

Research Note: Cisco Board Pro Running Microsoft Teams Rooms

As Cisco and Microsoft prepare to release Microsoft Teams Rooms for Cisco devices, Wainhouse explores the benefits and experiences related to interoperability.

Daniel Root

As the Cisco devices team prepares to enable Microsoft Teams Rooms interoperability, clients of both Cisco and Microsoft Teams are asking questions about the implications of this integration. This research note explores how Microsoft Teams Rooms operates on the Cisco Board Pro, from set up and provisioning to daily use. The goal of this research is to help adopting organizations understand what they stand to gain, as well as the trade-offs users experience when deploying this combination of in-room solutions.

Devices and Services used for this report:

- Cisco Board Pro 75" mounted on Cisco floor stand running Cisco RoomOS 11.2.1.6
- Cisco Control Hub
- Microsoft O365 Admin Panel
- Microsoft Teams App Version: 1449/1.0.96.2022120503

Tested environment for this report:

- Home Office Dimensions & Environment: 14.5' X 12', LVP flooring, Drywall walls and ceiling, 2x windows 60" x 30"

Each of these platforms was tested in conjunction with:

- Webex Meetings and Whiteboard
- Microsoft Teams Meetings and Whiteboard
- Third Party Integrated App, Miro

Specific areas of research include:

- How to deploy Microsoft Teams Rooms on a Cisco Board Pro?
- What is the in-room / remote user interface?
- What is the in-room / remote user experience?
- What is the experience of Cisco devices using Microsoft Teams Rooms?

This Wainhouse report explores the key workflows necessary to collaborate in both local and hybrid meeting settings, encompassing video conferencing, brainstorming, ideation, and third-party software options. Wainhouse's analysis compares the workflows across the evaluated solutions to highlight key differentiators for each. It further examines some of the key challenges that still need to be addressed. The information presented in this report enables IT decision makers to recognize if the combined solution aligns with current workflows. This report is also applicable to vendor product teams working to create best-in-segment integrations and interoperability for the workforce.

Introduction

With hybrid work here to stay, the challenges of cross platform communications for both internal and external meetings have led to multiple ‘interoperability’ announcements since 2020. Previous Wainhouse research revealed over 50% of companies maintain at least two communications platforms or more, making cross platform meetings an inevitability. While ‘guest-join’ functionality has enabled room-based systems to connect with other communications platforms, the capabilities lack many of the features available when meeting on the room’s native platform. With the announcement of Microsoft Teams Rooms running on Cisco devices in mid-2022, these limitations of interoperability may be coming to an end.

The initial announcement touting this integration, made by both [Microsoft](#) and [Cisco](#) on October 12, 2022, underscored a commitment to deeper levels of interoperability for Cisco devices and the Microsoft Teams solution. In one passage of the press release unveiling the partnership, Cisco executives worked to characterize their partnership with Microsoft as unique:

“Together, Cisco and Microsoft [announced a partnership](#) that will bring more choice, flexibility, and capabilities to our mutual customers. For the first time ever, Cisco will become a [certified Microsoft Teams Rooms](#) devices partner. Our mutual customers will benefit from the option of running Microsoft Teams or Webex meetings natively on their Cisco devices”.
Snorre Kjesbu, Cisco Devices

While Microsoft has a wide array of vendors selling Microsoft Teams Rooms devices, the unique capability included in the announcement pushes the needle on interoperability. The differentiator is that Cisco devices are powered by Cisco RoomOS, a purpose-built operating system for collaboration where Microsoft Teams Rooms runs as a containerized Android application. This architecture allows for deploying Microsoft Teams Rooms as a primary service while retaining the ability to participate in a native Webex meeting with the same quality and functionality as expected in native Cisco RoomOS mode.

This research note examines the experience that individuals can expect when using a Cisco Board Pro with Microsoft Teams Rooms as the corporate platform of choice. The goal of this research is to help adopting organizations understand what they stand to gain - as well as the trade-offs in user experience - when deploying this combination of in-room solutions.

