
Frequently Asked Questions

Q: What performance issues will arise due to environmental conditions?

A: AirMux-200 is not sensitive to environmental conditions. However if heavy rain or snowfall is expected we can ensure the performance by allowing a higher fade margin in the budget link planning calculations.

Q: When using the AirMux-200, what is the potential for interference between our system and other cellular or wireless Networks devices?

A: The AirMux-200 is a robust system. However since it operates in unlicensed band there maybe some interference. Nevertheless, the fact that we can manually set the frequency gives us the flexibility to find a clear channel. In addition each Airmux200 link uses unique user configurable SSID code.

Q: What type of security or encryption is being deployed on the Airmux-200?

A: The AirMux-200 supports AES encryption.

Q: What protocol does the AirMux-200 use, i.e. 802.11?

A: AirMux-200 uses a proprietary protocol; this protocol contains improved options that more efficiently support the clock reconstruction from the TDM services.

Q: What type of security is offered on the Airmux-200?

A: The Airmux-200 has three levels of security:

1. AES hardware mechanism
 2. Each unit uses a unique SSID - link specific code (up to 24 alphanumeric characters)
 3. Proprietary protocol protects from eavesdropping from other systems.
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Q: Can we use horizontal and vertical polarization on the same frequency to double the number of wireless links?

A: Installing two AirMux-200 systems in the same band with cross polarization provides 20–25 dB separations. Nevertheless, since there are reflections, the cross polarization separation is decreased and spatial separation is recommended.

Q: Can AirMux-200 be managed and configured via Telnet?

A: No. Use only the AirMux software manager.

Q: Could you add the frequency of 5.735 to the manual selection in order to increase the number of 20 MHz channels to six?

A: Currently the system provides 5 fixed channels. Yet, the manual frequency setting provides more flexibility of spectrum selection, including 5.735 MHz.

Q: Can we manage AirMux-200 using SNMPc other than the supplied management software that comes with the units?

A: Yes. The AirMux-200 is SNMP based, when using other SNMP software, and after implementing RAD MIB's, the AirMux-200 can be managed.

Q: Can I use the AirMux-200 with any vendor external antenna?

A: Yes. RAD supplies the AirMux-200 external ODU with an N-type typical connector. Any vendor external antenna that can be cascaded to our external unit can be used without problem. Please note that dB losses in the cascading cable between the external ODU and antenna should be taken into consideration. (In the supplied cascading cable of one meter we have 1 dB loss)

Q: What is the sensitivity for each rate of the Airmux-200?

A: The sensitivities are:

Rate 12 Mbps -84 dB

Rate 18 Mbps -81 dB

Rate 36 Mbps -74 dB

Rate 48 Mbps -68 dB

Q: Does AirMux-200 use DSSS technique?

A: No, AirMux-200 uses the advanced OFDM technique.

Q: Can I use any category 5e cable in order to connect the IDU and ODU?

A: The cable should be suitable for outdoor use, and shielded Category 5e.

Q: Do we need to add external arrestors on AirMux-200 cables?

A: The AirMux ODU includes arrestors and lightning protection. Therefore there is no need to add additional arrestors.

Q: What is the actual Ethernet data rate and maximum throughput?

A: The Max net throughput of the AirMux-200 is Full Duplex 18 Mbps.

The AirMux-200 is a symmetrical system

Note

Q: Does AirMux-200 withhold any MAC Addresses?

A: The AirMux-200 is a layer 2 Bridge (VLAN transparent). The built in switch contains a MAC Address table up to 2047.

Q: What are the BER values expected in the Airmux-200 link?

A: 10⁻¹¹ (according to BER sensitivity threshold)

Q: What are the main advantages of the AirMux-200 solution (e.g., wireline, wireless, etc.) over other possible alternatives?

A:

- ✓ Easy and intuitive installation using audio indication.
 - ✓ Easy configuration using the management software of overall link site to site – there is no need to travel between the two sites in order to change the configuration.
 - ✓ Easy migration between transition channels – site to site.
 - ✓ Full backup option – backup and restore using ini files.
 - ✓ Very light ODU (1.5 kg).
 - ✓ No RF losses between IDU and ODU.
 - ✓ Robust Air Interface Layer 2 ARQ insures “error-free” Ethernet service even in harsh conditions. Retransmit mechanism for TDM insures low BER.
 - ✓ Integrated, up to 4 E1/T1 and Ethernet in one single product.
 - ✓ Supports a variety of applications Voice and Data over single radio – no need for external mediation device.
 - ✓ Smooth migration to VoIP applications.
 - ✓ Carrier class compliant with ITU standards for E1 and T1.
 - ✓ Low and constant TDM latency (8 msec).
 - ✓ Extremely accurate recovered clock low cost replacement to PDH radios.
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