



WAVE Device Network Requirements

Connectivity

The WAVE system uses its own closed Bluetooth system (not W-Fi) to monitor swimmer wearables and lifeguard tags and connect to the vibrating staff bracelets. WAVE uses W-Fi to connect the central Hub to tablets/computers/phones and any System Accessories (see above) that may be used. While WAVE or one of its local partners can install an overlay Wi-Fi network, most customers prefer to utilize their existing Wi-Fi network. The Wi-Fi network must support 2.4GHz and should provide a strong, stable signal where the Hub is located and wherever the Supported Devices are used. For stability reasons, we recommend using a staff/internal Wi-Fi (or wired network for tablets/PCs) that is not accessible to the public. ***Network Isolation must be disabled on that Wi-Fi network to ensure the Hub and Supported Devices can access each other.*** If access to the Hub is required from a different subnet or building, TCP traffic must be routed between the networks

IP Addressing

- For the purposes of troubleshooting, we prefer that all WAVE devices have a static IP address either by a **reserved DHCP reservation** or a **standard static IP address**.
- All WAVE devices on the network must communicate with each other via TCP & UDP.

Internet Access

Devices must have outgoing access to the internet via the following ports, and all traffic will originate from the devices, with no need to port forward from the outside:

- 22 - Setup, Software Updates & Troubleshooting
- 80 & 443 - System Monitoring
- 8883 and 8443 - System Monitoring

Wi-Fi Security Protocols Supported

- No Captive Portal
- WPA-PSK
- WPA with EAP
 - EAP-PEAP/MSCHAPv2 (both PEAPv0 and PEAPv1)
 - EAP-PEAP/TLS (both PEAPv0 and PEAPv1)
 - EAP-PEAP/GTC (both PEAPv0 and PEAPv1)
 - EAP-PEAP/OTP (both PEAPv0 and PEAPv1)
 - EAP-PEAP/MD5-Challenge (both PEAPv0 and PEAPv1)
 - EAP-TTLS/EAP-MD5-Challenge
 - EAP-TTLS/EAP-GTC
 - EAP-TTLS/EAP-OTP
 - EAP-TTLS/EAP-MSCHAPv2
 - EAP-TTLS/EAP-TLS
 - EAP-TTLS/MSCHAPv2
 - EAP-TTLS/MSCHAP
 - EAP-TTLS/PAP