Specific issues addressed in this research include:

- Description of the interoperability capability
- Description of initial set up of Cisco Board Pro
- Description of initial set up of Microsoft Teams Rooms on a Cisco Board Pro
- Daily use experience of a Board Pro running as a native Cisco RoomOS system
- Daily use experience of a Cisco Board Pro running as a native Microsoft Teams Room
- In-meeting experience for Whiteboard software and third-party applications

This Wainhouse report explores key workflows necessary to collaborate in both local and hybrid meeting settings, encompassing video conferencing, brainstorming, ideation, and third-party software options. Wainhouse’s analysis compares the workflows across market leading solutions to highlight key differentiators for each. It further examines some of the key challenges still being addressed and provides information to IT decision makers trying to determine how this solution aligns with current workflows.

Methodology

To compile this research, Wainhouse conducted in-house testing of vendor solutions over the course of late 2022 and early 2023. Analysis presented in this report also draws upon both publicly available vendor-developed market positioning and briefings conducted with vendors at various stages of product development over the preceding years. The solutions compared in this document were provided to WH for testing but were not provisioned or previously deployed, necessitating WH to go through initial set up in addition to evaluating everyday use.

To properly understand the differences between the experiences, the Cisco Board Pro was initially tested as a Cisco RoomOS environment, then later reset to be provisioned as a Microsoft Teams Room. By conducting testing across both platforms, the trade-offs between the approaches is brought into focus. Each solution was tested in real-world, day-to-day, settings similar to that of end users entering and participating in meetings. Each of the tested solutions was connected and run on multiple days, across different times and meeting types. The tests also incorporated the use of whiteboarding and third-party integrated applications implemented during the meetings.

The specifications of the device used for testing are as follows:

- Cisco Board Pro 75" mounted on Cisco floor stand running Cisco RoomOS 11.2.1.6
- Cisco Control Hub
- Microsoft O365 Admin Panel
- Microsoft Teams App Version: 1449/1.0.96.2022120503
- Integrated third party app, Miro

Tested environment for this report:

- Home Office Dimensions & Environment: 14.5' X 12', LVP flooring, Drywall walls and ceiling, 2x windows 60" x 30"

The tested third-party application, Miro, was selected for its reliance on touch interactions and the depth of integration it has with both Microsoft Teams and Webex.

Please note that WH did not test in an urban environment, or a high-rise, where interference could impact the experience. Wainhouse also did not test maximum participant numbers per meeting or session, which also could compromise performance.

There were no quantitative evaluations used to test the solutions. Instead, this analysis focuses on comparing solutions based on ease-of-use in real-world, day-to-day business settings.

Cisco RoomOS11

Before testing the Microsoft Teams Room software, Wainhouse wanted to establish a baseline for Cisco devices. To accomplish this a Board Pro was set up with a floor stand in the home office of a senior analyst. After that, the device was registered using Cisco Control Hub and provisioned for the analyst.

Once provisioned, the device was tested within Webex meetings for multiple weeks, testing the in-room experience, quality of the image, in-meeting whiteboard and a third party integrated application. As expected, Wainhouse found that Cisco has a great solution in the Board Pro, with image quality on par or exceeding the best alternative all-in-one collaboration devices. The Board Pro reminded users of meetings, was easy to interact with, and featured great responsiveness from the touch-display in both a regular meeting and when leveraging the Webex Whiteboard. The

Webex ecosystem offloads the processing of third-party apps to the edge, making for a very responsive experience when pulling a Miro board into a Webex meeting.

This part of the testing resulted in a better understanding of why customers deploy Cisco devices - the quality, fit and finish of the Board Pro makes for a great in-room experience and provides superior video quality when compared to most all-in-one offerings.

Microsoft Teams Rooms

While Microsoft Teams Room software is available in both a Windows and an Android version, the Cisco Board Pro only operates a variant of the Android software. Within the two versions of Microsoft Teams Room software, the Windows version typically debuts a capability and the Android version follows later. Thankfully Microsoft is working to bring both versions into parity, and the Android version has been widely deployed to date.

To get a baseline of the capabilities, Microsoft Teams Room software has been previously tested within Wainhouse across a variety of room-based devices. Similar to Webex meetings, the in-room meeting experience is smooth and easy to operate. One point of differentiation for these devices has been their approach in supporting content sharing. This type of collaboration is typically supported in the cloud by Microsoft Teams, resulting in slight delays between a touch-input and a corresponding response. The extent of this delay can be impacted by devices with lower levels of processing power and responsiveness. To share content, or an integrated third-party application, a personal device is required to initiate within a Microsoft Teams meeting.

