



Configuration Guide

Intermec

MobileLAN Access Points
2100, 2101, 2102, WA21, WA22

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Introduction

This document details the specifications for configuring the Intermec 2100, 2101, 2102, WA21 and WA22 Access Points (APs) with SpectraLink 8000 Wireless Telephones.

Product Summary

Manufacturer:	Intermec	
Approved product(s):	2100, 2101, 2102, WA21, WA22	
RF technology:	Direct-sequence spread spectrum (DS), 2.4 GHz	
AP software version:	1.91 †	
SpectraLink handset models:	e340/h340/i640	8020/8030
SpectraLink radio mode:	802.11b	802.11b
Maximum telephone calls per AP:	12 *	12 *
AP configuration parameters:	See <i>Access Point Configuration</i> below.	
Indoor range (typical):	See vendor specifications for AP.	
Required network topology:	Switched Ethernet	
Network constraints:	Dedicated segment for wireless, single subnet	
WEP capability:	Yes *	
ESSID auto-learn function:	Yes *	

† Earlier and later software versions have not been tested for the SpectraLink 8000 SVP Server compliance, except as noted. Refer to *Polycom WLAN Compatibility Table* for Field Verified AP software versions.

* Telephone calls per AP must be configured in the system per documentation provided by Polycom. WEP and Automatic Learn are programmed into each handset in addition to being configured in the AP.

SpectraLink 8000 Wireless Telephones

SpectraLink 8000 Wireless Telephones use voice over IP (VoIP) technology on IEEE 802.11b-compatible wireless local area networks (WLANs). Access points utilize radio frequencies to transmit signals to and from the SpectraLink 8000 Wireless Telephones.

Access Point Capacity and Positioning

Each site is unique in its AP requirements. Please take the following points into account when determining how many APs are needed and where they should be placed in the facility.

Handset range

There must be wireless LAN coverage wherever SpectraLink 8000 Wireless Telephones will be used. The typical range for a SpectraLink 8000 Wireless Telephone is comparable to that of a laptop computer utilizing a wireless LAN PC card. However, SpectraLink 8000 Wireless Telephones are likely to be used in areas where data devices are not typically used, such as stairwells and outdoor areas. SpectraLink 8000 Wireless Telephones have a Site Survey mode that displays dBm levels to determine adequate WLAN coverage. Refer to the Administration Guide for your SpectraLink Wireless Telephones for details about this feature.

Number of handsets per access point

Estimate the number of SpectraLink 8000 Wireless Telephones and their anticipated call volume per AP area to ensure that the maximum number of calls per AP will not be exceeded. In this estimate, consider the data rates at which the handsets will operate. Higher data rates can only be sustained while well within the range of the AP. If the SpectraLink 8000 Wireless Telephones will be operating near the limits of the RF coverage from the AP, they will automatically drop to 1 Mb/s operation. SpectraLink 8000 Wireless Telephones require approximately 15% of the available bandwidth per call for 1 Mb/s operation, approximately 10% of the available bandwidth per call for 2 Mb/s operation, approximately 7% of the available bandwidth per call for 5.5 Mb/s operation, and approximately 5% of the available bandwidth per call for 11 Mb/s operation.



The maximum number of telephone calls per AP quoted in the summary table above is based on 11 Mb/s operation, and will be reduced if some or all SpectraLink 8000 Wireless Telephones are operating at 1, 2, or 5.5 Mb/s.

LAN bandwidth

Estimate anticipated peak call volume to ensure that the LAN has enough bandwidth available to handle the network traffic generated by all of the wireless devices. Network traffic can be

monitored/analyzed using a network sniffer or a simple network management protocol (SNMP) workstation.

Number of other wireless devices per AP

The SpectraLink 8000 Wireless Telephones share bandwidth with other wireless devices. To ensure adequate RF bandwidth availability, consider the number of wireless data devices in use per AP.

Notes on Configuration



The AP must support SpectraLink Voice Priority (SVP). Contact your AP vendor if you need to upgrade the AP software.

If you encounter difficulties or have questions regarding the configuration process, please contact the Customer Support Hotline at (800) 775-5330. The hotline is open Monday through Friday, 6 a.m. to 6 p.m. Mountain time.

Access Point Configuration

The following AP configuration steps need to be repeated for each AP radio that you are planning to use with VoIP.

1. Connect to the AP using the Web browser interface. Consult the access point documentation for details.
2. Go to **IEEE 802.11B Radio** and set the **SSID (Network Name)** on the AP the same as the setting for the SpectraLink 8000 Wireless Telephones.
3. Go to **IEEE 802.11B Radio: Advanced Configuration** and set **Data/Voice Settings** option to **Data and SpectraLink Traffic**.
4. Go to **IEEE 802.11B Radio: Advanced Configuration** and set the **Basic Rate** to **11Mb/s**.
5. Go to **Spanning Tree Settings: Global Flooding**, set **Multicast Flooding** to **Universal (Inbound)**
6. Save changes and reboot.

The AP is now ready for use with SpectraLink 8000 Wireless Telephones.