

Technical Bulletin

Connecting Multiple SMART Board™ Interactive Whiteboards to One Computer

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This document explains how to connect multiple SMART Board™ interactive whiteboards to your computer in the following scenarios:

Scenario 1

You're delivering a presentation in a large meeting room, and you want to display the presentation to different locations around the room so everybody can see. You can connect one computer to multiple interactive whiteboards, and then display the output of the computer on all of the screens.

Scenario 2

You're using multiple interactive whiteboards to simultaneously display different applications from the same computer or to stretch one application across two or more screens.

IMPORTANT

- You must operate all the screens in projected mode.
- Not all video cards are capable of this process. If you purchase a video card, ensure it meets the requirements for your desired setup.

NOTES

- Some of the steps will vary based on your video card and operating system.
- The SMART Board tools work the same way on multiple interactive whiteboards as they do on a single one. Each pen tray is active, and users can take turns writing or interacting on the same applications.

- For front projection SMART Board interactive whiteboards, you'll need a projector for each unit.

To apply the following instructions to **Rear Projection** SMART Board interactive whiteboards

The instructions in this document are for users of *Front Projection* SMART Board interactive whiteboards, but they will apply to your *Rear Projection* interactive whiteboards as well.

When this article directs you to connect cabling to a socket on a projector, you can connect the cabling to the appropriate socket on the connection panel of your *Rear Projection* panel instead.

Scenario 1: Displaying an Application from One Computer on Several Interactive Whiteboards

You can display the same application desktop on multiple interactive whiteboards so everybody can view and interact with the application.

Each interactive whiteboard has touch control. Anything a participant does on one interactive screen displays on all connected interactive screens.

Choose one of these three options, and then follow the steps on the next pages.

- A. Use a video card on the connected computer to split one video signal into multiple signals.
- B. Use a video distribution amplifier from the projectors and the computer to send the signal to more than one projector.
- C. Connect the projectors to each other in a daisy chain by connecting the first projector to the second projector, the second to the third, and so on.

Option A

Use a video card on the connected computer to split one video signal into multiple signals.



IMPORTANT

Your video card must support mirrored signals.

To use a video card to split the video signal to multiple signals

1. Install a video card on your computer to split the computer's video signal into multiple signals. For further details, refer to the video card's installation instructions.
2. Set up each SMART Board interactive whiteboard, and then connect them to the computer using appropriate cabling.

3. Connect an RGB video cable from an **RGB OUT** socket on the computer to the **RGB IN** socket on each projector.
4. Change the operating system display settings according to how your screens are arranged. For further details, refer to the documentation for your operating system.
5. Press the **SMART Board** icon in the notification area (Windows® computers) or the Dock (Mac computers), and then select **Control Panel**.
6. Press **SMART Hardware Settings**.

The *SMART Board Settings* dialog box appears.
7. If a connection isn't configured for any of the interactive whiteboards, configure the connection. For more information, refer to the installation guide for your interactive whiteboard.
8. Press the **Orient** button, and then follow the on-screen instructions to complete the orientation process.
9. Press the **Orient** button again.

The *Orientation* screen reappears on the interactive whiteboard you just oriented.
10. Press SPACEBAR on your keyboard to move the orientation image to the next screen, and then follow the on-screen instructions to complete the orientation process.
11. Repeat step 9 for each additional interactive whiteboard.

Option B

Use the computer's video distribution amplifier to send the signal to more than one projector.

To display the same application using a video distribution amplifier

1. Set up each SMART Board interactive whiteboard, and then connect them to the computer using appropriate cabling.
2. Connect an RGB video cable from the **RGB OUT** socket on the computer to the **RGB IN** socket on the video distribution amplifier.
3. For each projector, connect an RGB video cable from an **RGB OUT** socket on the video distribution amplifier to the **RGB IN** socket on the projector.

NOTE

If the distribution amplifier can also distribute audio, you can distribute the computer's audio output to the projectors in a similar method.

4. Press the **SMART Board** icon in the notification area (Windows computers) or the Dock (Mac computers), and then select **Control Panel**.

5. Press **SMART Hardware Settings**.

The *SMART Board Settings* dialog box appears.

6. If a connection isn't configured for any of the interactive whiteboards, configure the connection. For more information, refer to the installation guide for your interactive whiteboard.
7. Press the **Orient** button, and then follow the on-screen instructions to complete the orientation process.
8. Press the **Orient** button again.

The *Orientation* screen reappears on the interactive whiteboard you just oriented.

9. Press SPACEBAR on your keyboard to move the orientation image to the next screen, and then follow the on-screen instructions to complete the orientation process.
10. Repeat step 8 for each additional interactive whiteboard.

Option C

Connect the projectors to each other in a daisy chain by connecting the first projector to the second projector, the second to the third, and so on.

CAUTION

Some projector manufacturers do not recommend this method. Consult the user manual for each projector model before proceeding.