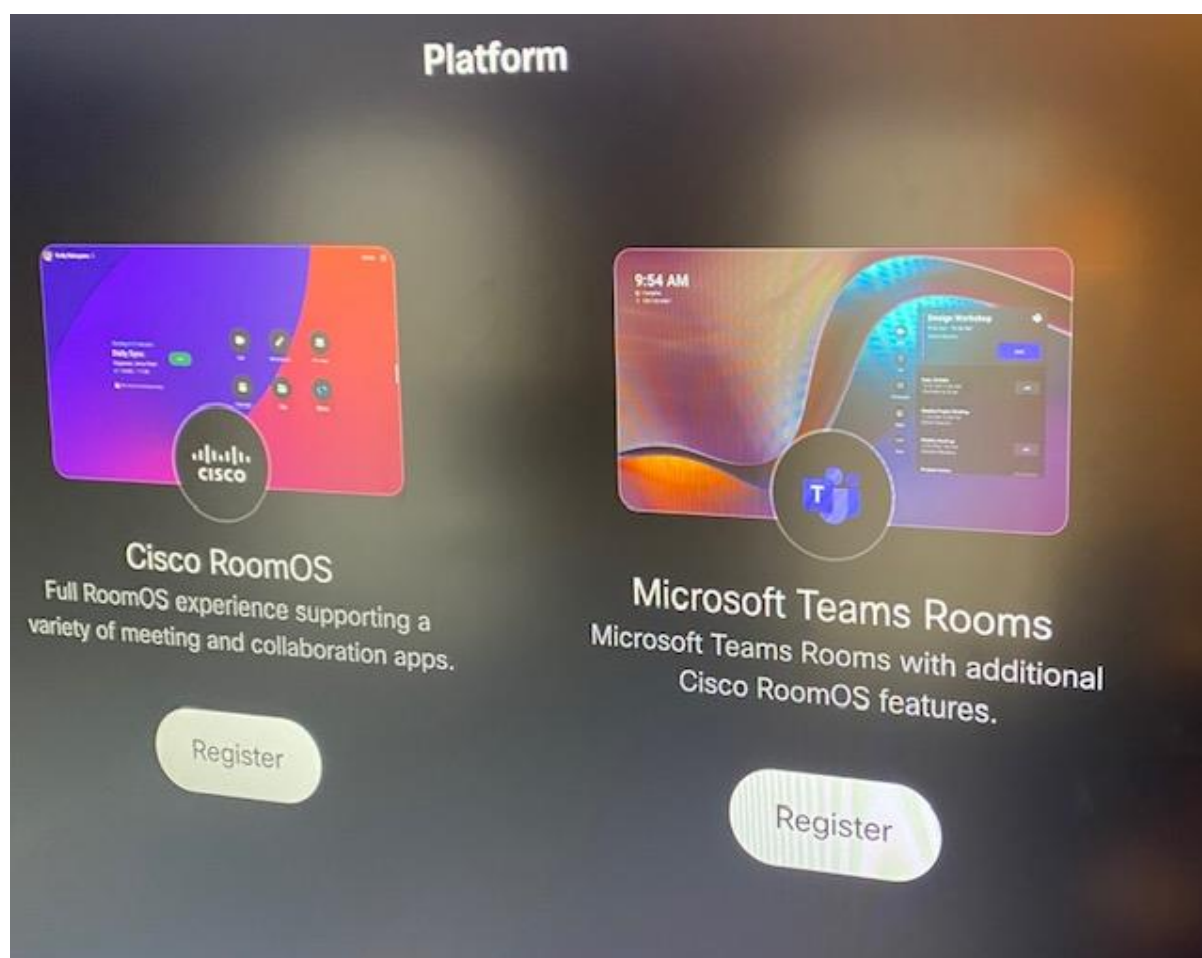
Microsoft has integrated its Teams solution with a wide array of device vendors. While this approach broadens the availability of the solution, the trade-off is quality control. With so many options for hardware with Microsoft Teams Room software, the quality of the image and video can vary depending on the components and processing power. This trade-off is usually outweighed by the power of customer choice, as there's a price point for every type of buyer. This stands in contrast to Cisco, which has done little to open its ecosystem to third-party hardware vendors.

