
LM-WS110 Wireless Product Specification --

11Mbps Wireless Access Point

Note: This document contains proprietary technical information in which is the property of the Delta Networks Inc. and shall not be disclosed to others in whole or in part, reproduced, copied, or used as the basis for design, manufacturing, or sale of apparatus without written permission of Delta Networks Inc.



Table Of Contents

- 1. REVISION HISTORY 3
 - 1.1. PRODUCT REVISION HISTORY 3
 - 1.2. DOCUMENT REVISION HISTORY 3
- 2. GENERAL DESCRIPTION 4
 - 2.1. FEATURES 4
 - 2.2. MECHANICAL DESIGN..... 5
 - 2.3. LED DEFINITIONS 6
 - 2.4. IC SOLUTION 8
- 3. TECHNICAL SPECIFICATIONS..... 9
- 4. DELIVERY PACKAGE 10
 - 4.1. LABELS FOR GIFT BOX AND CARTON 10

1. Revision History

1.1. Product Revision History

Revision	Date	Remark
0	2000/12/22	▪ Product Initial

1.2. Document Revision History

Revision	Date	Remark
1.00	2000/12/22	▪ Initial specification
1.01	2001/2/6	▪ Add Case Photo
1.02	2001/2/12	▪ Modify LED definitions ▪ Change RF activity to RF ready ▪ Add Ethernet Full/Half LED description
		▪

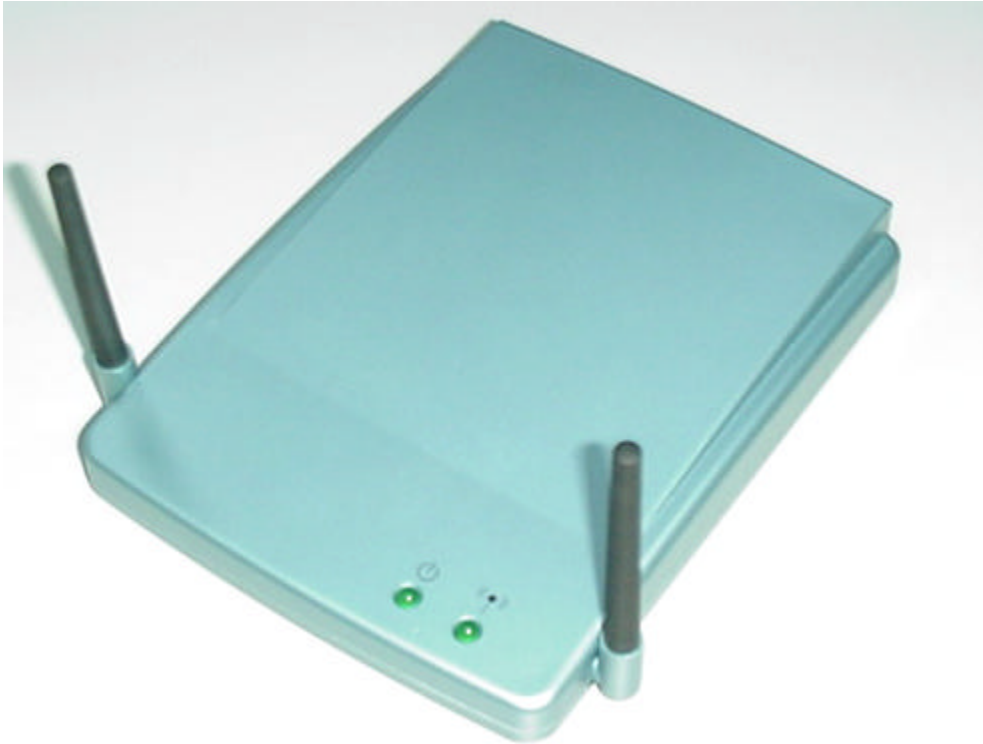
2. General Description

LM-WS110 is a Wireless-to-Ethernet product. The Wireless interface is IEEE802.11b standard compatible. Its data transmission rate is 11Mbps. The Ethernet interface is IEEE802.3 standard compatible. The data rate is 10Mbps.

2.1. Features

- Complies with the IEEE 802.11b Direct Sequence Specification
- Complies with IEEE 802.3
- Supports 1, 2, 5.5 and 11 Mbps Data Rate on the wireless interface
- Supports 10Mbps Data Rate on the Ethernet interface
- WEP 40-bit data encryption for security
- With Roaming capability
- SNMPv1 management provided
- Remote management via SNMP protocol
- Local management via console port
- Firmware upgrade via console interface
- [5V@800mA](#) power supply needs
- FCC Certified under Part 15 to Operation in 2.4GHz ISM Band
-

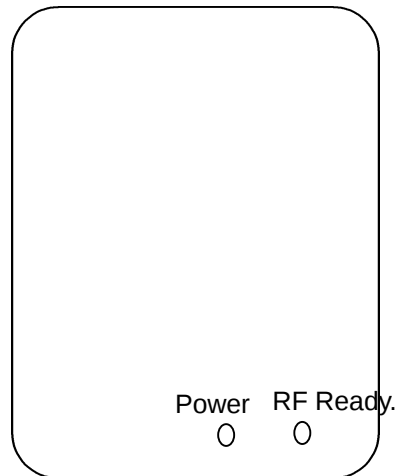
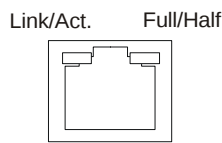
2.2. Mechanical Design



2.3. LED Definitions

The LEDs on the LM-WS110 provide visual presentation to show the following status:

- ✓ Status of the system
- ✓ Ethernet Link/Activity
- ✓ Ethernet Full/Half
- ✓ RF Ready



Power LED

Green	System is in operation
Off	Power is off

Ethernet Link/Activity LED

Solid Green The Ethernet port is at the link status and no data transmission on the port.

