



# ORiNOCO AP-4000

## For Mobile Enterprise and Metro-Area Network Applications



### APPLICATIONS

- **Metro Wi-Fi outdoor deployments**  
Broad coverage for public safety, business and residential usage
- **Large corporations**  
Mobile access to improve employee, contractor and customer efficiency
- **Universities**  
Flexible, immediate, mobile faculty and student connectivity in dorms, classrooms, libraries and campus quads
- **Hospitals and medical clinics**  
Real time information system wide for better patient care and reduced errors
- **Local, state and federal agencies**  
Fast access to information to serve constituencies better

### Highest-Performance Access Point Delivers Scalability for Large Wi-Fi Deployments

The ORiNOCO AP-4000 Access Point is the flagship solution in Proxim's next-generation line of access points supporting enterprise voice and video applications. The AP-4000 delivers enterprise-scale security, management and QoS features, and is pre-configured with tri-mode for best-in-class performance and flexibility in large deployments. The AP-4000 is perfect for large production Wi-Fi and metro-Wi-Fi networks.

- Tri-mode and AP-to-AP communication for deployment in large or hard-to-reach areas
- Unique 802.11a scalability – external antenna connector for increased transmit distance, and maximum system gain on B/B radio for repeating configurations
- Twice the memory of competing APs, ensuring software upgrade capacity
- Industry-leading throughput with 802.11g and 802.11a simultaneous operation, and new Super Mode
- New level of intelligent rogue access point and client detection
- Sophisticated hotspot interfaces with RADIUS integration
- Pre-standard IEEE 802.11e quality of service support for latency-sensitive applications

### Proactive Security Measures to Protect Your Network

ORiNOCO access points support the latest security standards, including IEEE 802.11i and AES encryption, and add proactive security measures.

- IEEE 802.1X mutual authentication
- Dynamic per-user, per-session rotating keys

- Rogue access point detection, notification
- Secure management interfaces: SNMPv3, SSL and SSH
- Intra-cell blocking to prevent client-to-client snooping

### Easy to Deploy and Manage

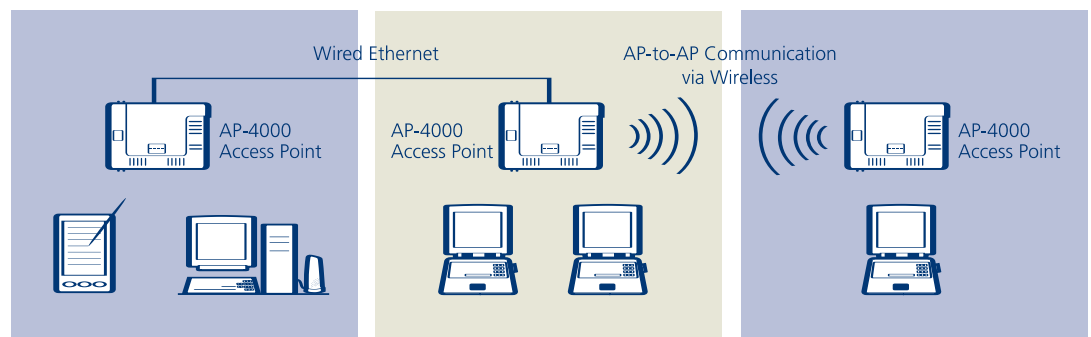
Ease of deployment and integration with the wired network are critical factors in a successful, profitable wireless LAN rollout. ORiNOCO access points excel with key capabilities that simplify WLAN deployment.

- Tools to speed installation and optimization: automatic channel selection, adjustable transmit power, external antenna connectors
- Wireless repeating functionality in areas without Ethernet wiring
- Remote management via SNMP, HTTP and Telnet
- Extensive RADIUS accounting support
- Powerful group configuration, software updates and automatic alerts via Proxim Wavelink Mobile Manager

### Reliable by Design

With over 10 years of experience in the design and manufacture of wireless LANs, Proxim understands that service providers and enterprises require the same uptime and reliability in a wireless network as in a wired network. ORiNOCO access points offer:

- Robust features for enterprise, public access – compared to consumer grade APs
- Automatic reconfiguration of security policy in the event of power loss
- Dual firmware image support – for rollback in the event of software or configuration change problems
- IEEE 802.3af Power-over-Ethernet, plenum rating, built-in Kensington lock and external antenna connectors\*\*



\*\*Not available on all models

# ORiNOCO AP-4000 Specifications

## About Proxim Wireless

Proxim Wireless is a global leader in networking equipment for Wi-Fi and broadband wireless networks. Proxim provides solutions for enterprise applications, last mile access, municipal broadband networks, and cellular backhaul. Product families include ORiNOCO and TeraStar Wi-Fi products; Tsunami, TeraBridge, Gigalink, and TeraOptic Ethernet bridges, and Lynx point-to-point digital radios.