Provisioning Cisco Board Pro as a Microsoft Teams Room

Testing the Beta version of the Microsoft Teams Room software on a Cisco device requires a registration with the Webex Beta program. This process was simple, and required the admin to register, as well as update the Cisco device to run Beta Webex software. During this portion of the testing Wainhouse did encounter an error, which stemmed from a simple user misunderstanding and not the Webex process. Once enrolled in the Webex Beta program the process was relatively straight forward.

To provision the Cisco Board Pro for Microsoft Teams Room software, the device needed to be reset once running RoomOS 11.2.1.6. At this point the admin needed to access both Microsoft's Admin panel and Cisco Control Hub to get the instance ID for both platforms. This process will change once the software is publicly available as Cisco devices will not require Control Hub to provision a single unit. With both the Microsoft and Webex instance IDs in hand, the reset Board Pro will populate an option upon start-up to register as either a Microsoft Teams Room or a Cisco RoomOS system. Upon selecting Microsoft Teams Room on the device, the Microsoft Instance ID is entered from the device, as well as in Control Hub, the device registers and initiates as a Microsoft Teams Room.

Figure: Cisco Board Pro initial start up screen



Wainhouse, January 2023

Once operating Microsoft Teams Room software, the Board Pro immediately showed corresponding meetings, with the option to initiate directly from the display. During the initial test of a Teams meeting, the Board Pro was unable to connect audio, though video participants could be seen. After a quick reboot of the Board Pro the audio and video came through clearly and hasn't failed since.

In initial testing the ability to join a Webex call was restricted, but access was provided to Wainhouse at recent industry events. During testing it was confirmed that a Webex license will not be required when registering as a Microsoft Teams Room, but a Webex license will still be required to join native Webex meetings. Without a Webex entitlement to connect the device to Control Hub, the Board Pro joins Webex calls through Microsoft's Direct Guest Join experience.

Microsoft Teams Meetings on a Cisco Board Pro

When running Microsoft Teams Room software on the Cisco Board Pro, the lobby experience is in line with other third-party vendors of Teams Rooms. The experience is intuitive and includes one-touch join capabilities. When joining a meeting the Board Pro provides great video clarity, with no notable delay or packet loss.

The value of the Cisco device portfolio comes into focus during meetings, as the camera retains tracking and framing capabilities that feed the Teams meeting with a great picture for remote participants. In addition, the light correction and embedded microphone array ensure in-room participants look and sound close to the camera, even when located across the room from the Board

Research Note: Cisco Board Pro Running Microsoft Teams Rooms Webex Meetings from a Microsoft Teams Room

Pro. If there's a need to adjust the camera settings, users pull a menu from the right side of the screen and are presented with the Cisco device interface. As seen below, this menu is intuitive and provides camera, microphone, and speaker settings.

Figure: Cisco Board Pro running Microsoft Teams Rooms



Wainhouse, January 2023

Select the camera mode by tapping the camera icon within the menu, then choose between auto group, frames, or speaker modes as well as manual control. The high-quality experience that Cisco customers are used to translates very well to Teams meetings. The on-screen settings menu is a differentiator as Teams Rooms software typically doesn't allow for hardware overlay interactions. In every meeting type the Microsoft Teams Room operated as expected, providing great audio and video quality through the Cisco hardware.

Webex Meetings from a Microsoft Teams Room

Within Microsoft Teams Room software an additional capability is exclusively available to the Cisco device portfolio: the ability to run native Webex meetings. When a meeting is scheduled with Webex, the Teams lobby treats it much the same way it does a Teams meeting, including one-touch join. The user taps the join button, Webex connects to the meeting, entering the native Webex experience. This is different than other interoperability capabilities in that instead of a guest join, or a web-app connection, the in-room participants benefit from the full functionality of Webex. When the meeting is finished, the device returns to the Microsoft Teams Room lobby.

