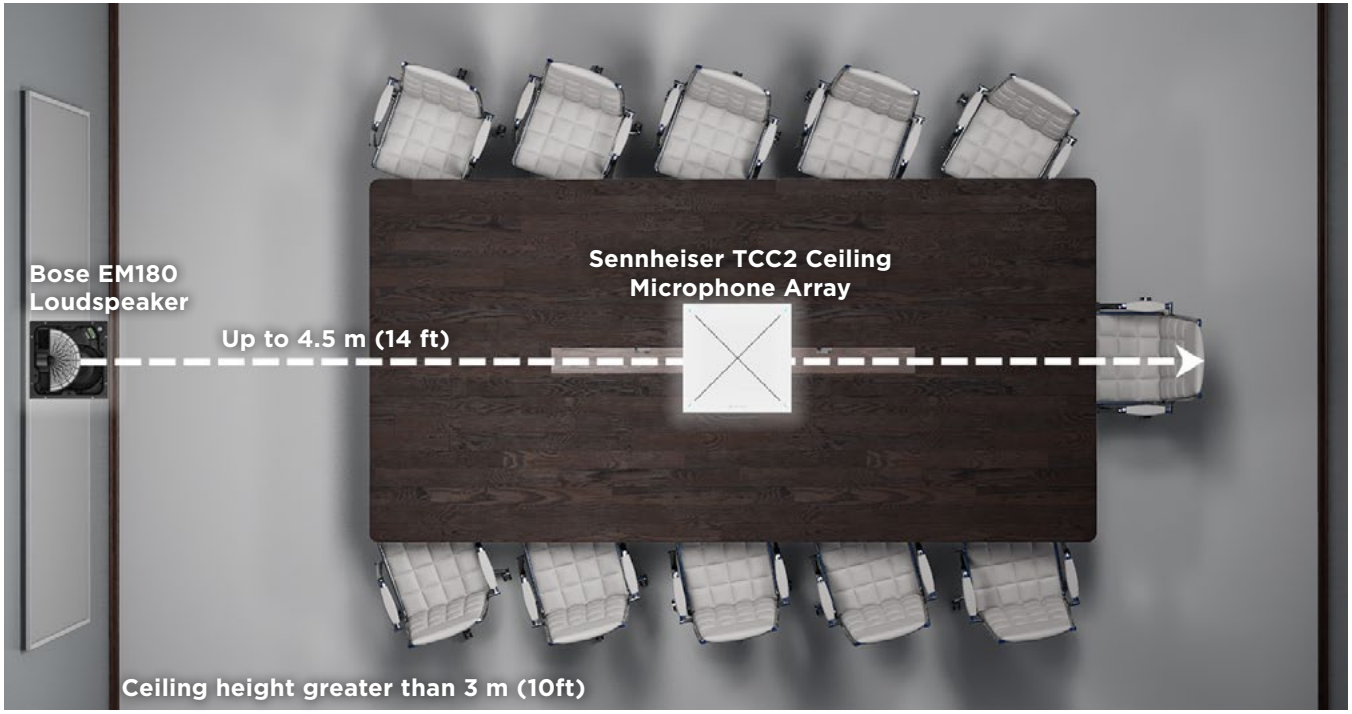
Combine with popular unified communications platforms such as Microsoft Teams, Zoom, Google Meet, and more to provide enhanced audio performance in fully integrated meeting rooms

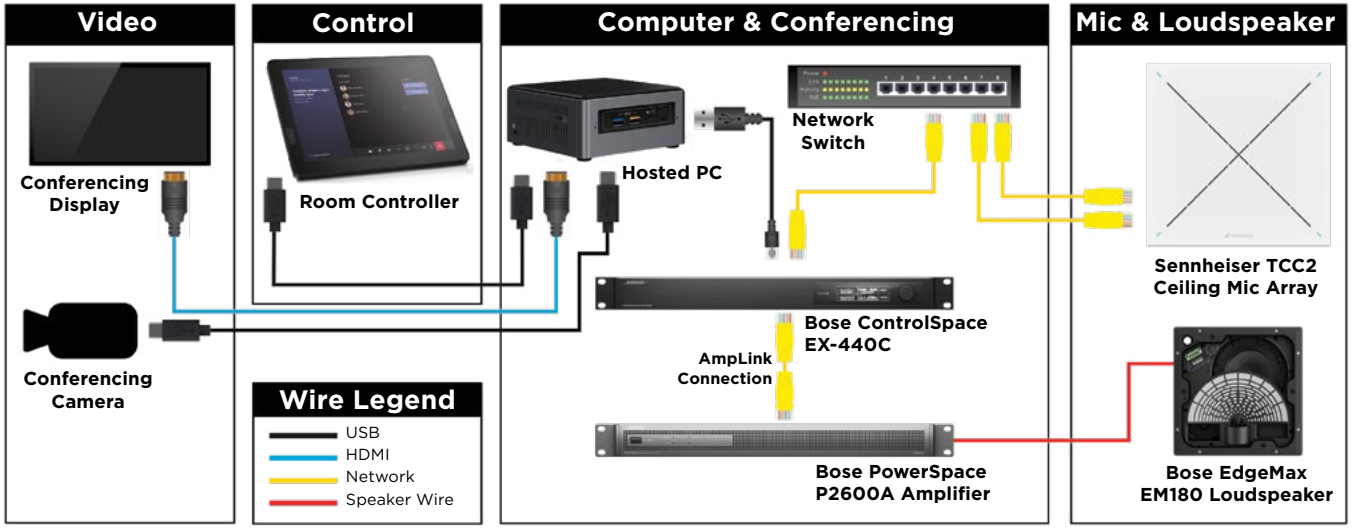
Build trust with end-users by offering an integrated conferencing solution from globally respected audio companies that they already know and recognize as premium brands

