

QSC

Deployment Guide



Microsoft Teams Room Certified Bundle

Extra-large room with directional audio +
ceiling-mount loudspeakers

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Use this guide to connect, set up and commission your new system to the Microsoft Teams Room Device certification standard. Make sure you have the current Q-SYS Designer file, Q-SYS Control for Microsoft Teams Room application installer, and the Q-SYS feature license for Teams Room. before you start.

1. Items included in this bundle

QSC Q-SYS Core 110f processor	1	
QSC SPA Series SPA4-100 power amplifier	1	
QSC AcousticDesign™ Series AD-C6T-LP ceiling-mount loudspeaker	2	
QSC AcousticDesign™ Series AD-S802T column surface-mount loudspeaker	2	
QSC Q-SYS NS-1108P network switch	1	
Sennheiser TeamConnect Ceiling 2 microphone	2	
Sennheiser SL CM EB US ceiling brackets	2	
7' Cat6 Ethernet cable	1	
35' Cat5e Plenum Ethernet cable	2	
50' Cat5e Plenum Ethernet cable	2	
USB 3.0 A male to B male cable	1	
150' 16 AWG 2-Conductor Plenum Speaker Cable	1	

Additional items needed

- Microsoft Teams Room compute device with Touch Controller.
- Configuration laptop running Q-SYS Designer Software, Sennheiser Control Cockpit and Dante Controller.

