



RADIO	Dual Radio Access Point with integrated radios: 802.11a + 802.11b/g								
DATA RATES SUPPORTED	802.11b	1, 2, 5.5, 11							
	802.11g	1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48, and 54 Mbps							
	802.11a	6, 9, 12, 18, 24, 36, 48, 54 Mbps							
NETWORK STANDARD	IEEE 802.11a IEEE 802.11b or IEEE 802.11g								
UPLINK	Autosensing 802.3 10/100BASE-T Ethernet								
FREQUENCY BAND	802.11b/g	2.412 to 2.462 GHz (FCC)							
		2.412 to 2.472 GHz (ETSI)							
2.412 to 2.484 GHz (TELEC)									
2.412 to 2.462 GHz (Taiwan)									
2.412 to 2.462 GHz (Singapore)									
2.412 to 2.462 GHz (S. Korea)									
802.11a	5.15 to 5.35 GHz (FCC UNII 1 and UNII 2), 5.725 to 5.85 GHz (FCC UNII 3/ISM)								
	5.15 to 5.35 GHz and 5.47 to 5.725 GHz (ETSI)								
	5.15 to 5.25 GHz (TELEC)								
	5.15 to 5.25 GHz and 5.725 to 5.825 GHz (Singapore)								
	5.25 to 5.35 GHz and 5.725 to 5.85GHz (Taiwan)								
	5.725 to 5.825 GHz (S. Korea)								
NETWORK ARCHITECTURE TYPE	Infrastructure								
WIRELESS MEDIUM	802.11b or 802.11g	Direct sequence spread spectrum (DSSS); Orthogonal Frequency Division Multiplexing (OFDM)							
	802.11a	Orthogonal Frequency Division Multiplexing (OFDM)							
MEDIA ACCESS PROTOCOL	Carrier sense multiple access with collision avoidance (CSMA/CA)								
MODULATION	OFDM	BPSK @ 6 and 9 Mbps							
		QPSK @ 12 and 18 Mbps							
		16-QAM @ 24 and 36 Mbps							
64-QAM @ 48 and 54 Mbps									
DSSS	DBPSK @ 1 Mbps								
	DQPSK @ 2 Mbps								
	CCK @ 5.5 and 11 Mbps								
OPERATING CHANNEL	2.4 GHz Band	802.11b: ETSI: 13; Americas: 11; TELEC (Japan): 14 802.11g: ETSI: 13; Americas: 11; Japan (TELEC): 14 CCK, 13 OFDM							
	5 GHz Band	FCC: 12 ETSI: 19 Japan (TELEC): 4 Singapore: 9 Taiwan: 8 S. Korea: 4							
NON-OVERLAPPING CHANNELS	Fifteen (FCC only)								
RADIO SPECIFICATIONS	The following tables show typical RF performance values for FCC-certified products (values may differ for products certified in other regulatory domains)								
RF PERFORMANCE	802.11a RF Performance								
	802.11a Data Rates (Mbps)	54	48	36	24	18	12	9	6
	Tx Power (dBm)	16	17	18	18	18	18	18	18
	Receiver Sensitivity (dBm)	-70	-73	-78	-82	-84	-85	-86	-87
	Antenna Gain (dBi)	0 (integrated diversity antennas; 5.15–5.85 GHz)							

ORiNOCO AP-4000 Technical Specifications

RADIO SPECIFICATIONS RF PERFORMANCE	802.11b/g RF Performance												
		G-only Rates								B-only Rates			
	802.11b/g Data Rates (Mbps)	54	48	36	24	18	12	9	6	11	5.5	2	1
	Tx Power (dBm)	17	18	18	18	18	18	18	18	20	20	20	20
	Receiver Sensitivity (dBm)	-70	-73	-79	-82	-85	-88	-90	-91	-89	-91	-92	-93
COMPLIANCE STANDARDS	Antenna Gain (dBi)	1 (integrated diversity antenna module; 2.4–2.5 GHz)											
	Safety	UL 60950 CSA 22.2 No. 60950-00 IEC 60950 3rd Ed (1999)											
	Radio Approvals	FCC Part 15.401-15.407 RSS-210 (Canada)											
	Antenna Approvals	EN301.893 EN300.328 EN301.489-1 EN301.489-17 EN50371 ARIB STD-T71, ARIB-STD 33, ARIB-STD 66 FCC 15.247 RSS-210											
	EMI and Susceptibility (Class B)	FCC Part 15.107 ICES-003 (Canada)											
	Security	802.1X and TKIP WPA AES and 802.11i ready											
	Network Standard	IEEE 802.11b IEEE 802.11g IEEE 802.11a											
	Other	FCC Bulletin OET-65C Wi-Fi Alliance Certification RSS-102 IEEE 802.3af											
	SNMP COMPLIANCE	ORiNOCO; rfc1213; rfc1643; SNMPv2c; 802.11i-D3; IANAifType-MIB; MIB802											
	ANTENNA	2.4 GHz											
SECURITY ARCHITECTURE CLIENT AUTHENTICATION		Dual on-board antennas to support antenna and polarization diversity:											
		One 3dBi vertically polarized omni antenna, 360° horizontal and 40° vertical beamwidths											
		One 2dBi horizontally polarized omni antenna, 360° horizontal and 30° vertical beamwidths											
	Certified with	Proxim 1086-REA Proxim 1086-DA24-4 Proxim 1086-OA24-5 Proxim 1086-PA24-8.5 Proxim 1086-PA24-9.5											
		5 GHz											
		Dual on-board antennas to support antenna and polarization diversity:											
		One 3dBi vertically polarized omni antenna, 360° horizontal and 40° vertical beamwidths											
		One 2dBi horizontally polarized omni antenna, 360° horizontal and 30° vertical beamwidths											
	Certified with	Proxim 1086-REA Proxim 1086-PA50-7											
		2.4 and 5 GHz											
		Dual band (2.4 and 5GHz) external Range Extender Antenna for optimum antenna placement, 1086-REA											
SECURITY ARCHITECTURE CLIENT AUTHENTICATION	Authentication	802.1X support including PEAP, EAP-TLS, EAP-TTLS EAP-SIM, and other EAP methods that conform to RFC 3748 to yield mutual authentication and dynamic per-user, per-session encryption keys RADIUS-based MAC address MAC address control list											
	Encryption	802.11i support for CCMP/AES keys of 128 bits (WPA2) TKIP encryption enhancements (for WEP) with key hashing (per-packet keying) and broadcast key rotation (WPA) Support for WEP keys of 64 and 128 bits											
	Message Authentication:	802.11i AES message authentication with 128 bit keys TKIP with 128 bit Michael Message Integrity Check											