BASIC SYSTEM SIGNAL FLOW



BOSE ES1 CEILING AUDIO SOLUTION: OVERVIEW





*** Images not to scale**

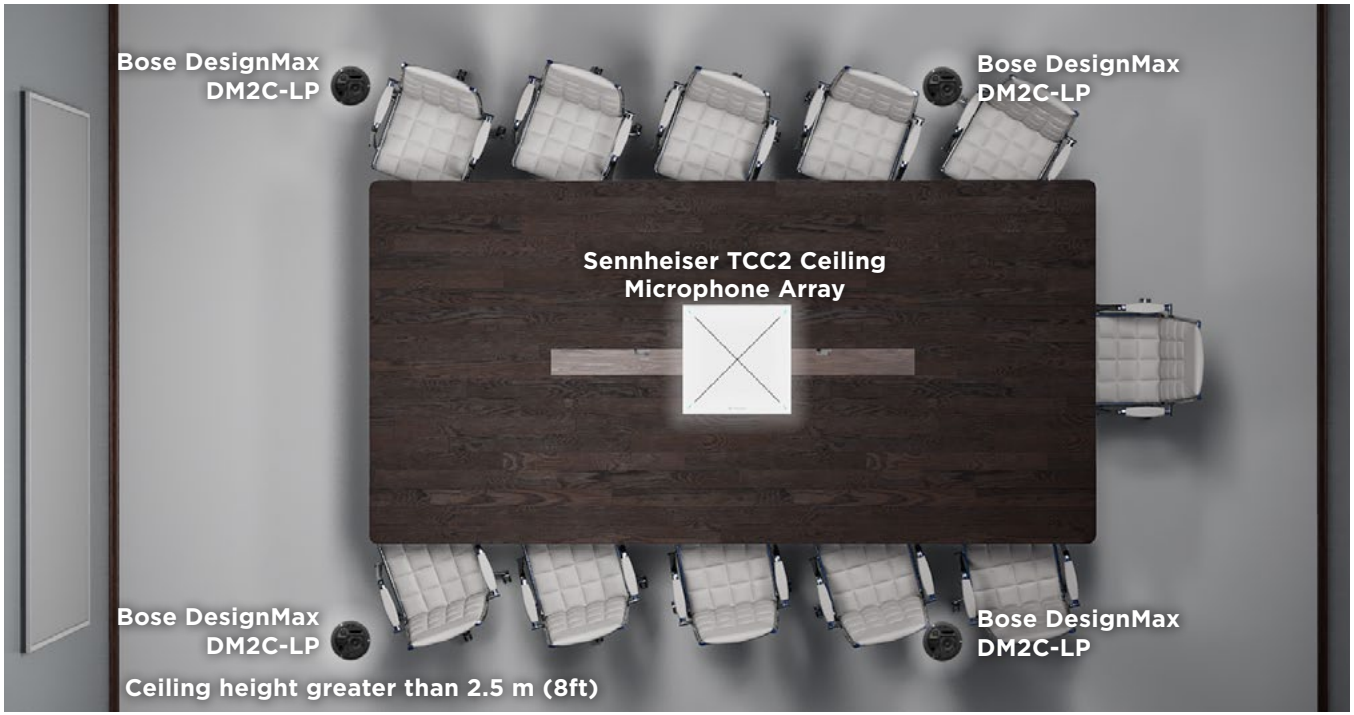
Microphone Array: The Sennheiser TeamConnect Ceiling 2 provides a patented automatic voice location detection and dynamic beamforming to capture a presenter's voice no matter where they are located in the room. It quickly switches between multiple voices and it's great for rooms with flexible seating configurations.