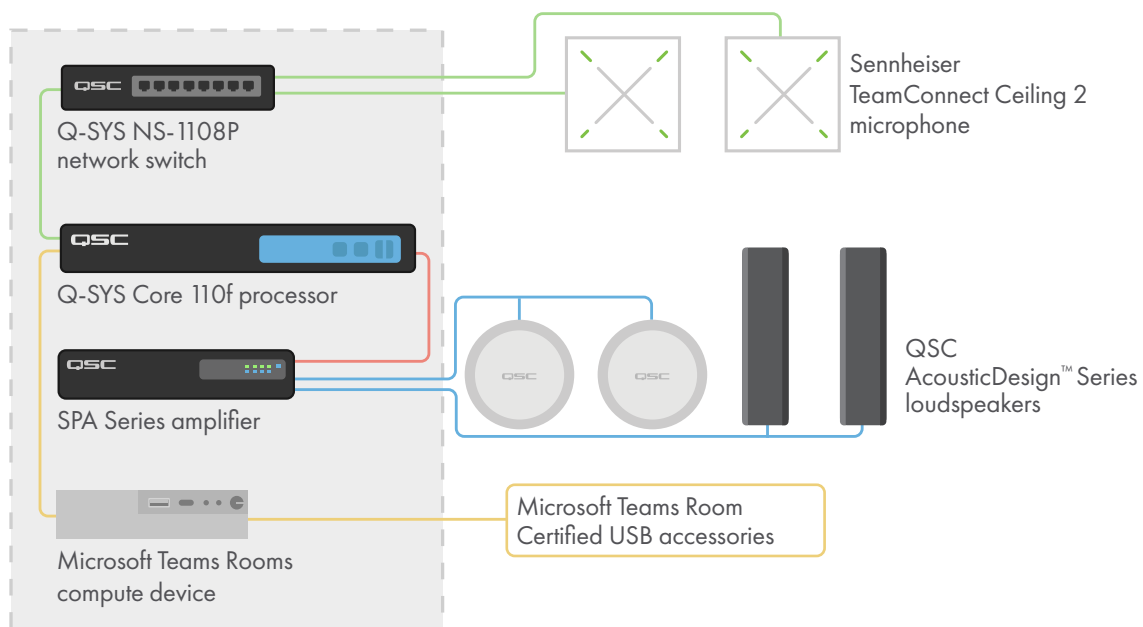
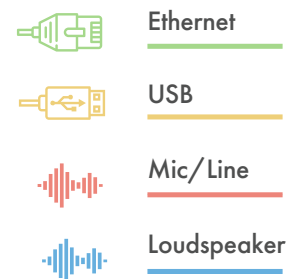
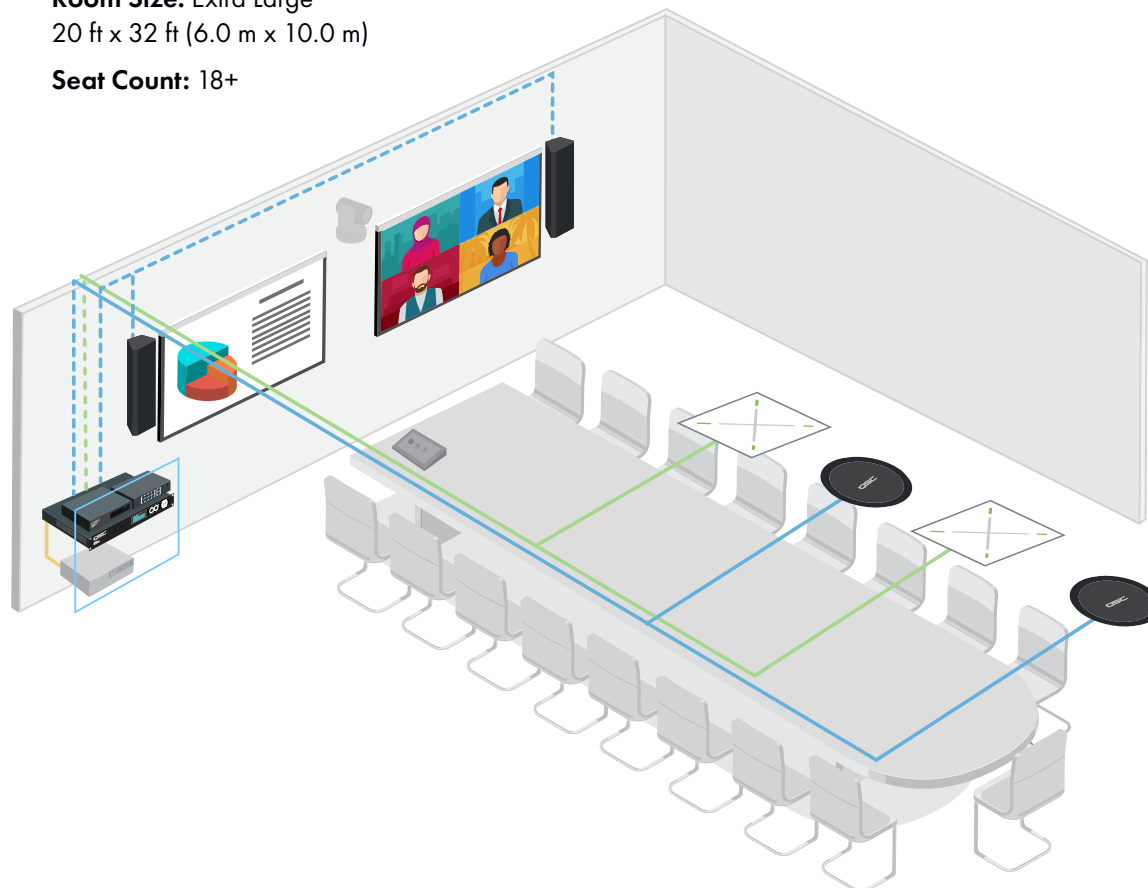
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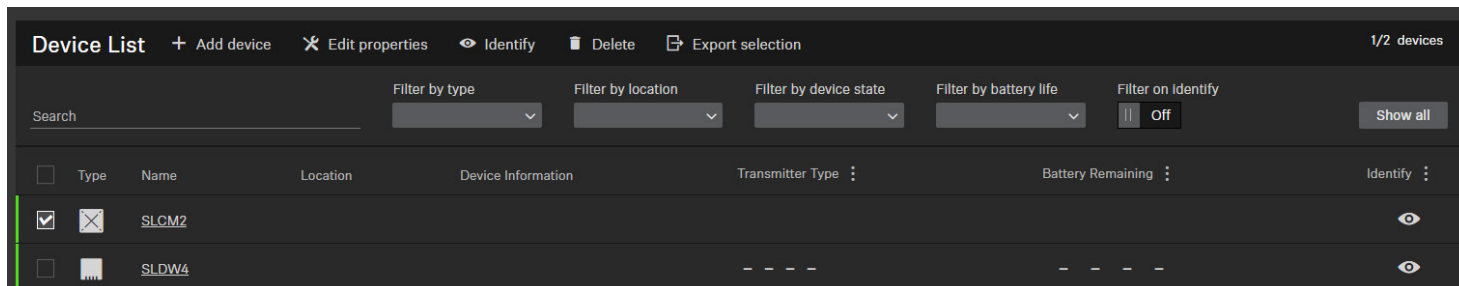
2. Diagrams

