

# MiChoice Technologies

## Wireless Network Specifications

### *What is wireless networking?*

A wireless local-area network (WLAN) uses Radio Frequency (RF) technology to transmit and receive data over the air, providing all the features and benefits of traditional LAN technologies but without the limitations of a cable. A wireless local-area network is a flexible data communication system implemented as an extension to, or as an alternative for, a traditional wired local area network.

Wireless local area networks are not the answer to all applications. Many factors can impact the performance of a wireless network; therefore MiChoice Technology Systems, Inc. does not guarantee that a wireless local-area network will function properly in every installation. Some installations simply will not work with a wireless network, therefore the traditional wired network is recommended. We strongly encourage the district/school to consult with their network support staff or contractor to assist them in making the best decision on whether or not wireless is suitable solution.

### **Wireless product specifications:**

- Network standards must be IEEE 802.11b, 802.11a and 802.11g High Rate Compliant and Wi-Fi certified
- 802.11b for standard transmissions, 802.11g is strongly recommended for heavy graphics and video transfer
- IEEE High Rate-compliant roaming
- Compatible with Windows 2000/98/95/NT and XP operating systems
- 2400-2483.5 MHz frequency
- Wireless Medium: Direct sequence spread spectrum (DSSS)
- Media Access control: Carrier Sense Multiple Access with Collision Avoidance (CSMA/CA)
- Security: Access Control Lists; WEP Encryption (Open system, 64 bit, and 128 bit), VPN capability, USB, Enterprise AP and Gateway provide physical lock mechanism to help deter theft; 802.1x support provided in PC card via future Web download
- Modulation: DBPSK @ 1 Mbps; DQPSK @ 2 Mbps; CCK @ 5.5 and 11Mbps
- Network Architecture: Must support peer-to-peer (ad-hoc) networking and communication to wired networks via Access Points and Gateways.
- Operating channels: 11 channels (U.S. & Canada) 13 channels (ETSI compliant countries); 14 channels (Japan)
- Minimum range at 1Mbps must be 1500ft (460m) open environment (1000ft [300m] for handheld modules); 300ft (90m) office environment
- Minimum range at 11Mbps must be 400ft (120m) open environment (300ft [90] for handheld modules); 100ft (30m) office environment
- Mounting: Gateway and Access points can mount on ceiling or wall, or rest on flat surface
- Antenna: Flexible Gateway and APWE Access Point antenna
- Network Management: SNMP, Enterprise Access Point with Embedded Web Server, Telnet, and tFTP Embedded Web browser configuration tool