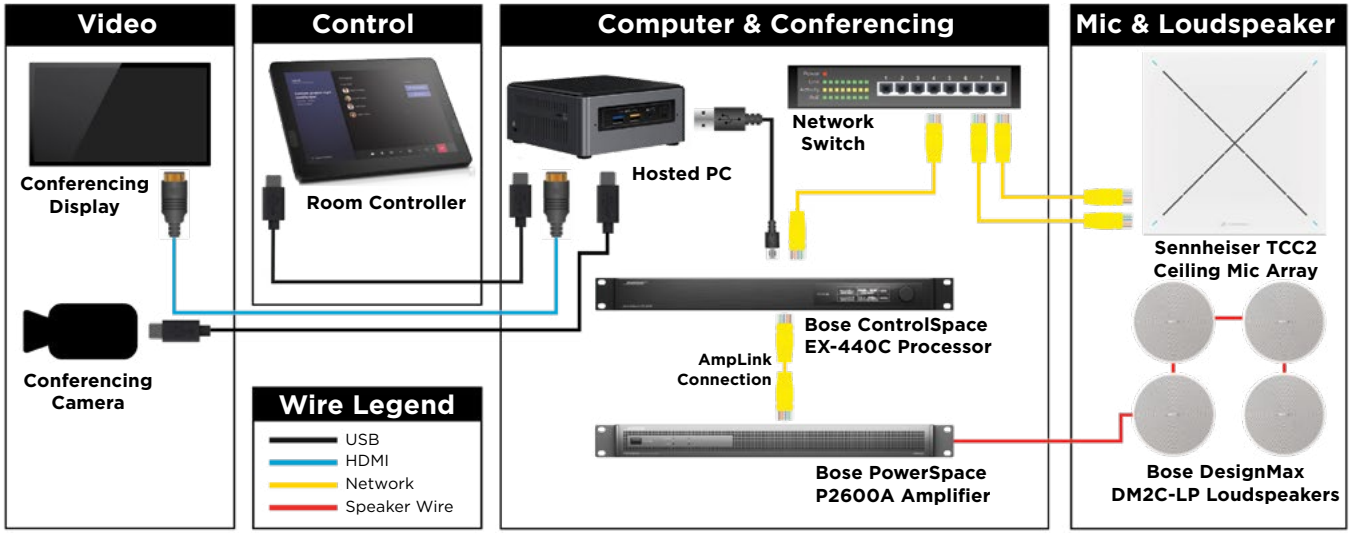
Networked System Processor: The Bose ControlSpace EX-440C conferencing signal processor facilitates high-quality microphone integration and audio processing. Various inputs and outputs allow for flexible configuration with four mic/line analog inputs, four analog outputs, onboard VoIP and PSTN, USB, Bose AmpLink output, eight-channel acoustic echo cancelling (AEC), and 16 x 16 Dante® connectivity.

Power Amplification: To power the EdgeMax EM180, the PowerSpace P2600A provides 600 watts per channel, and the Bose AmpLink connection provides uncompressed, low-latency digital audio from the ControlSpace processor via a network cable.

Loudspeakers: The Bose EdgeMax EM180 loudspeaker is a revolutionary new type of ceiling loudspeaker — it's best described as a large-format, surface-mount loudspeaker hidden away in a flush ceiling-mount. A single unit provides 180° coverage with unparalled sound performance due to the Bose PhaseGuide technology. The result is high-definition sound that fills the entire room.

BOSE DS4 CEILING AUDIO SOLUTION: OVERVIEW





* Images not to scale

Microphone Array: The Sennheiser TeamConnect Ceiling 2 provides a patented automatic voice location detection and dynamic beamforming to capture a presenter's voice no matter where they are located in the room. It quickly switches between multiple voices and it's great for rooms with flexible seating configurations.

Networked System Processor: The Bose ControlSpace EX-440C conferencing signal processor facilitates high-quality microphone integration and audio processing. Various inputs and outputs allow for flexible configuration with four mic/line analog inputs, four analog outputs, onboard VoIP and PSTN, USB, Bose AmpLink output, eight-channel acoustic echo cancelling (AEC), and 16 x 16 Dante® connectivity.

Power Amplification: To power the four DesignMax loudspeakers, the PowerSpace P2600A provides 600 watts per channel, and the Bose AmpLink provides uncompressed, low-latency digital audio from the ControlSpace processor via a network cable.

Loudspeakers: For projects requiring premium-class, traditional ceiling loudspeakers, the Bose DesignMax DM2C-LP is the best choice. They are compact with a low-profile backcan for installation with limited above-ceiling clearance. They provide high-definition sound performance that fills the entire room.


BOSE
PROFESSIONAL