



AP-4000 Dual-radio Access Point

### ORiNOCO Wireless LAN

Proxim Wireless' industry-leading ORiNOCO® wireless LAN products deliver enterprise-class 802.11 a/b/g functionality, standards based networking, capacity, security and Quality of Service.

This portfolio includes:

- **ORiNOCO Client Products** – Ultimate flexibility to connect to any Wi-Fi® network
- **ORiNOCO Access Points** – Enterprise-class AP with QoS support and mesh capabilities
- **ORiNOCO Wi-Fi Mesh** – Outdoor and indoor Wi-Fi mesh for service providers and municipalities

**Proxim Wireless** is a global provider of end-to-end broadband wireless systems that deliver the quadruple play. From Wi-Fi to wireless Gigabit Ethernet – our WLAN, mesh, WiMAX and point-to-point products are available through our extensive global channel networks.

### High-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 connectors for increased transmit distance, and maximum system gain on B/G radio for repeating configurations<sup>1</sup>
- 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
- Upgradeable to AP-4000M Mesh AP with ORiNOCO Mesh Creation Protocol Software download

### 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 ProximVision® Network Management System

### 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
- IEEE 802.3af Power-over-Ethernet, plenum rating, built-in Kensington lock and external antenna connectors<sup>1</sup>

<sup>1</sup>External antenna connectors not available on all models.

# ORINOCO AP-4000

## Technical Specifications

### 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>2</sup>
Secure Management Interfaces	SNMPv3 and SSL protect against unauthorized AP changes via the management interface
Multiple VLAN Support	Up to 16 separate VLANs per radio, each able to support multiple authentication and encryption algorithms simultaneously
Multiple BSSID Support	Up to 4 Basic Service Set Identifiers (BSSIDs) per radio
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>2</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 improves 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 selectable 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 communications 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>3</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

ORINOCO AP-4000	
<b>INTERFACE</b>	
WIRED ETHERNET	10/100 base-T Ethernet (RJ-45)
WIRELESS ETHERNET	1 integrated 802.11a/b/g radio; integrated 802.11a radio
RS-232	Unit configuration
<b>HARDWARE SPECS</b>	
MEMORY	32 MB SDRAM; 4 MB Flash
<b>PHYSICAL</b>	
DIMENSIONS	
PACKAGED	11.4 x 9.3 x 2.8 in (289.6 x 236.2 x 71.1 mm)
UNPACKAGED	7.8 x 4.75 x 1 in (198 x 121 x 25 mm)
WEIGHT	
PACKAGED	2.05 lbs (0.929 kg)
UNPACKAGED	0.65 lbs (0.29 kg)
<b>ENVIRONMENTAL</b>	
TEMPERATURE	
OPERATING	0° to 55°C
STORAGE	-20° to 85°C
HUMIDITY	
OPERATING	Max 95% relative humidity (non-condensing)
STORAGE	Max 95% relative humidity (non-condensing)
<b>ELECTRICAL</b>	
POWER SUPPLY TYPES	<ul style="list-style-type: none"> <li>Integrated module</li> <li>Autosensing 100/240 VAC; 50/60 Hz</li> <li>IEEE 802.3af Active Ethernet for power over Ethernet<sup>4</sup></li> </ul>
<b>LEDS TYPES</b>	<ul style="list-style-type: none"> <li>Power, Ethernet LAN Activity</li> <li>Wireless 802.11a/b/g Activity</li> </ul>
<b>MANAGEMENT</b>	<ul style="list-style-type: none"> <li>SNMPv1, SNMPv2c and secure SNMPv3 management</li> <li>Standard &amp; ORINOCO traps</li> <li>ORINOCO MIB, Etherlike MIB, 802.11 MIB, Bridge MIB, MIB-II</li> <li>TFTP support</li> <li>Telnet CLI, Serial Port CLI (no proxy required)</li> <li>HTTPS (SSL) server for secure web-based management</li> <li>ProximVision® NMS for group management (not included)</li> <li>Syslog</li> <li>DHCP Server and Client</li> </ul>
<b>MTBF</b>	100,000 hours
<b>WARRANTY</b>	1-year on parts and labor
<b>PACKAGE CONTENTS</b>	<ul style="list-style-type: none"> <li>AP-4000 Access point with built-in 802.11a/b/g radio (Qty 1)</li> <li>Power supply and support for Active Ethernet and IEEE 802.3af (Qty 1)</li> <li>Software and documentation (Qty 1)</li> <li>Cable cover and mounting bracket (Qty 1)</li> </ul>
<b>RELATED PRODUCTS</b>	ProximVision Network Management System, Proxim Ekahau Site Survey and RF Prediction Software, ORINOCO 11a/b/g ComboCard, Dual Band Range Extender Antenna, Active Ethernet Injector, ServPak (US/CAN only)

<sup>1</sup>In conjunction with ProximVision NMS.

<sup>2</sup>8675-AU, 8675-EU2 and 8675-US2 do not include external antenna connectors.

<sup>4</sup>Active Ethernet injector sold separately.

For detailed technical specifications, please go to <http://proxim.com/products/enterprise-wireless-lan-wi-fi-mesh/orinocor-ap-4000>

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