Research Note: Cisco Board Pro Running Microsoft Teams Rooms Native Whiteboard Support

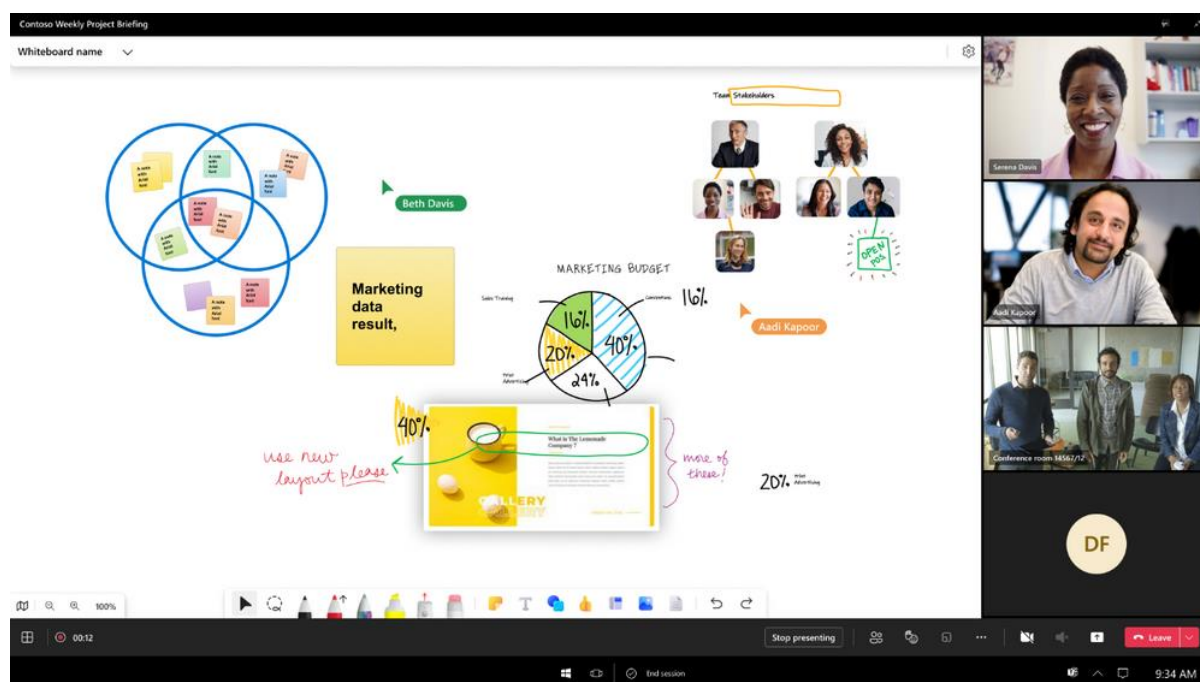
Between the capabilities of Webex and the added value of Microsoft Teams, the Cisco device portfolio will continue to be a premium offering for the enterprise. The convenience of having two of the largest enterprise communications platforms available across all meeting spaces will be a strong value proposition for enterprise clients, many of whom leverage licenses through multiple platforms to support business operations.

Within Webex meetings, the experience is what customers expect from Webex, with great video, audio, and extremely responsive touch interactions. Shared content is well placed within the meetings, and easily interacted with. When in a Webex meeting the Board Pro operates without Microsoft Teams, making for a smooth user experience. Cisco video and audio hardware, including correlated software and AI, remains consistent in both Teams and Webex meetings, reducing the learning curve for in participants. Throughout Webex testing the Board Pro operated as expected and delivered a great in-room experience.

Native Whiteboard Support

When meeting with Teams or Webex, the corresponding whiteboard is available to Board Pro users with the ability to both join and initiate a new whiteboard. While tying the whiteboard to the meeting platform does increase the potential for in-room user confusion, both whiteboards have full functionality. From the lobby screen of the Microsoft Teams Room software, the Microsoft Whiteboard is accessible, allowing for ad-hoc use.

Figure: Microsoft Teams Whiteboard



Microsoft Tech Community, January 2023

Both Webex and Teams meetings allow Board Pro users to save a Whiteboard, leveraging a web interface for retrieval and continued editing. While retrieving a whiteboard is not available on the Board Pro itself, personal devices can share a whiteboard into a meeting, or alternatively be sent to the Board Pro to be shared into a meeting. The Microsoft Teams Whiteboard did have a couple moments of delay in comparison to the Webex Whiteboard experience, which may be due to the beta version of the software. The overall experience was smooth and operated as expected in both Microsoft Teams and Webex meetings.

