

Detailed Product Information / Operational Description

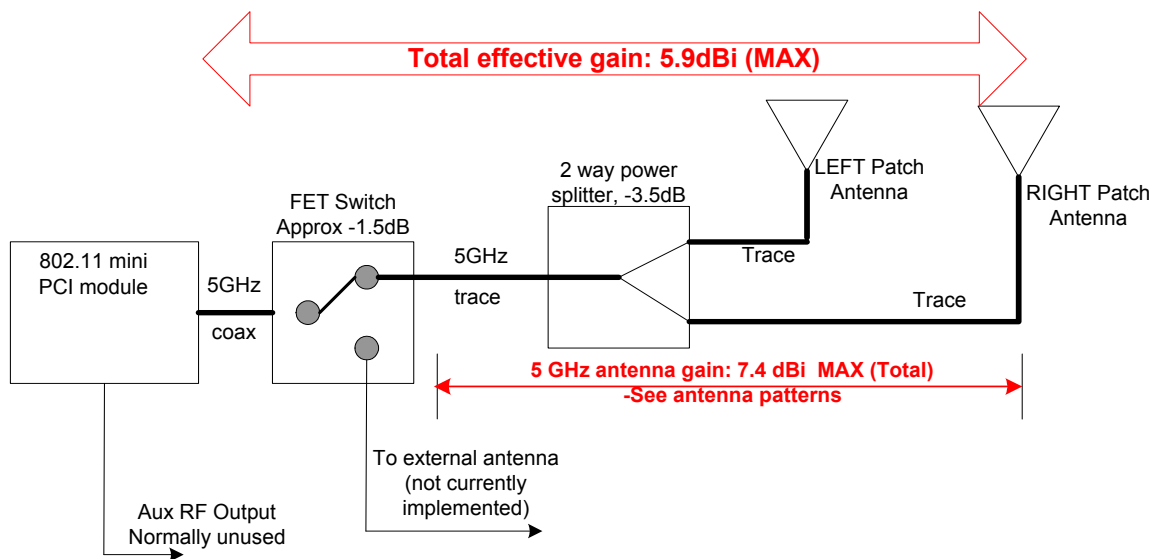
The Airespace radio is an IEEE 802.11 A / B Virtual Access point (VAP) intended to be professionally installed and configured in corporate and industrial environments.

The device utilizes a mini PCI module manufactured by an outside vendor. At the time of this certification the module had not received FCC approval as a module. For this reason, Airespace is pursuing its own certification.

The VAP utilizes integral antennas on the 802.11 A / B bands. The VAP includes two integral 5 GHz patch antennas pointing 180° from each other to create a somewhat omni directional 5GHz pattern. The VAP includes only a single 2.4GHz patch antenna (the 2.4 GHz antenna is discussed in the 15.247 report). The effective gain of the 5 GHz antenna path (the antenna switch and the antenna itself) is 5.9dBi. The diagrams below outline the RF path from the output of the mini PCI module within the VAP to the integral antennas within the VAP .See the antenna patterns included with this application (Note that only the Subpart E, 15.401 UNII 5 GHz portion is covered by this particular report)

There is a provision for attaching external antennas to the VAP (which, when implemented will disable the integral antenna by means of the switch) however at this time, since external antennas are not included in this certification application, the ability to utilize an external antenna, and even switch the antenna selection switch to the other position will be disabled in the configuration software. The hardware was put in place to support the future use of external antennas once such use is authorized either by permissive change of new grant.

The VAP is powered either by a external 48V power supply or via power over Ethernet.



RF Path Schematics

Detailed Product Information

The Airespace radio is an IEEE 802.11 A / B Virtual Access point (VAP) intended to be professionally installed and configured in corporate and industrial environments.

The device utilizes a mini PCI module manufactured by an outside vendor. At the time of this certification the module had not received FCC approval as a module. For this reason that Black Storm is pursuing its own certification.

The VAP utilizes integral antennas on the 802.11 A / B bands. The VAP includes two integral 5 GHz patch antennas pointing 180° from each other to create a somewhat omni directional 5GHz pattern (The 5 GHz antenna system is addressed in the UNII Part 15 Subpart E report). The VAP essentially includes only a single 2.4GHz patch antenna. There are actually two 2.4 GHz antennas. The VAP switches rapidly between them and when a signal is detected, the VAP uses the antenna offering the best connection. At any one time, there is only one antenna connected to the module.

The effective gain of the 2.4 GHz antenna path (the antenna switch and the antenna itself) is 6.8dBi. The diagrams below outline the RF path from the output of the mini PCI module within the VAP to the integral antennas within the VAP .See the antenna patterns included with this application (Note that only the Part 15.247 2.4 GHz portion is covered by this particular report)

There is a provision for attaching external antennas to the VAP (which, when implemented will disable the integral antenna by means of the switch) however at this time, since external antennas are not included in this certification application, the ability to utilize an external antenna, and even switch the antenna selection switch to the other position will be disabled in the configuration software. The hardware was put in place to support the future use of external antennas once such use is authorized either by permissive change of new grant.

