3Com Wireless LAN Access Point
Model: WL-306

Technical Description

The 3Com Wireless LAN Access Point is a wall or ceiling mounted bridge, connecting Wireless LAN clients to 10baseT Ethernet networks. This product offers up to 11Mbps Wireless LAN (Direct Sequence Spread Spectrum) connectivity, compliant with the IEEE 802.11b specification. WL-306 operates within the frequency range 2400 to 2483.5 MHz.

Functional Overview

The 3Com Wireless LAN Access Point, model WL-306 includes a wireless LAN transceiver (Harris Prism 2.4GHz Radio Chipset Interface), controller, processor, memory and integral retractable dual diversity dipole antennas and optional external antennas.

Radio Interface Overview

The Harris/Intersil Prism 2.4GHz Radio Chipset Interface includes a direct sequence spread spectrum (DSSS) baseband processor (HFA3861), an I/Q modulator/demodulator and synthesizer (HFA3783), a 2.4GHz RF/IF converter and synthesizer (HFA3683), a bandpass filter, an RFMD Micro Devices Inc. power amplifier, a dielectric filter, two MMIC switch, a SAW filter, and two VCOs.

Four modulation and channel data rates are supported, as per the IEEE 802.11b specification. These are:
- 1 Mbit/s DBPSK modulation
- 2 Mbit/s DQPSK modulation
- 5.5 Mbit/s CCK modulation
- 11 Mbit/s CCK modulation

The maximum allowable transmit power level is 17.5 dBm. The minimum output power is 12 dBm.

Spectral shaping is controlled in order to comply with adjacent band (above 2483.5 and below 2400 MHz) regulatory requirements of FCC Part 15.247, ETS 300328 and SP/DGPT/ATAS/23.

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Physical Specifications

Dimensions and Weight		***Power Requirements***	
Width:	102 mm	+24VDC	@ 500 mA
Length:	175 mm		
Height:	20 mm	***Environmental Ranges***	
Weight:	<0.2 Kg	Operating Temperature: 0° to 55° C	
		Humidity:	5% to 95% RH

Features:

- Each AP can support up to 128 wireless clients simultaneously.
- Distributed Coordination Function (DCF) support, as the primary access protocol for sharing the wireless medium.
- Point Coordination Function (PCF) infrastructure operation supported.
- RTS/CTS communications protocols in order to deal with contention between stations out of range of each other.
- Fragmentation to deal with long packet transmissions in bad channels.
- Buffering of WC packets, enabling client station Power Management for longer battery life.
- User Authorization and Authentication security functions using an Access Control List featuring UserID and User Password verification.
- WC Device Authorization and Authentication security functions using an Access Control List featuring MAC Addresses.
- Network authentication to the user using NetworkID and Network Password verification.
- Privacy security function using both the IEEE 802.11 standard 40 bit WEP shared period key protocol (where permitted by law)
- Optional 128 bit shared session key scheme security (where permitted by law)
- Manual entry key management protocol for the 40 bit WEP encryption (where permitted by law)
- Configurable via SNMP or HTTP. APs shall also be configurable via wireless or 10/100 baseT. The user/administrator shall be able to readily configure all or a subset of all APs using a save-and-load AP configuration mechanism.
- Power input from PowerBrick module via Cat 5 Ethernet cable.