Third Party Integration Application Experience

When handling third party applications Webex and Microsoft Teams handle the interaction differently. While Cisco RoomOS has apps available directly from the Board Pro, Microsoft Teams Rooms requires users to share apps into a meeting through an integration on the personal device. These workflows remain consistent for the Board Pro, meaning that users have two types of interactions to access content. Thankfully most users have already adopted a personal device share-out methodology with these tools so this shouldn't cause too much confusion. When integrated, third party apps such as Miro provide guest access for users to interact and add content as needed within a meeting. These tools are becoming more commonplace as teams try to improve productivity by reducing redundancies through various types of management software. To learn more about the capabilities of integrations please see the previously published [research note on Visual Collaboration Integrations](#).

One challenge that does stand out is how third-party apps handle conferencing platforms. At the time of writing, most third-party applications that integrate with collaboration tools limit connectivity to a single or maybe two conferencing platforms at the same time. The challenge comes in connecting multiple meeting platforms within a single organization to enable the same level of capabilities regardless of meeting. While third party apps will likely support multiple meeting platform connections over time, the interim may lead to user confusion when moving between Webex and Microsoft.

Conclusions

Throughout testing, the Board Pro met or exceeded Wainhouse expectations, returning great quality meetings across both Webex and Microsoft Teams meetings. Set up and registration was smooth, with a couple extra clicks needed due to the Beta software status of the solution. Once provisioned, the system operated smoothly in both active and sleep modes. The presence sensors worked well regardless of Webex or Microsoft environments. While there were some capabilities that had to be tested on a Webex server, the underlying technology works reliably.

After testing the Cisco Board Pro in both a Cisco RoomOS and Microsoft Teams Room environment, Wainhouse has a solid appreciation for how customers will leverage this solution. After spending time using the Board Pro it has become clear that Microsoft Teams Room experiences are made better through the Cisco device portfolio. The picture and audio quality are among the best in market, making for great experiences.

Initial industry chatter after the October announcement made the value propositions for Microsoft clear, but questions remained regarding how Webex stands to increase market share through the strategy.

One potential path is for Cisco to leverage the strength of its device portfolio to establish Webex as a viable alternative to Microsoft Teams, cementing the long-term market position for Webex. Plenty of meeting spaces require high quality interactions and experiences, with Cisco devices well suited for these environments. In this scenario the main value proposition is the quality of the devices, with the Webex software becoming the natural choice for a second IT supported meeting platform. While this approach may win new clients, the premium price-point mixed with the channel centric go to market of Cisco devices will likely preclude the offerings from some opportunities.

The most likely gains will come from current and previous Webex customers that retain devices and some licensing while using Microsoft Teams as the primary means of communication. In these

Research Note: Cisco Board Pro Running Microsoft Teams Rooms Conclusions

scenarios Cisco devices stand the best chance of winning new opportunities as customers have previous experience with the portfolio and know the added value of the Cisco quality.

While the experience is compelling, how this solution will drive the buying decision for new Cisco and Microsoft Teams customers is yet to be seen. It's likely that this will increase Microsoft Teams Room licensing within shared Webex customers, but there's more to be done to get this great experience in the hands of the market.

About Us

About the Author

Daniel C. Root, Senior Analyst. Located in the Boston, MA area, Dan focuses on workplace communications & collaboration technologies, with an emphasis on the intersection of cloud-based collaboration software and hardware deployments (e.g., whiteboard-style co-authoring) necessary for adoption. He has close to a decade's worth of experience in enterprise hardware and software with roles in business development, partnerships, product growth, strategic planning, and product development.

About Wainhouse Research

Wainhouse Research is an independent analyst firm that focuses on critical issues in the unified communications and collaboration market. The company provides end-to-end coverage of the UC&C industry, with areas of focus covering unified communications, enterprise video, meeting room collaboration, personal & web-based collaboration, and audio conferencing market segments. The company acts as a trusted advisor providing strategic advice and direction for both the UC&C industry and its enterprise users. For further details contact sales@wainhouse.com or see <http://www.wainhouse.com>.

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