# 3Com® Wireless LAN Managed Access Point 3850

**Improves Performance and Scalability with Distributed Forwarding at the Access Point for Voice and Other Low Latency Applications**

## OVERVIEW

The 3Com® wireless LAN Managed Access Point (MAP) 3850 delivers secure, voice-ready reliable connectivity for WLAN users. An integral component of the 3Com Wireless LAN Mobility System, the 3Com MAP 3850 with intelligent switching offers both centralized and distributed data forwarding, with the MAP automatically determining the best alternative based on the requirements of the underlying application. This allows it to support the most demanding wireless applications indoors and outdoors, including Voice over Wi-Fi.

Fully controlled by a WLAN switch or controller with which it securely communicates, the MAP contains no local data store for sensitive data, eliminating the chance of information being compromised due to hacking or theft. The end result helps reduce capital expenses and ongoing administrative costs—all while keeping the wireless LAN secure.

## KEY BENEFITS

### PROVIDES VOICE-READY WIRELESS CONNECTIONS

Distributed forwarding in the 3Com Managed Access Point 3850 optimizes traffic flow, reducing latency, while providing ultra high performance and massive scalability. The MAP automatically calculates the data integrity and RF signal strength of the wireless channel, continually tuning it for optimal RF channel and transmit power, while enforcing the prioritization of delay-sensitive voice and other critical applications.

Wi-Fi Multimedia (WMM) or SpectraLink Voice Priority (SVP) helps ensure optimal QoS for voice traffic. Policies provide per user, protocol, or class-of-service (CoS) mapping, while enhanced features such as Call Admission Control can finely tune deployment of Voice over Wireless.

### SIMPLIFIES CONFIGURATION, CONTROL AND OPTIMIZATION

With remote management, the arduous process of initially configuring and deploying access points (APs) is vastly simplified because configuration settings are centrally distributed for consistency and accuracy. And for easier long-term management, any added MAPs inherit configuration settings from their wireless switch or controller.

Automated network controls at the wireless switch improve coverage and service by optimizing RF gain, assigning radio channels, balancing traffic loads and monitoring the RF environment of all managed access points with which it is associated.

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### DELIVERS SECURITY AND SEAMLESS MOBILITY

Local traffic encryption distributes the encryption processing across the network rather than relying on one central device. Continuous, on-demand, or scheduled RF scans can be used to locate users and identify and isolate potentially harmful rogue APs or other vulnerabilities.

3Com wireless switches and controllers integrate with backend Authorization/Authentication/Accounting (AAA) servers, consistently enforcing user and group access policies across the wireless LAN to provide secure session integrity as users roam throughout the network. No re-association or IT intervention is required.

The MAP 3850 also supports location-based service applications that rely on Wi-Fi signal information for position location; common usages include asset tracking or client location.

### PROVIDES SCALEABLE DEPLOYMENT OF REMOTE OFFICE WIRELESS NETWORKS

Distributed Forwarding on the MAP 3850 allows scalable wireless deployments in remote locations. Only authentication and control traffic is sent back to the wireless controller, while most user traffic can stay local to that site, thereby improving performance and increasing scalability of distributed wireless deployments.

This new architecture provides an IEEE 802.11n-ready wireless infrastructure, without the need for expensive controller upgrades.

### EXTENDS THE REACH OF THE WIRELESS NETWORK

In addition to traditional access point functionality, the MAP 3850 can also serve as an IEEE 802.11s mesh AP, mesh point, mesh portal, or WDS bridge to other MAP 3850s, extending the reach of enterprise WLANs. The MAP can support such functionality in either point-to-point or point-to-multipoint topologies, allowing maximum flexibility within a mesh or bridged environment.

The MAP 3850 can be configured with one radio for client services and the other for mesh service. The MAP can also be used in a dedicated bridging mode, to provide seamless connectivity between buildings without the expense of laying new cable.

### BOOSTS RELIABILITY AND RESILIENCY

The MAP 3850 offers dual Ethernet ports with Power over Ethernet (PoE) support. With automatic failover capability for both data and electrical power, this MAP adds a level of redundancy for demanding environments and increases network uptime.

## FEATURES

### CONVERGENCE-OPTIMIZED WIRELESS NETWORKING

**Distributed forwarding›** The 3Com Managed Access Point 3850 with distributed forwarding optimizes traffic flow, reducing latency.

**IEEE 802.11i PMK cached roaming›** When roaming between access points, security credentials no longer must be completely reauthenticated, helping reduce dropped voice sessions.

