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White Paper

Windows or Android in the Meeting Room

Choosing the right operating system for your organization's group video systems.



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Traditional Video Conferencing

Video conferencing has evolved from an expensive and complex technological curiosity into a costeffective, highly reliable, core business tool used by hundreds of millions of people every day.

Traditionally, most meeting room (a.k.a. group) video conferencing systems spoke the same language – a language called communication "standards." By adhering to standards such as SIP and H.323, video conferencing systems could communicate with each other and connect to back-end video conferencing platforms (meaning calling services, video bridges, gateways, registration systems, and more).

Customers purchasing these video systems didn't worry much about interoperability or compatibility with video conferencing platforms because almost all video systems adhered to the same standards.

Also, customers didn't think about the operating system or software running on these video conferencing systems for one reason – they had no choice in the matter. When they purchased a video system, it came with that vendor's hardware, that vendor's chosen operating system, and that vendor's collaboration software.

Today, things are very different.

It's All About the Platform

Countless organizations have made feature-rich communication tools – including video conferencing - available to their workers on their desktops, laptops, and mobile devices.

For various reasons (scalability, ease of use, feature-set, and more), most companies expanded their communication and video conferencing deployments to their workers using cloud platforms.

Over time, users became comfortable with the communication software provided by their platform providers, and now they expect the same experience (look, feel, workflow, etc.) in their meeting rooms.

In response, some cloud service providers created "meeting room friendly" versions of their communication software. To make their software easy to deploy, the providers designed their meeting room software to be compatible with third-party hardware running Windows and Android.

Organizations worldwide are video-enabling their meeting rooms using Windows and Android software from communication platform providers like those listed in the table below.

Meeting Room Software	Windows	Android
BlueJeans Rooms	Х	Х
Dialpad Meetings		Х
GoToRoom		Х
Microsoft Teams Rooms (MTR)	Х	Χ
Pexip Room		Χ
RingCentral Rooms		Χ
StarLeaf Room		Χ
Tencent Meeting Rooms		X
Zoom Rooms (ZR)	Х	Х

Figure 1: Meeting Room Video Conferencing Software (and Supported Operating Systems)



Choosing the Right Operating System

Customers looking to deploy software solutions in their meeting rooms first need to choose their preferred communication platform (e.g., Microsoft Teams, Zoom, etc.).

As shown above, some providers (e.g., GoToRoom, RingCentral, and Pexip) offer Android meeting room software only, while others offer both Windows and Android options.

If your chosen platform provider offers meeting room software for only one operating system, your choices are limited; either accept the supported OS, wait for the provider to support the other operating system, or choose a different communication platform.

But if your preferred provider offers meeting room software for both Windows and Android, or if you haven't chosen a communication platform yet, you have some decisions to make.

This section highlights some of the key items IT managers should consider when choosing between Windows and Android for their meeting room video systems.¹

Device Form Factors – Windows video systems typically use mini-PC form factors and USB mic(s), camera, and speaker(s). On the other hand, Android video systems are available in all-in-one (video bar) form factors with built-in mics, speakers, and cameras or as stand-alone devices in mini-PC form factors that use USB mic(s), camera, and speaker(s).

Ease and Speed of Installation – all-in-one (video bar) systems tend to be quicker and easier to install than systems that utilize USB mics, speakers, and cameras.

Supported Room Sizes / Types – all-in-one (video bar) systems are best suited for small and medium-sized meeting rooms, while devices that use external AV accessories (mics, speakers, cameras, etc.) are more flexible and can support almost any room size or type.²

Feature Parity – some platform vendors prioritize one operating system over another. For example, Microsoft has committed to feature-parity between operating systems for Microsoft Teams Rooms (MTR), but some features will likely arrive on Windows before Android.

Wired Content Sharing – Windows video systems typically require additional hardware (e.g., Logitech Tap controller) to enable wired content sharing, while Android devices often support wired content sharing using HDMI or USB connections (or both). ³

BYOD Support – \underline{B} ring \underline{Y} our \underline{O} wn \underline{D} evice support allows users to connect their laptops to the meeting room video system and "borrow" the video system's mics, speakers, and camera for use with any collaboration application running on the laptop.

Windows video systems do not typically support BYOD without external video, audio, and USB switching devices (e.g., Logitech Swytch), while most Android-based video systems support BYOD out of the box.⁵

³ Wired content sharing and BYOD support also depend on the calling platform in use on the video system.



¹ Hybrid deployments including both Windows and Android video systems are also common.

² Some video bars (e.g., Logitech Rally Bar) can be used with external mics to support larger rooms.

