



Application Note

Broadband Microwave Transport

Airmux-200 Provides Affordable and Reliable E1/T1 and IP Connectivity for Broadcast Applications

Typical Users

- Broadcast companies
- TV Stations
- AM/FM Radio stations
- Integrators
- Service providers

Typical Applications

- Studio to transmitter links
- Implementation of HD broadcast
- Studio link back-up
- Interoffice WAN
- Copper alternative

Business Requirement

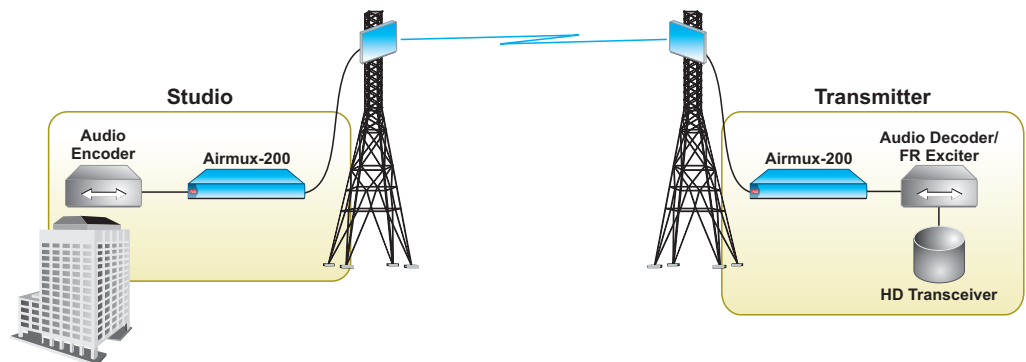
Broadcasting companies require communications links between studios and remote transmission facilities. Today, most broadcasters rely on telco circuits because they offer commercial quality voice transmission. However, costly circuits do not have enough capacity to support the higher bandwidth requirements of HD radio and TV, nor are these circuits reliable in many areas, resulting in audio drop-outs.

Another issue facing broadcasting companies is the limited capacity of legacy studio link transmitters, which do not provide a migration path to IP/Ethernet.

These current solutions are expensive, from both a capital and operating expense perspective.

RAD's Airmux-200 Advantages

Offering the perfect combination of top performance, high capacity, ease-of-installation and cost-effectiveness, Airmux-200 is a solution designed to meet the bandwidth-intensive requirements of broadcasting companies today, and into the future.



The Airmux-200 Advantages

Features	Benefits
Best price/performance in the industry with fast ROI	Saves recurring monthly cost of leased lines
1, 2 or 4 x E1/T1 ports, 1 or 2 Ethernet ports	Connection of all voice and data by a single compact device
Air interface bandwidth of up to 48 Mbps, yielding a full duplex payload of up to 18 Mbps	High throughput, enough for up to 4 x E1/T1 and Ethernet traffic
Range up to 80 km (50 miles)	Extension of services to rural or remote regions
Alignment tools and installation wizard	Fast and easy deployment, cuts installation costs
High link availability, Redundant power supply option	Carrier-class performance and reliability
Operates over unlicensed 2.4, 4.9 and 5.x GHz radio bands	Avoids the trouble, cost and delay of frequency license registration
Automatic Channel Selection (ACS) interference management	Automatically skips to free frequencies to allow continuous wireless communications in crowded environments
AES 128-bit key encryption scheme	Guarantees optimal over-the-air security for data
RADview SNMP fault management	Hundreds of links and access devices can be centrally managed from a single SNMP fault management application

Providing average bandwidth rates of 18 Mbps full duplex, Airmux-200 is the only broadband radio that is designed specifically for voice, audio data and video transmission.

Forward Error Correction, six non-overlapping channels and adaptive modulation are features that enable the Airmux-200 to provide stable transmission in the unlicensed spectrum.

RAD's Airmux-200 systems deliver up to 4 E1/T1s and Ethernet at ranges of up to 80 km (50 miles). With these systems in place, broadcasting companies increase network capacity and at the same time reduce costs by eliminating the need to lease telco circuits or deploy expensive legacy transmitters.



Airmux-200
Broadband Wireless Multiplexer

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