**Session-based bandwidth reservation›** Voice QoS can be assured with IEEE 802.11e TSPEC Call Admissions Control (CAC).

**Wi-Fi Multimedia (WMM)›** WMM grants preference to high-priority traffic like voice.

**Neighbor Report advertisement›** Load balancing using IEEE 802.11k directs traffic to a neighbor AP that has a lighter load or offers enhanced services.

### SECURITY

**Strong, multiple encryption›** IEEE 802.11i WPA2 Advanced Encryption Standard (AES), WPA dynamic Temporal Key Integrity Protocol (TKIP) and Wi-Fi Equivalent Privacy (WEP) packet encryption help ensure strong data security.

**Virtual private group support›** Administrators can independently encrypt and isolate subnets or VLANs using the same SSID.

**Intrusion Detection and Protection›** Multi-band sweeps scan the RF environment, searching for rogue access points, denial-of-service (DoS) attacks, ad-hoc users and sources of RF interference and takes action to mitigate the intrusion.

**Theft- and hacker-safe›** No local data store of sensitive network data; if a MAP is stolen, no secure information goes with it.

### INSTALLATION EASE AND FLEXIBILITY

**Simple installation›** No pre-staging or pre-configuration is required for new MAPs; replacement MAPs inherit configuration information from their WLAN switch or controller.

**Flexible deployment topologies›** MAP can be directly or remotely connected to their WLAN switch or controller, offering a wide variety of flexible deployment scenarios.

**PoE support›** Both data and power are supplied by a 3Com wireless switch or any 802.11af-compliant device over Ethernet cabling, eliminating the need for power adapters, power cords, or AC outlets.

**Dual-band operation›** The MAP 3850 supports IEEE 802.11a and 802.11b/g simultaneously for user flexibility.

### SCALABILITY AND RESILIENCY

**Scales to hundreds of users›** Supports up to 500 simultaneous clients.

**Intelligent switching›** Enables distributed forwarding of user traffic through the MAP.

**PoE and data port redundancy›** If the MAP loses either the LAN or PoE connection on either port, it will automatically failover to the other port, increasing network uptime.

### COMPREHENSIVE MANAGEMENT AND CONTROL

**Automated transmit power and radio channel assignment›** Transmit power settings and radio channel assignments can be set to optimize the RF cell size and to support international requirements.

**Remote management›** Channel number, power level, SSIDs and security settings are all handled by the wireless LAN switch or controller for additional security; MAPs are not operational in stand-alone mode.

# SPECIFICATIONS

### SYSTEM REQUIREMENTS
A 3Com Wireless LAN Controller or Switch—Wireless LAN Controller WX4400 or WX2200, Wireless LAN Switch WX1200, or WXR100 Remote Office Wireless LAN Switch— is required for MAP operation; 3Com Wireless LAN Switch Manager recommended for MAP operation

### TOTAL PORTS
Two 10BASE-T/100BASE-TX IEEE 802.3af-compatible PoE ports with auto-negotiation

### MEDIA INTERFACES
RJ-45; IEEE 802.11a, 802.11b, 802.11g

### DATA RATES
**IEEE 802.11a/g:** 54, 48, 36, 24, 18, 12, 9, 6 Mbps; Orthogonal Frequency Division Multiplexing (OFDM), with automatic fallback
**IEEE 802.11b:** 11, 5.5, 2, 1 Mbps; Direct-Sequence Spread Spectrum (DSSS), with automatic fallback

### FREQUENCY BAND
IEEE 802.11a: 5.15-5.85 GHz
IEEE 802.11b/g: 2.4-2.484 GHz

### MEDIA ACCESS PROTOCOL
CSMA/CA

### OPERATING CHANNELS
Channel availability depends on local country regulations. Wireless LAN system administrator must choose correct country of operation. Channels are then automatically configured to comply with specified country's regulations.