Security Concerns – Both Windows and Android video systems are vulnerable to attack. Some experts consider Android more secure because of its Linux heritage. Other experts point out that hackers frequently target mobile operating systems (e.g., Android and iOS), and that once a bad actor gains access to an Android device, they typically gain access to all applications and data on the device. Some video conferencing hardware vendors use modified versions of the underlying operating system to enhance system security.

Operating System (OS) Access – Windows systems typically allow the installation of additional software (e.g., virus and malware checkers, other security software, etc.) and access to configuration settings (e.g., firewall rules, etc.). In contrast, Android-based video systems are typically locked down. For some companies, and especially large, security-conscious enterprises, this may be a significant benefit.

System Management – Both Windows- and Android-based devices require some active management to keep them up-to-date and secure.

- Windows systems can typically be managed using standard IT management tools (e.g., SCCM, Intune / Microsoft Endpoint Manager, Remote Desktop, etc.).
 - However, these systems often require frequent and time-consuming updates to many parts of the system (e.g., the device's firmware, the operating system, system and device drivers, collaboration applications, etc.). Such updates are often beyond the ability of typical users.
- Android-based video systems are typically easier and faster to update, but usually require the vendor's management platform or portal.

Platform Flexibility – Android video systems make it relatively quick and easy to change from one default calling (video) platform to another. Such changes are more complex and time-consuming on Windows.

Total Cost of Ownership (TCO) – in the meeting room video conferencing world, TCO includes numerous elements, including the cost of:

- the video conferencing system hardware
- ongoing device support and maintenance packages
- software licenses (e.g., operating system licenses, anti-virus software, etc.)
- service fees (e.g., monthly calling platform fees)
- any AV peripherals (mics, speakers, cameras, etc.)
- back-end monitoring or management (products and services)



Windows and Android – Side by Side

The table below lists some typical differences between Windows and Android meeting room video conferencing systems.

Area of Interest	Windows	Android	Comments
Device Form Factor	Mini-PC form factor + AV (USB) peripherals	All-in-One (video bars) Mini PC form factor + AV peripherals	Note – there are some exceptions (e.g., Microsoft Surface Hub is an all-in-one, Windows-based meeting room solution.)
Ease of Installation	Medium	High	Windows video systems usually require more time and expertise to install and configure.
Supported Room Sizes and Types	Small Medium Large	Small Medium Large	Depends mainly on the form factor. Video bars are best suited for small and medium meeting rooms. Mini-PC form factors (Windows or Android) can address any room size or type.
Feature Parity	Depends on platform	Depends on platform	Some platform vendors offer feature parity across operating systems, while others favor one OS over another.
Wired Content Sharing	Requires additional hardware	Typically supports HDMI or USB content sharing	Wired content sharing capability depends on the device and calling platform in use.
BYOD Support	Requires external AV and USB switching	Typically supported out of the box	BYOD support depends on the device and calling platform in use.
Security Concerns	Medium	Medium	There are pros and cons associated with each operating system. Some companies may be more comfortable with one over the other.
Operating System (OS) Access	High	Low	Windows systems typically allow admins to access the OS and install additional software as required.
System Management	Using Standard IT Tools	Using Vendor Tools	Windows systems usually require more frequent and "larger" updates than Android.
Platform Flexibility	Weak	Strong	It is quicker and easier to switch between meeting room platforms on Android systems than on Windows systems.
Total Cost of Ownership	Higher (typically)	Lower (typically)	TCO includes the cost of hardware, licenses, AV accessories, management, and more.

Figure 2: Meeting Room Video Systems – Comparing Windows vs. Android Approaches



Solution Spotlight

The sponsor of this study, Logitech, offers a portfolio of Windows and Android video conferencing systems and accessories for use in small, medium, and large meeting rooms.

USB Video Systems

<u>MeetUp</u> is a USB video bar that includes a 4K camera, a three-element beamforming mic array, and a custom-tuned speaker designed for use in small meeting rooms.



Figure 3: Logitech MeetUp in a Windows Microsoft Teams Rooms Bundle including a Logitech Tap Controller

<u>Rally Plus</u> is a modular video conferencing system that includes a 4K motorized pan/tilt/zoom camera, two speakers, and two mic pods. Rally Plus can support up to seven mics pods.



Figure 4: Logitech Rally Plus in a Zoom Rooms Bundle including a Logitech Tap Controller

MeetUp and Rally Plus can be used in Windows, Android, and BYOD environments:

- Windows these solutions can be used with Microsoft Teams Rooms and Zoom Rooms systems running on PCs from Logitech partners, including Lenovo, HP, Intel, or Dell.
- Android these solutions can also be used with Logitech <u>RoomMate</u>, an Android appliance that currently supports several cloud platforms (e.g., Pexip, RingCentral Rooms, and Zoom Rooms).⁴
- BYOD these solutions can act as the mic, speaker, and camera for a user's laptop running any collaboration application.

