

Antenna Information

C2PC KING Falcon Antenna

September 7, 2018

List of Antennas

- Tenda 50001828, 5dBi, 2.4 GHz dipole antenna
- KING KF1000/KF1001, 8 dBi, 2.4 GHz Yagi antenna

Photographs

See “External Photos” document submitted with this filing.

FCC 15.203 Compliance

The 5dBi dipole antenna connects to the Router with an RP-SMA connection to form a unique coupling.

The 8 dBi Yagi antenna connects to the Router through number of couplings:

- The Yagi antenna in the KF1000/KF1001 is connected through internal electronics to an SMB port.
- The KF1000/KF1001 connects to the Power Inserter with a SMB to RP-SMA cable.
- The Power Inserter receives RF power on its SMB port and sends it and DC power to the KF1000/KF1001 with its RP-SMA port.
- The Power Inserter connects to the Router with a SMB to RP-SMA cable.
- The Router has a RP-SMA port.

This combination of components meets the requirements of 15.203 because:

- Both the Router and Power Inserter use RP-SMA ports where those devices output RF energy, thus maintaining a unique coupling.
- The cables used include an RP-SMA connector, thus maintaining a unique coupling.
- The Power Inserter must be used to provide power to the KF1000/KF1001. If not used:
 - The Falcon will be unable to perform its scanning and pointing functions, thus negating its usefulness to the user.
 - An RF SPDT switch in the KF1000/KF1001 will be unpowered, thus adding more RF loss than either of the two cables alone. Having this added loss would:
 - Cause impaired operation, which is not desirable to the user.
 - Reduce the transmit power below that allowed in the grant, which is permissible.
- Because the Power Inserter must be used, there is no workable system in which the user uses only one cable to connect the Router to the KF1000/KF1001. Thus, all provided components of the system must be used in the prescribed fashion.