Room Size: Extra Large
20 ft x 32 ft (6.0 m x 10.0 m)
Seat Count: 18+



3. Sennheiser TeamConnect Ceiling 2 Microphone Setup

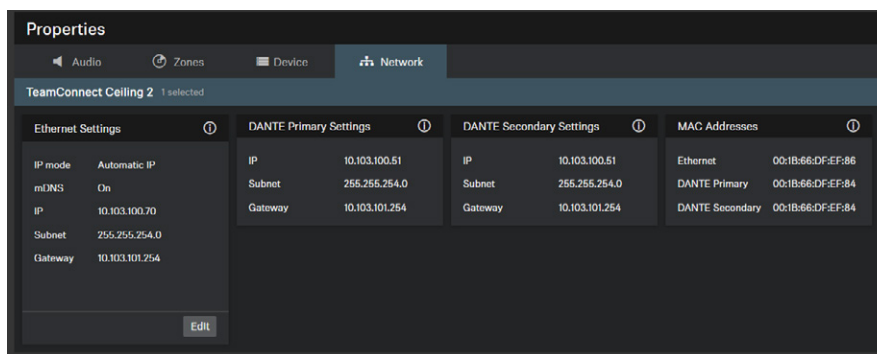
3.1 - The Sennheiser TeamConnect Ceiling 2 (TCC2) is a ceiling-mounted dynamic beamforming microphone that supports Dante for audio transport. The Sennheiser Control Cockpit software is required to begin the setup process. With your configuration laptop and the TCC2 Ethernet PoE/Ctrl port connected to the network switch, the browser-based Control Cockpit interface will detect and identify the TCC2 as shown below (using mDNS).



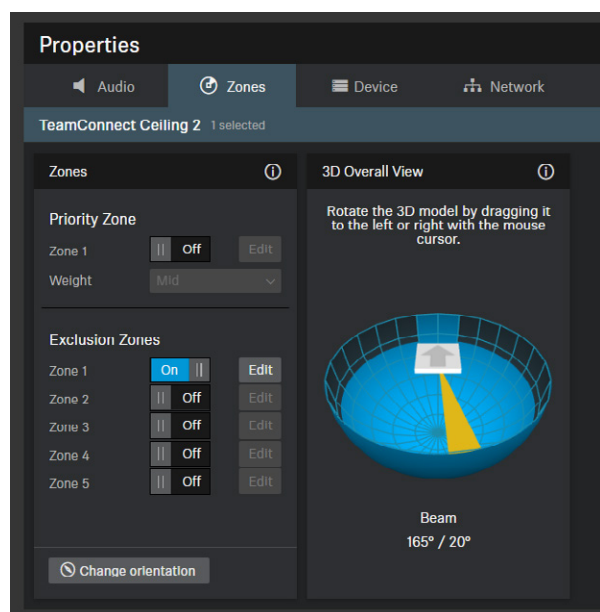
(Figure 3.1 – Control Cockpit Device List)

Select the unit to be configured from the Device List (Figure 3.1). This will enable the Properties window where audio, device and network parameters can be examined and edited.

3.2 - Select the Network tab (Figure 3.2) to configure the Ethernet settings of the microphone. If using static IP address for your system set your IP address and click save. You will need the IP address of the microphone later in the set up (Step 6.4) to complete the control connection between the Q-SYS Core and the microphone.



(Figure 3.2 – Control Cockpit Network Tab)



(Figure 3.3 - Zones Tab)

3.3 - The Zones tab (Figure 3.3) shows the current focus of the TCC2 automatic beam-steering, which can be tracked in real time. Click Edit to manually configure vertical and horizontal exclusion zones, which prevents detection of noise and sounds in these zones (e.g., ceiling mounted AC vents, projector fans).

In some reverberant environments, applying an exclusion zone, directed toward the front of the room and in the direction of the video display can improve acoustic echo cancellation (AEC) performance.

Note: Refer to the TeamConnect Ceiling 2 instruction manual for more information.

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4. Install Q-SYS Designer Software

On your configuration laptop, install the current version of Q-SYS Designer Software (9.0 or later) and open the provided Q-SYS Designer file. Once open, select Tools from the ribbon and select Show Configurator. This will open Q-SYS Configurator and you will see your Core processor listed on the left pane of the window. Choose your Core processor and click on the Configuration Page link to open Q-SYS Core Manager > [Network Settings](#). Review/configure the Core's network settings. For more information, see [Initial Discovery and Configuration](#). Set the name of the Core to a unique name that suits your needs. Return to the design file and ensure that the Core's name in your design matches the Hostname you just set in [Q-SYS Core Manager](#). Save the design to the Core and Run (F5). See [About Designs on the Core](#).

If the Core's firmware does not match that of Q-SYS Designer on your configuration laptop, you will be prompted to update the firmware. Refer to Updating [Q-SYS Software and Firmware](#).

5. Configuring the Microsoft Teams Room Compute

5.1 - Before you start this step, you will need to have your Microsoft Teams Rooms connected to the network and to the Q-SYS Core as shown in the drawing earlier in this guide. Refer to your network administrator and the [Microsoft Deployment Overview](#) for details in getting your Microsoft Teams Room compute device running. From the Admin account, install the included Q-SYS Control for Teams Room Installer on your Microsoft Teams Room compute device. You will also need to capture the Host name (preferred) or IP address of the application to be used later in the setup (Step 6.5).