⁴ RoomMate started shipping in late November 2021. RR expects RoomMate to support additional calling platforms (e.g., Microsoft Teams) in the near future.



Android Video Bars

<u>Rally Bar Mini</u> is an Android video bar that includes a 4K camera, a six-element beamforming mic array, and two speakers designed for use in small and medium meeting rooms. Rally Bar Mini also supports up to two expansion mics.



Figure 5: Logitech Rally Bar Mini and a Tap Controller

<u>Rally Bar</u> is an Android video bar that includes a 4k camera, a six-element beamforming mic array, and two speakers designed for use in medium and large meeting rooms. Rally Bar also supports up to three expansion mics and offers Speaker Boost mode to serve larger rooms.



Figure 6: Logitech Rally Bar and a Tap Controller

Rally Bar Mini and Rally Bar can also be used in Windows, Android, and BYOD environments:

- Android – these solutions offer native support for numerous calling platforms (see logos below).



- Windows these solutions can also be connected and used with Windows PCs running Microsoft Teams Rooms or Zoom Rooms.
- BYOD these solutions can act as the mic, speaker, and camera for a user's laptop running any collaboration application.

The table below highlights the supported room sizes and use cases (Android, Windows, BYOD) of Logitech's video conferencing systems.

	Room Size	Android	Windows	BYOD
MeetUp	Small	Yes – with Logitech RoomMate	Yes – USB connection to Windows PC	Yes – USB connection to user's laptop
Rally Plus	Medium / Large	Yes – with Logitech RoomMate	Yes – USB connection to Windows PC	Yes – USB connection to user's laptop
Rally Bar Mini	Small / Medium	Yes – using Embedded Android Compute	Yes – USB connection to Windows PC	Yes – USB connection to user's laptop
Rally Bar	Medium / Large	Yes – using Embedded Android Compute	Yes – USB connection to Windows PC	Yes – USB connection to user's laptop

Figure 7: Logitech Video Systems with Room Size and Use Case Information



Logitech also offers two touch controllers for Windows and Android video systems. Logitech <u>Tap</u> is a USB touch controller that supports HDMI ingest for wired content sharing, and <u>Tap IP</u> is a PoE-powered Android-based touch controller.

Logitech recently introduced Tap Scheduler, a purpose-built, Android-based scheduling panel for meeting rooms.

All of Logitech's meeting room video conferencing products, including the Logitech Tap and Tap IP controllers and Tap Scheduler, can be managed using <u>Logitech Sync</u>, the company's cloud-based monitoring and management portal.

Conclusion

Traditional video systems used proprietary hardware and software to support standards-based video calls. With these systems, the underlying operating system was of little consequence to the customer.

Today, many organizations are deploying video conferencing software from communication platform providers (e.g., Microsoft Teams Rooms, Zoom Rooms, etc.) in their meeting rooms. Some of these software solutions are available for both Windows and Android, so IT managers must now choose which operating system to deploy.

When making their OS and video system decisions, IT managers should consider various items, including the breadth of software platforms supported, the available device form factors and supported room sizes, ease and speed of installation, usability, feature-set, security concerns and IT policies, device management options, the total cost of ownership, and more.

Logitech, the sponsor of this study, offers both Android-based and Windows-ready video conferencing solutions and bundles in various form factors for small, medium, and large meeting rooms. These solutions support a wide range of communication platforms.

The Recon Research team has tested and used the majority of these Logitech solutions in our lab and as a part of our everyday business and can confirm first-hand that they deliver on their promise.

Organizations seeking to video-enable their meeting rooms should take a good look at Logitech's range of meeting room video solutions.



About Logitech



(Information below provided by Logitech)

Logitech designs products that have an everyday place in people's lives, connecting them to the digital experiences they care about. More than 35 years ago, Logitech started connecting people through computers, and now it's a multi-brand company designing products that bring people together through video, music, gaming, and computing.

The Logitech Video Collaboration group supports a lasting shift to working from anywhere by helping people across organizations connect face-to-face, wherever they are - without compromising on the quality, productivity or the creativity that comes from collaboration. Learn more about Logitech Video Collaboration products at www.logitech.com/vc, www.linkedin.com/showcase/logitech-video-collaboration or @LogitechVC.

About Recon Research



Recon Research (RR) is an analyst/market research firm focused on enterprise communications. Our coverage areas include unified communications, video conferencing, collaboration and ideation, audiovisual AV solutions, wireless presentation, and more.

RR provides enterprise customers, vendors, channel partners, and investment professionals with the information and insight needed to make fact-based decisions.

What makes RR different is the depth of knowledge and experience we bring from our 15+ years of company briefings, market analysis, and hands-on testing of products and services in the space.

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