Blinking Green The Ethernet port is at the link status and there is a data transmission on the port.

Off The port is not connected.

Note: The link speed is fixed at 10Mbps.

Ethernet Full/Half LED

Solid Green The Ethernet port is operated at full-duplex mode. But we don't support full-duplex operation now.

Off The Ethernet port is at half-duplex mode.

Note: At the current version, this LED is always OFF.

RF Ready LED

Solid Green	Data transmission or receive activity occurs on the port.
Off	The RF is not ready for data transmission.

2.4. IC Solution

The IC solution for LM-WS110 adopts Intersil PRISM II chip set:

P/N	Functionality	Description
Atmel AT76C510	Ethernet to Wireless bridge controller.	An internetworking device for interconnecting a WLAN with other WLANs and legacy LANs. Wireless interface following the IEEE 802.11 standard. Ethernet MAC Unit interfaces with 10/100 Mbps Ethernet Physical through a standard MII port. Internetworking Unit (INWARM) with integrated ARM7TDMI RISC processor, provides the bridging functions between Ethernet and wireless interfaces. WLAN MAC unit with a second ARM7TDMI and integrated 128-byte Tx and 128-byte Rx FIFOs for wireless MAC layer functions. Integrated 12Kx32bit internal SRAM for fast program code execution and temporary storage of data.
Seeq 80225	Ethernet PHY	10/100Mbps Single PHY
Intersil HFA3861B	Direct Sequence Spread Spectrum Baseband processor	HFA3861B Direct Sequence Spread Spectrum (DSSS) baseband processor is part of the PRISM 2.4GHz WLAN Chip set and contains all the functions necessary for a full or half duplex packet baseband transceiver. The HFA3861B has on-board A/D's and D/A for analog I and Q inputs and outputs for HFA3783.
Intersil HFA3783	I/Q Modulator/Demodulator and Synthesizer	HFA3783 is a highly integrated and fully differential SiGe baseband converter for half duplex wireless application. It features all the necessary blocks for quadrature modulation and demodulation of "I" and "Q" baseband signals.
Intersil HFA3683A	2.4GHz RF/IF Converter and Synthesizer	HFA3683A is a monolithic SiGe half-duplex RF/IF transceiver designed to operate in the 2.4GHz ISM band.
HFA3983	2.4GHz Power Amplifier and Detector	HFA3983 is a 2.4GHz monolithic SiGe Power Amplifier designed to operate in the ISM Band. It delivers a 18dBm(Typ.) of an output power for the typical DSSS signal. The HFA3983 is housed in a 28 lead exposed paddle EPTSSOP package well suited for PCMCIA board applications.

3. Technical Specifications

LM-WS110 Specifications

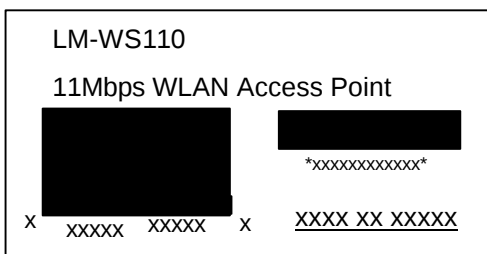
Electronics Specification	
Standard Compliant	IEEE 802.11b Standard IEEE 802.3 Standard USB 1.0 Specification
Data Transmission Rate	11/5.5/2/1Mbps on Wireless interface 10Mbps on Ethernet interface
Security	WEP 40-bit encryption
Frequency Band	2400-2483.5MHz
Wireless Medium	Direct Sequence Spread Spectrum (DSSS)
Modulation Technique	DBPSK@1Mbps , DQPSK@2Mbps , CCK@5.5 and 11Mbps
Operating Channels	11 channels for US
Operating Range	Up to 800 feet operating range in open environment
Antenna	Built-in dipole antenna
Output Power	13dBm
Antenna	Two dipole antenna
Interface	Ethernet interface RJ-45 USB interface as console port for local configuration and firmware upgrade
Management Specification	
Maximum Clients	256 stations
SNMP Management	Support SNMPv1 Allow monitoring the network and wireless parameters using a existing network management platforms.
TFTP	Firmware upgrade
Electromagnetic Emission	FCC Part 15
Operating Environment	Operation Temperature: 0~40 Storage Temperature: -20~70 Operation Humidity: 10~90% RH
Dimension (L x W x H)	
Weight	

4. Delivery Package

- Wireless Access Point
- User manual
- Driver diskette or CD

4.1. Labels for Gift box and Carton

Giftbox label: The label must print out “ FCC Class B” logo.



Carton label: The carton label need print out the “ FCC