ADDITIONAL FEATURES	
Tri-mode 802.11b, 802.11g and 802.11a support	Pre-configured, simultaneous 802.11b, 802.11g and 802.11a support
Field upgradeable	Software upgradeable to support new standards
IEEE 802.11i and AES encryption	Highest authentication and encryption methods including mutual authentication, message integrity check (MIC), per-packet keys initialization vector hashing and broadcast key rotation
Rogue AP and Client Detection	Detects, alerts and stops unauthorized rogue Access Points and clients in both the 2.4 and 5 GHz bands <sup>1</sup>
Secure Management Interfaces	SNMPv3 and SSL protect against unauthorized AP changes via the management interface
Multiple VLAN Support with different security settings	Up to 16 separate VLANs per radio each able to support a different security setting
Auto configuration via DHCP	Ensures new APs automatically receive correct configuration and prevents security vulnerabilities with deliberate resets
Central management and configuration	Allows centralized management of AP settings including group updates of firmware <sup>1</sup>
Assured Software Upgrades	Guarantees new AP configuration file is valid before deleting current image - dual image support
Quality of Service	Draft IEEE 802.11e along with 802.1p and 802.1q improve performance of video and voice applications
High Output Power	+20 dBm for 802.11b, +18 dBm for 802.11g and 802.11a
Transmit Power Control	Supports settable transmit power levels to adjust coverage cell size
Automatic Channel Selection	Simplifies installation by choosing best possible channel upon installation
RADIUS Support	Extensive RADIUS Accounting support, intra-cell blocking to prevent client-to-client snooping, multiple VLAN support with different security modes
Super Mode	Delivers greater than 30 Mbps throughput for ORiNOCO and Atheros-based clients while simultaneously compatible with non-Atheros clients
Designed for Metro Wi-Fi	AP-to-AP communication for extension of wireless LAN to areas without Ethernet wiring (parking lots, long corridors, etc) for 802.11b, 802.11g and 802.11a
Advanced Filtering Capabilities	IEEE 802.1d bridging with static MAC address filtering, network protocol filtering, Proxy ARP, multicast/broadcast storm threshold filtering, TCP/UDP port filtering, intra-cell traffic filtering, and Spanning Tree support
IEEE 802.3af and AC Power	Decreases installation costs up to \$1000 per AP when Power over Ethernet is available
Integrated diversity 2.4 and 5 GHz antennas with horizontal and vertical polarization	Delivers optimum coverage in any mounting position and excellent performance in high multipath environments
External antenna connectors for 802.11b/g and 802.11a	Allows use of shaped and higher gain antennas to design for most efficient AP placement <sup>2</sup>
Plenum rated	Meets safety and insurance requirements when installed in air spaces
Wi-Fi Certified	Industry certification guarantees interoperability with other Wi-Fi certified clients

## INTERFACE

Wired Ethernet	10/100 base-T Ethernet (RJ-45)
Wireless Ethernet	1 integrated 802.11b/g radio and 1 integrated 802.11a radio
RS-232	Unit configuration

## HARDWARE SPECIFICATION

Memory	32 MB SDRAM; 8 MB Flash
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## PHYSICAL SPECIFICATIONS

Dimensions	11.375 x 9.25 x 2.75 in (29 x 23.5 x 7 cm)
Weight	2.05 lbs (0.93 kg)

## ENVIRONMENTAL SPECIFICATIONS

Temperature	Operating	0°C to 55°C
	Storage	-10°C to 70°C
Humidity	Operating	95% (non-condensing)
	Storage	95% (non-condensing)

## POWER SUPPLY

Types	Integrated module Autosensing 100/240 VAC; 50/60 Hz IEEE 802.3af Active Ethernet for power over Ethernet
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## LEDS

Type:	Power, Ethernet LAN Activity Wireless 802.11b/g Activity Wireless 802.11a Activity
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## MANAGEMENT

- SNMPv1, SNMPv2c and secure SNMPv3 management
- Standard & ORiNOCO traps
- ORiNOCO MIB, Etherlike MIB, 802.11 MIB, Bridge MIB, MIB-II
- TFTP support
- Telnet CLI, Serial Port CLI (no proxy required)
- HTTPS (SSL) server for secure web-based management
- Proxim WaveLink Mobile Manager for group management (not included)
- Syslog
- DHCP Server and Client

## WARRANTY

1 year (on parts and labor)

## PACKAGE CONTENTS

- AP-4000 tri-mode access point with built-in 802.11b/g and 802.11a radios
- Power supply and support for Active Ethernet and IEEE 802.3af
- Software and documentation
- Cable cover and mounting bracket

## RELATED PRODUCTS

WaveLink Mobile Manager, Ekahau Site Survey and RF Prediction Software, ORiNOCO 11a/b/g ComboCard, Dual Band Range Extender Antenna

<sup>1</sup> In conjunction with Proxim WaveLink Mobile Manager

<sup>2</sup> 8670-AU, 8670-EU2 and 8670-US2 do not include external antenna connectors for 802.11a



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For detailed technical specifications, please go to <http://www.proxim.com/products/wifi/ap/ap4000/techspecs.html>

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