

## AIRVIEW SPECTRUM ANALYZER

- Optimize Wireless Network Design and Performance
- Analyze Frequency Usage and Activity Levels Onsite
- Energy Data Points Collected in Real-Time Spectral Views

### Optimize Wireless Network Design and Performance

To optimize the performance of a wireless network, the network designer should seek the best SNR (Signal-to-Noise Ratio) possible. Signal level can be predicted and planned based on the transmit power, antenna gain, distance, and frequency band. However, a common problem with unlicensed wireless bands (2.4 GHz, 5 GHz, etc.) is that noise cannot be predicted, and clean spectrum is not guaranteed on any certain frequencies. Previously, an off-the-shelf spectrum analyzer (which may cost upwards of \$10,000) was required to conduct a site survey or spectrum analysis at the installation site of the wireless equipment. Now integrated on all Ubiquiti Networks™ airMAX® M products, airView® provides powerful spectrum analyzer functionality, removing the need to rent or purchase additional equipment for doing site surveys.

### Analyze Frequency Usage and Activity Levels Onsite

airView allows network designers to identify noise signatures and plan their networks to minimize noise interference. airView accurately depicts the frequencies currently in use by other devices, how active the devices on those frequencies are, and how much noise or interference may be expected if a wireless network operates on or near certain frequencies. Using airView, network designers can avoid highly used channels and set up new access points on channels showing the least usage. In airView, there are three spectral views, each of which represents different data.

#### Waterfall View

A time-based graph shows the aggregate energy collected since the start of the airView session for each frequency. The power of the energy (in dBm) is displayed across the frequency span, and a new row is inserted every few seconds. The color of the energy denotes the amplitude (or strength) of the signal.

#### Waveform View

An activity-based graph shows the aggregate energy collected since the start of the airView session. The power of the energy (in dBm) is shown across the frequency span. The spectral view over time essentially displays the steady-state RF energy signature of a given environment.

#### Real-time Chart

A graph displays a traditional spectrum analyzer in which energy (in dBm) is shown in real time as a function of frequency. There are three traces in this view: **Max Hold**, which updates and holds maximum power levels across the frequency since the start of an airView session; **Average**, which shows the running energy average across frequency; and **Real-time**, which displays the real-time energy seen by airView as a function of frequency.