ORiNOCO AP-4000 Technical Specifications

INTRUSION DETECTION	Rogue AP and client detection Detect switch port of rogue access point when used in conjunction with Wavelink Mobile Manager Detect MIC intrusion attacks	
STATUS LEDS	Four indicators on the top panel indicate power, wireless traffic, Ethernet traffic, and error conditions	
REMOTE CONFIGURATION SUPPORT	DHCP, Telnet, HTTP, TFTP, Boot P, and SNMP	
LOCAL CONFIGURATION	RS-232 Serial port, DB9 Female	
DIMENSIONS	Packaged	11.375 x 9.25 x 2.75 inches (289 mm x 235 mm x 70 mm)
	Unpackaged	7.8 x 4.75 x 1 inches (198 mm x 121 mm x 25 mm)
WEIGHT	Packaged weight	2.05 lbs (.92 kg)
	Unpackaged weight	.65 lbs (.29 kg) AP-only, .45 lbs (.20 kg) for power supply
ENVIRONMENTAL	Operating	0° to 55°C, 5-95% humidity non-condensing @ 5° to 55°C
	Storage	-20° to 85°C, 5-95% humidity non-condensing @ 5° to 85°C
PROCESSOR	220MHz MIPS 4000 processor	
SYSTEM MEMORY	16 Mbytes RAM 8 Mbytes FLASH	
INPUT POWER REQUIREMENTS	90 to 240 VAC ±10% (power supply) 48 VDC ±10% (device)	
POWER DRAW	10 watts, RMS	
WARRANTY	One year	
WI-FI CERTIFICATION	View Wi-Fi Interoperability Certificate for ORiNOCO AP-4000	
PART NUMBERS	8670-US	ORiNOCO AP-4000 US FCC-MU; with Middle and Upper Bands only for 802.11a, includes external antenna connectors for 802.11a and 802.11b/g for FCC countries
	8670-US2	ORiNOCO AP-4000 US FCC-LMU; with Lower, Middle and Upper Bands for 802.11a (no antenna connector for 802.11a) for FCC countries
	8670-AU	ORiNOCO AP-4000 AU FCC-LMU; certified for Australia; Lower, Middle and Upper Bands for 802.11a; includes external antenna connectors for 802.11b/g
	8670-AU2	ORiNOCO AP-4000 AU FCC-LMU; certified for Australia; Middle and Upper Bands for 802.11a; includes external antenna connectors for 802.11a and 802.11b/g
	8670-BR	ORiNOCO AP-4000 BRAZIL-L; certified for Brazil; includes external antenna connectors for 802.11b/g and 802.11a
	8670-JP	ORiNOCO AP-4000 JP MKK; certified for Japan; includes external antenna connectors for 802.11b/g and 802.11a
	8670-SG	ORiNOCO AP-4000 UK SG-LU; certified for Singapore; includes external antenna connectors for 802.11b/g and 802.11a
	8670-CN	ORiNOCO AP-4000 CN ASIA; certified for China; includes external antenna connectors for 802.11b/g and 802.11a
	8670-SK	ORiNOCO AP-4000 SK ASIA; certified for South Korea; includes external antenna connectors for 802.11b/g and 802.11a
	8670-TW	ORiNOCO AP-4000 TW ASIA; certified for Taiwan; includes external antenna connectors for 802.11b/g and 802.11a
	8670-EU	ORiNOCO AP-4000 EU ETS-L; with Lower Band only for 802.11a, includes external antenna connectors for 802.11a and 802.11b/g
	8670-EU2	ORiNOCO AP-4000 EU ETS- with Lower and Middle Bands for 802.11a, includes external antenna connectors for 802.11b/g and 802.11a; certified for Finland, Germany and Netherlands only
	8670-UK	ORiNOCO AP-4000 UK ETS-LM; with Lower and Middle bands, includes external
Customers are responsible for verifying approval for use in their country. Not all regulatory domains have been approved		



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¹ To achieve 802.11i security, the EAP method that is used must conform to both RFC 3748 and IETF draft-walker-ieee802-req-07 (Submitted as an Informational RFC). In RFC 3748, EAP- MD5-Challenge (Section 5.4), One-Time Password (Section 5.5) and Generic Token Card (Section 5.6), are non-compliant with the requirements specified in IETF draft-walker-ieee802-req-07 and thus do not support the 802.11i security claims when used with 802.11i.