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Network One Sheet

This guide will take you through how to make integration into an existing network a breeze!

Before we get started: Stem Audio products are all IP-based and make use of common IT standards. Each Stem device behaves much like any other network device you would already find on your network. Let's go over some Stem Audio network details!

- Stem Audio devices require PoE+
- Stem Audio uses DHCP for addressing, devices will not default to a set IP address.
- To complete full-boot-up Stem Audio devices will continue to 'look' for DHCP until an IP address is secured from DHCP.
- Stem Audio devices allow the setting of static IP addresses in Advanced Settings. As a best practice, we recommend MAC address reservation on the DHCP server.

What to expect: To know what to expect, here is the kind of network traffic you will see on your network with Stem Audio devices:

- Stem Audio utilizes UDP protocol for both audio and command/control.
- Bandwidth: Traffic for Table, Wall, and Ceiling is 1.1Mbps, Hub is 2Mbps, and Control is 1.5Mbs, plus 10% overhead.
- If you have ten audio endpoint units (Table, Wall, and/or Ceiling), Hub, and Control, it will take a total of 14.5Mbs bandwidth.

Ports: Stem Audio uses the following ports:

- Port 5061 – Unicast Audio Traffic - Not to be confused with ports 5060 and 5061 associated to the Session Initiation Protocol (SIP)
- Port 8888 – Control and commands (unicast and broadcast)
- Port 80 – Web control application
- All of our traffic is encrypted using AES 128 bit

Power: Stem Audio power requirements include:

- PoE+ is required for all Stem Audio devices
- EEE (Energy Efficient Ethernet or 'Green Ethernet') Switch
  - Smart Switch: If you use managed switches, ensure that they allow EEE to be disabled. Make sure that EEE is disabled on all ports used for real-time Stem traffic. Lack of power distribution will result in poor synchronization performance and occasional dropouts.
  - Unmanaged Switch: If you use unmanaged switches, do not use Ethernet switches that support the EEE function, because you cannot disable EEE operation in these switches.

Need Additional Help?

The Stem Customer Happiness team is standing by to help!
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