# MD1000 Operation Overview

In order for an MD1000 to appear and be configurable on the Network Viewer, it must associate to another connected Meshdynamics product (MD1000, or MD4000). Upon association to a Meshdynamics AP or downlink radio, the MD1000 will then appear as a node icon on the Network Viewer screen.

The MD115X do *not* need to associate to another device in order to appear on the Network Viewer. Connect the the POE to the laptop running the NMS and the MD115X will appear as a lone icon.

On boot up, MD1000 products will look for beacons from *other* Meshdynamics products in order to associate. The MD115X series will scan the 802.11a channels of **52, 60, 149, 157, 165** upon boot up. The MD**1155/6** will *continue* to scan these channels during operation in order to support the mobility function. 30% of the uptime for these models will be spent scanning.
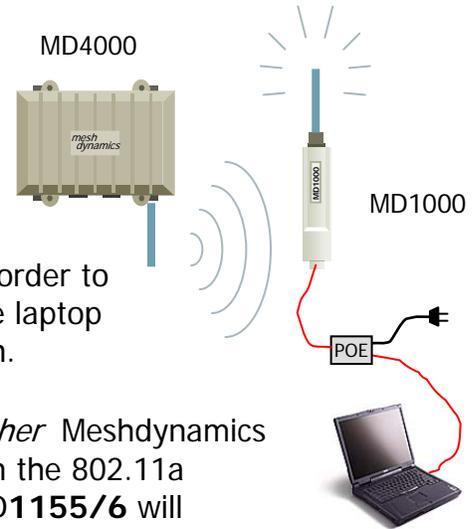
It is good practice to populate the Scan Channel List

NMS ->Configuration window → Interface Settings

of the **virtual uplink radio** of the MD1000 with *only* the channels that are being provided by the beaconing radios to which the MD1000 may associate.
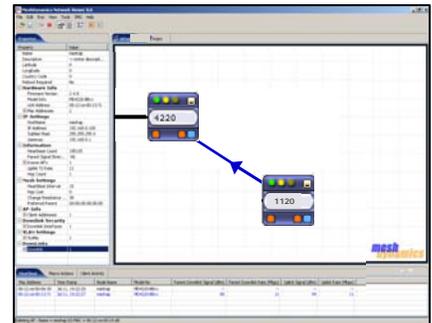
For example, if there are only *two* 5GHz downlink radios (hence, *two* channels) available for association by an MD1155, it would be a waste of the MD1155's scan time to scan all five default channels: three of the five channels will not be present. This is done by manually filling in the available channels in Scan Channel List of the *virtual uplink radio*.

Usage Considerations

The Ubiquiti Bullet hardware (onto which the MD1000 software is ported) can take a maximum of 24 volts. If a higher-voltage POE device is used to power the MD1000, it can cause damage.   The MD1000 can be powered by either POE, or by battery. To power by battery, connect the power leads of the CAT5 cable (blue, blue+white [positive], and brown, brown+white [ground]) to the battery terminals.