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To:

Federal Communications Commission
7435 Oakland Mills Road
Columbia, Maryland 21046

Subject: Theory of Operation of Airespace Outdoor Radio QTZ1300

Gentlemen,

The outdoor access point is a standard Airespace 802.11 access point radio that has been placed in a weather proof enclosure to allow outdoor operation. The radio operates in a manner similar to the Airespace model 1250 (QTZ1200W) indoor access point.

The outdoor radio incorporates the same circuitry as the Airespace indoor access point with the exception that RF amplifiers are incorporated into the outdoor radio to provide additional transmit power for longer distance, outdoor operation.

The outdoor radio is for enterprise applications where it is necessary to extend the 802.11 infrastructure outside to cover a corporate campus for example.

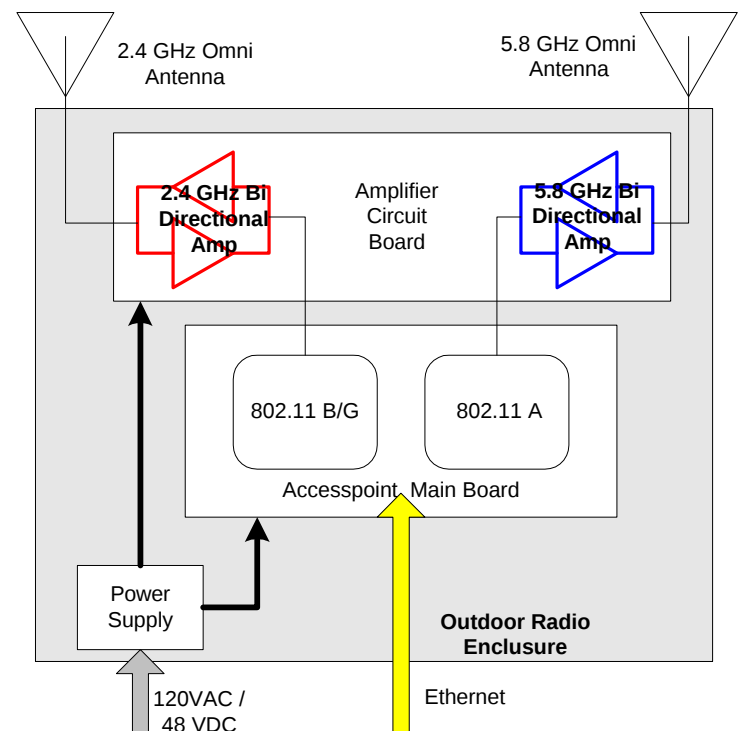
The outdoor radio utilizes omni directional antennas on both 2.4 and 5.8 GHz. Future models of the outdoor radio may include 5 GHz directional antennas.

The outdoor radio is powered either by 120VAC or 48VDC and is enclosed in a proven weatherproof enclosure.

If any additional operational details are required, please contact me at the email address below

Sincerely,

David Waitt
Consultant Representing Airespace
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Outdoor Operational Specifications:

802.11a

Data rates: 6, 9, 12, 18, 24, 36, 48, and 54 Mbps

Frequency bands: 5.725 - 5.85 GHz

Carrier Sense Multiple Access with Collision Avoidance (CSMA/CA)

Radio Technology: Orthogonal Frequency Division Multiplexing (OFDM)

Modulation Type: BPSK (6 and 9 Mbps), QPSK (12 and 18 Mbps), 16-QAM (24 and 36 Mbps), 64-QAM (48 and 54 Mbps)

Typical receiver sensitivity: -73 dBm at 54 Mbps, -75 dBm at 48 Mbps,

- 80 dBm at 36 Mbps, -83 dBm at 24 Mbps, -87 dBm at 18 Mbps,

- 89 dBm at 12 Mbps, -90 dBm at 9 Mbps, -91 dBm at 6 Mbps

802.11b

Data rates: 1, 2, 5.5 and 11 Mbps

Frequency band: 2.412 – 2.462 GHz

Carrier Sense Multiple Access with Collision Avoidance (CSMA/CA)

Radio Technology: Direct Sequence Spread Spectrum (DSSS)

Modulation Type: DBPSK (1 Mbps), DQPSK (2 Mbps), CCK (5.5 and 11 Mbps)

Typical receiver sensitivity: -89 dBm at 11 Mbps, -91 dBm at 5.5 Mbps,

-92 dBm at 2 Mbps, -94 dBm at 1 Mbps

802.11g

Data rates: 1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48, 54 Mbps

Frequency band: 2.412 – 2.462 GHz

Carrier Sense Multiple Access with Collision Avoidance (CSMA/CA)

Radio Technology: Direct Sequence Spread Spectrum (DSSS) and Orthogonal Frequency Division Multiplexing (OFDM)

Modulation Type: DBPSK (1 Mbps), DQPSK (2 Mbps), CCK (5.5 and 11 Mbps), BPSK (6 and 9 Mbps), QPSK (12 and 18 Mbps), 16-QAM (24 and 36 Mbps), 64-QAM (48 and 54 Mbps)

Typical receiver sensitivity: -73 dBm at 54 Mbps, -75 dBm at 48 Mbps,

-80 dBm at 36 Mbps, -84 dBm at 24 Mbps, -87 dBm at 18 Mbps,

-90 dBm at 12 Mbps, -89 dBm at 11 Mbps, -91 dBm at 9 Mbps,

-91 dBm at 6 Mbps, -91 dBm at 5.5 Mbps, -92 dBm at 2 Mbps, -94 dBm at 1 Mbps

Compliance

Radio Approvals

- US: FCC Part 15 subpart C

EMI and Susceptibility (Class A)

- US: FCC Part 15