### OPERATING RANGE
**IEEE 802.11a:** up to 50 meters (164 ft) transmit and receive
**IEEE 802.11b/g:** up to 100 meters (328 ft) transmit and receive

### DIVERSITY ANTENNAS
Two internal (integrated) dual-band 2.4-2.48/5.15-5.825 GHz, 2dBi omni-directional antennas
Additional optional antenna available

### TRANSMIT POWER SETTINGS
Transmit levels are measured conducted, and the maximums shown are reduced based on country regulations.
**IEEE 802.11a**
6 to 24 Mbps: 21±2 dBm
36 Mbps: 21±2 dBm
48 Mbps: 19±2 dBm
54 Mbps: 17±2 dBm
**IEEE 802.11b**
1 Mbps: 23±2 dBm
2 Mbps: 23±2 dBm
5.5 Mbps: 23±2 dBm
11 Mbps: 23±2 dBm
**IEEE 802.11g**
6 to 24 Mbps: 23±2 dBm
36 Mbps: 22±2 dBm
48 Mbps: 20±2 dBm
54 Mbps: 19±2 dBm

### Receive Sensitivity
**IEEE 802.11a**
6 Mbps: -91 dBm
12 Mbps: -88 dBm
18 Mbps: -87 dBm
24 Mbps: -82 dBm
36 Mbps: -79 dBm
48 Mbps: -74 dBm
54 Mbps: -71 dBm

**IEEE 802.11b**
1 Mbps: -94 dBm
2 Mbps: -92 dBm
5.5 Mbps: -90 dBm
11 Mbps: -85 dBm
**IEEE 802.11g**
6 Mbps: -90 dBm
9 Mbps: -89 dBm
12 Mbps: -88 dBm
18 Mbps: -86 dBm
24 Mbps: -83 dBm
36 Mbps: -79 dBm
48 Mbps: -74 dBm
54 Mbps: -72 dBm

### POWER CONSUMPTION
9.3 W, max. (from PoE ports)

### SECURITY
WEP 40/64 and 104/128-bit encryption
WPA (TKIP) and WPA2 (AES)
Multiple SSID support at the MAP
Access Control Lists (ACLs) and VLAN support at the wireless switch/ controller
Kensington Security Slot

### LEDS
Radio 1, radio 2, health

### STANDARDS CONFORMANCE
IEEE 802.11a, 802.11b, 802.11d, 802.11e, 802.11g, 802.11h, 802.11i, 802.11s, 802.1X, 802.3af, 802.3i, 802.3u; WEP, AES, WPA, WPA2, Wi-Fi CERTIFIED

### REGULATORY/AGENCY APPROVALS
**Safety**
UL 60950-1, 1st Edition
CAN/CSA C22-2 No. 60950-1-03
CB Scheme to IEC 60950-1, 1st Edition
EN 60950-1, 1st Edition
**Environmental**
WEEE: EU Directive 2002/96/EC
ROHS: EU Directive 2002/95/EC
**Radio**
RTTE: EU Directive 1999/5/EC
FCC Parts 15.247,15.407
Industry Canada RSS-210
**Other**
EN 60601-1-2 (2001): EMC for Medical Electrical Equipment

### DIMENSIONS AND WEIGHT
Diameter: 16.8 cm (6.60 in)
Depth: 5.3 cm (2.09 in)
Weight: 366 g (12.9 oz)

### ENVIRONMENTAL RANGES
Operating temperature: 0 to 50°C (32 to 122°F)
Storage temperature: -25 to 70°C (-4 to 158°F)
Humidity: 10 to 95% non-condensing

### PACKAGE CONTENTS
3Com managed WLAN access point
Mounting hardware
Quick Start guide
Warranty booklet

### WARRANTY AND OTHER SERVICES
Limited Hardware Warranty for one year. 90 days free technical support. Refer to www.3com.com/warranty for details.

# ORDERING INFORMATION

| PRODUCT DESCRIPTION | 3COM SKU |
|---|---|
| 3Com Wireless LAN Managed Access Point 3850 | 3CRWX385075A |
| **Wireless LAN Managed Access Point Antenna Options** | |
| 3Com 6/8dBi Dual Band Omni Antenna | 3CWE591 |
| **Wireless LAN Controller, Switches and Software[1]** | |
| 3Com Wireless LAN Controller WX4400 | 3CRWX440095A |
| 3Com Wireless LAN Controller WX2200 | 3CRWX220095A |
| 3Com Wireless LAN Switch WX1200 | 3CRWX120695A |
| 3Com WXR100 Remote Office Wireless LAN Switch | 3CRWXR10095A |
| 3Com Wireless LAN Switch Manager | 3CWXM10A |
| **3Com Global Services** | |
| 3Com Wireless LAN Site Survey, Network Health Check, Installation Services and Express℠ Maintenance | www.3com.com/services_quote |
| 3Com University Courses | www.3com.com/3comu |

1 WLAN Controller or WLAN Switch required for operation of managed access point.

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