To display the same desktop using a daisy chain pattern

1. Set up each SMART Board interactive whiteboard, and then connect them to the computer using appropriate cabling.
2. Connect an RGB video cable from the **RGB OUT** socket on the computer and the **RGB IN** socket on the first projector.
3. Connect an RGB video cable from an **RGB OUT** socket on the first projector to the **RGB IN** socket on the second projector.

NOTE

If required, you can distribute the audio signal between the projectors in a similar way.

4. Repeat step 3 for each additional projector (the second to the third, the third to the fourth and so on).

NOTE

The video signal becomes weaker with each projector that you add to the daisy chain.

5. Press the **SMART Board** icon in the notification area (Windows computers) or the Dock (Mac computers), and then select **Control Panel**.

6. Select **SMART Hardware Settings**.

The *SMART Board Settings* dialog box appears.

7. If a connection isn't configured for any of the interactive whiteboards, configure the connection. For more information, refer to the installation guide for your interactive whiteboard.

8. Press the **Orient** button, and then follow the on-screen instructions to complete the orientation process.

9. Press the **Orient** button again.

The *Orientation* screen reappears on the interactive whiteboard you just oriented.

10. Press SPACEBAR on your keyboard to move the orientation image to the next screen, and then follow the on-screen instructions to complete the orientation process.

11. Repeat step 9 for each additional interactive whiteboard.
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Scenario 2: Displaying Multiple Applications from One Computer on Multiple Interactive Whiteboards

You can set up multiple SMART Board interactive whiteboards in the same way that you can set up multiple monitors at a workstation. This allows you to:

- Stretch an application across multiple interactive whiteboards.
- Show different applications running on the same computer, such as a spreadsheet and an Internet browser, each on their own interactive whiteboard.

Some operating systems support multiple displays, and others don't. Once you determine whether your computer's operating system supports multiple displays, select either option A or B.

- A. An operating system that supports multiple displays.
- B. An operating system that does not support multiple displays.

IMPORTANT

You must have a video card that splits one video signal into multiple signals and special drivers that support this functionality.

Option A

An operating system that supports multiple displays.

To display multiple applications on an operating system that supports multiple displays

1. Install multiple video cards (one for each connected SMART Board interactive whiteboard), or a single video card to split one video signal into multiple signals from the connected computer. For further details, refer to the video card's installation instructions.
2. Set up each SMART Board interactive whiteboard, and then connect them to the computer using appropriate cabling.
3. Connect an RGB video cable from the **RGB OUT** socket on the computer to the **RGB IN** socket on the first projector.
4. Repeat step 3 for each additional projector.
5. Change the operating system display settings according to how your screens are arranged. For further details, refer to the documentation for your operating system.
6. Press the **SMART Board** icon in the notification area (Windows computers) or the Dock (Mac computers), and then select **Control Panel**.
7. Press **SMART Hardware Settings**.

The *SMART Board Settings* dialog box appears.

8. If a connection isn't configured for any of the interactive whiteboards, configure the connection. For more information, refer to the installation guide for your interactive whiteboard.
9. Press the **Orient** button, and then follow the on-screen instructions to complete the orientation process.
10. Press the **Orient** button again.

The *Orientation* screen reappears on the interactive whiteboard you just oriented.

11. Press the SPACEBAR on your keyboard to move the orientation image to the next screen, and then follow the on-screen instructions to complete the orientation process.
12. Repeat step 11 for each additional interactive whiteboard.

Option B

An operating system that does not support multiple displays.

To display multiple applications on an operating system that doesn't support multiple displays

1. Set up each SMART Board interactive whiteboard, and then connect them to the computer using appropriate cabling.
2. Install a video card that splits one video signal into multiple signals and supports this type of functionality.
3. Connect an RGB video cable from the computer to the **RGB IN** socket on the first projector.
4. Repeat step 2 for each additional projector.

NOTE

Ensure that all of the projectors are set to the same resolution.

5. Press the **SMART Board** icon in the notification area (Windows computers) or the Dock (Mac computers), and then select **Control Panel**.
6. Press **SMART Hardware Settings**.

The *SMART Board Settings* dialog box appears.

7. If a connection isn't configured for any of the interactive whiteboards, configure the connection. For more information, refer to the installation guide for your interactive whiteboard.
8. Define the arrangement of your interactive whiteboards by selecting the **Arrange Video Output** option from the list, and then setting the *Columns* and *Rows* to match the arrangement of your interactive whiteboards.

 **NOTE**

Columns indicate how wide and rows indicate how tall your arrangement is. For example, three interactive whiteboards arranged three wide and one high would be three columns and one row.

9. Press **OK**.
10. Press the **Orient** button, and then follow the on-screen instructions to complete the orientation process.
11. Press the **Orient** button again.

The *Orientation* screen reappears on the interactive whiteboard you just oriented.

12. Press SPACEBAR on your keyboard to move the orientation image to the next screen, and then follow the on-screen instructions to complete the orientation process.
13. Repeat step 11 for each additional interactive whiteboard.

 **TIP**

If you're using adjacent interactive whiteboards, you can easily move objects from one screen to the next. With one hand, press an object on one screen, and then press the adjacent screen with the other hand. Release your finger from the first screen, and the object you selected moves to the adjacent screen.