

General information

AV1 can be setup to use WiFi instead of 4G in places where the cellular coverage isn't good enough. The WiFi settings are registered in the AV1-application under "Settings" and "WiFi network". It is important that all the WiFi settings are entered correctly, since AV1 uses this information to find the correct network and connect to it. Take therefore extra care to make sure UPPER and lower case letters and symbols are entered correctly.

For AV1 to learn about the network from the application where it was entered, it first has to get online using the cellular modem. This means that you first have to register the network settings in the application, then make sure you get the AV1 online so that it learns about the network and can connect to the WIFI network the next time it becomes available. Sometimes 2G can be enough, other times the AV1 needs to have 3G/4G access. If the AV1 shows a red cross on its head, it is an indication of no cellular coverage. In this instances, you should move to another location.

Questions and answers

Which wireless standards does AV1 support?

AV1 supports most wireless routers that are in use today. It specifically supports 802.11 b / g / n (2.4 GHz). AV1 *does not support* networks that *only* operate at 5GHz, or solely on the 802.11ac standard.

Which network security mechanisms does AV1 support?

AV1 supports open networks, and networks protected by WEP / WPA / WPA2 Personal / Enterprise. Specifically it supports WPA Enterprise 802.1x (PEAP). Networks that require http-proxy or firewalls that block all ports out of the network are **not** supported.

What if the network uses NAT / firewall?

NAT should not affect the operation of AV1 at all. The way AV1 works is that all communication, except control signaling, goes directly peer-to-peer between the robot and the user application. If both parties are behind NAT / firewalls the software will attempt to traverse the firewall using technologies such as STUN/upnp. If that fails the encrypted media are relayed through one of our (TURN) servers.

What do we do if our network isn't supported?

Usually the simplest solution is to acquire a wireless router for use with AV1 (eg. in the classroom). Often a stock wireless router can be plugged into the wall in the classroom and be configured securely with WPA2 Personal and a password that is only used by the AV1 use

What is the min. required access to the internet:

The minimum required access to the internet is:

TCP: gateway.noisolation.com: 80

TCP: gateway.noisolation.com: 443

TCP: global.turn.twilio.com: 443

Preferably also:

UDP: global.stun.twilio.com: 3478

UDP: global.turn.twilio.com: 3478

And if at all possible: any high port number out to the internet using UDP, as that will often allow us use peer-to-peer communication, which gives better performance, and less del.

If you have further questions about anything, feel free to contact us by chat at noisolation.com or visit support.noisolation.com.