



Application Note

School Board Connectivity

Broadband Internet connections at schools are critical for students to have access to more data, which means additional resource information for study. Currently, many schools still utilize painfully slow connections that will not enhance the learning/research experience, and do not support modern distance learning applications.

Long-range outdoor wireless connections have emerged as an alternative to expensive carrier-provided fiber, T1/E1 and IP land-based circuits. It is now possible to link multiple buildings together with high-speed links up to 50 miles away. One initial investment replaces ongoing monthly charges from carriers, charges that escalate as data usage increases.

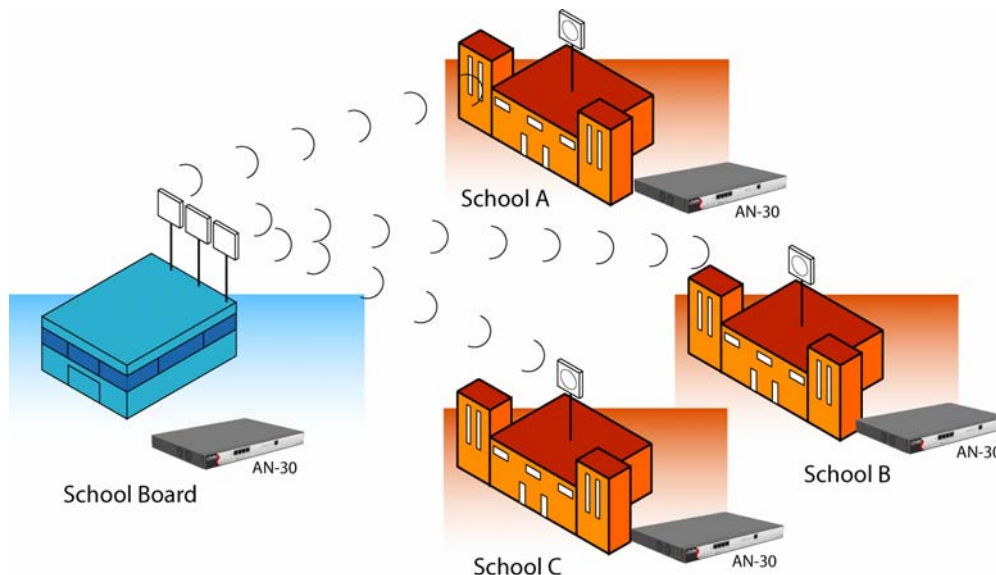
For school boards, WAN data access can provide the backbone for distance learning via videoconferencing and voice-over-IP. Fixed wireless systems like the Redline's AN-50 and

Wireless connectivity provides reliable high-speed network links for school boards

AN-30 connect urban and rural schools for a fraction of the cost of telco provided services.

Benefits of broadband fixed wireless links

- No cabling costs
- Stable connections to the main computing center and to the main Internet access
- Universal access to bandwidth access for all schools
- Dramatically improved ability to share educational resources and IT applications across the school board
- Ability to deploy new bandwidth-intensive applications such as video learning and distance learning
- The links can carry voice, video and data traffic simultaneously



SETTING THE STANDARD FOR ADVANCED BROADBAND WIRELESS

Redline AN-50 and AN-30:

Redline's AN-50 and AN-30 (T1/E1) systems are designed to provide data and voice solutions for:

- Schools, Libraries and Hospitals
- Medium and Large Enterprises
- Carriers and Service Providers
- Local and Regional Governments
- Public Safety Organizations
- Building Local Exchange Carriers
- Property Management Companies

Typical Uses

- Connect Voice and high speed IP based equipment over long range wireless links
- Extend head office and regional office systems out to branch locations
- Connect telephone and broadband data connections Multiple Tenant Buildings (MTU)

Key Features

- OFDM technology provides robust wireless links even in the presence of multipath interference
- Ability to operate in some non line of sight conditions
- Ranges of 80 km (50 miles)
- Extremely low latency is ideal for time sensitive applications like VoIP and videoconferencing
- Adaptive modulation adapts to changing line conditions for robust link reliability
- Offers high speed 64 QAM modulation
- Carrier class remote Network Management System support
- Over the air encryption
- AN-30: Carries up to 4 T1/E1 and up to 30 Mbps over 100BaseT interface
- AN-50: Carries up to 48 Mbps data rate over 100BaseT interface, point to point or point to multipoint
- Single or dual AC or DC power supplies for redundancy

Additional Benefits

- Allows a PBX system to be connected across multiple buildings
- Helps to deploy 4 digit dialing across the school board
- Supports T1/E1 and IP connections
- Proactive remote management and diagnostics tools for your telephony and IP staff
- May be eligible for the E-rate program

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