5.2 - To set the Q-SYS Core as the Default Microphone and Speakers for the Microsoft Teams room system select "More" on the touch controller then select "Settings". Enter the password for the system (SFB is the default) and select "Peripherals" from the left pane. In the center window, select "Echo Cancelling Speakerphone (Core 110f)" for both the microphone, speaker and default speaker boxes. Press "Save and Exit" to go back to the main control window.

6. Commissioning the Q-SYS Design file

With the Microsoft Teams Rooms design for Q-SYS running on your Core, the next steps will complete the setup of the room devices.

6.1 - Set the Room Name: this is usually a common name for the room that will help the Admin of the room quickly identify it. This name will be used in the web hook reporting thru Teams if enabled by the admin.

6.2 - Choose the location of the loudspeakers in the room. For in-ceiling or pendant style, select "Ceiling" and for directional loudspeakers, select "Wall." If your system uses both types, select the first type of loudspeaker, then follow Step 3. Then return to Step 2 to make the selection for the additional loudspeaker type.

6.3 - Choose the QSC loudspeaker model. These should be pre-populated in your file but should be verified.

Room Details (Required)

Step 1 Room Name:
Training Room

Step 2 Choose Microsoft Teams speaker location
Ceiling
Wall

Step 3 Choose QSC speaker models

Output 1	AD-S6T
Output 2	AD-S6T
Output 3	AD-S6T
Output 4	AD-S6T

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6.4 - Microphone setup: Using the Ctrl/PoE IP address that was configured in Step 3.2, enter it into the Control IP address field. Click on the TCC2 Device dropdown and select the name of the microphone you are using. Then Select "Out" from the TCC2 Audio Channel selection drop down. You should see the Status illuminate green and say "OK." Then enter a Dante stream name for the Acoustic Echo Cancellation reference that will be sent to the microphone. Once set, you will need to open Dante Controller software and make a cross point connection between the AEC reference and the input of the microphone. Please refer to the [Dante Controller User Guide](#) for more information.

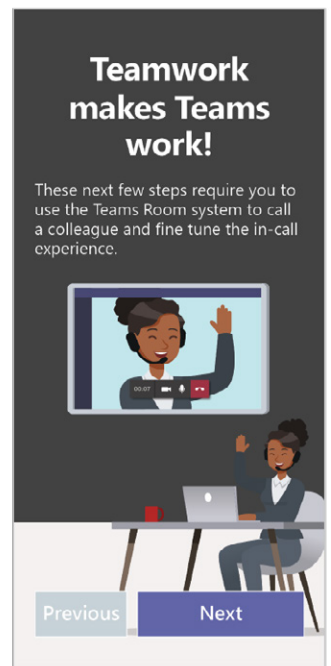
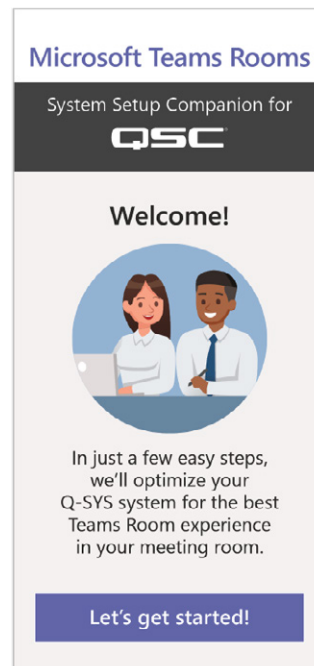
6.5 - Enter the Host Name or IP Address from Step 5.1 of your Teams compute device here, this will allow communication between the Core and Teams Room compute device via the network. The Room Controls UCI (user control interface) can be selected below, a sample UCI is selected by default, but this can be changed later to suit your needs.

6.6 - If you would like the Core to notify you of parameters that are out of spec, you can enter your webhook info here. If this will not be used, just leave this space blank.

6.7 - With your mobile device on the same network as the Q-SYS Core, scan the QR Code to Load the mobile "Companion App." From here, you will follow the step-by-step instruction of the app to complete setup. You will need to make a call to a colleague outside of the room to complete the audio tuning so make sure you have someone available before you start.

Completion

Once you complete the steps on the companion app, the Room Status will show all devices are working and are in spec. If no signal chain changes are made, the System Status will show "This System is Using Certified Settings." If changes were made to accommodate your rooms unique audio needs the status will say "Using Commissioned Settings."



Room Status



Equipment Status:

OK

System Status:

This system is using certified settings

Congratulations, you have now completed the Certified Microsoft Teams Room setup for your QSC system!