# **BreezeNET PRO.11 Wireless LAN**

# Hopping the spectrum

BreezeNET PRO.11's superior range, coverage and flexibility make it the ideal wireless infrastructure solution for enterprises and campus communities whose daily operation depends on reliable network connectivity and high-speed Internet access.

The BreezeNET family of products provides efficient, cost effective and consistent building-to-building, inbuilding and Internet networking with the added-benefit of seamless roaming, introducing a mobile dimension to enterprise-wide communications.

Providing an indoor/outdoor wireless infrastructure for high-speed network access, BreezeNET PRO.11 leverages Frequency Hopping Spread Spectrum technology, which is optimized for high density and noisy environments, enabling uninterrupted mobile connectivity to a vast number of simultaneous users.

Featuring plug-and-play network installation, BreezeNET is immediately deployed and scales easily to the changing needs of the network environment.

# **Product Highlights**

BreezeNET PRO.11 delivers a comprehensive range of product features, ensuring fast, consistent and reliable networking services, including...

- Wide range of indoor and outdoor products.
- High speed roaming up to 90 km/h (60 mph).
- Data rate of up to 3 Mbps, with an aggregate backbone data rate of up to 15 Mbps using a multicell configuration.
- Outdoor range of 50 km (30 miles) and indoor range of 150 m (500 ft).
- Load balancing between co-located access points.
- Compatibility with any standard Ethernet port.
- Form factor PCMCIA card with retractable diversity antennas.
- IEEE 802.11 and IEEE 802.3 compliance.
- Wired Equivalent Privacy (WEP) using the RC4 encryption algorithm as defined in the IEEE 802.11 standard.
- O DHCP client.

# **BreezeNET PRO.11 System Components**

AP-10 / AP-10D Access Point	Connects directly to the 10Base-T Ethernet backbone using a RJ-45 connector and transmits data across the network between the wired LAN and wireless users.
SA-PCR / SA-PCD PC Card	Available with retractable or detached antennas for use with hand-held devices.
SA-10 / SA-10D and SA-40 / SA-40D Station Adapter	Connects to any RJ-45 10Base-T Ethernet port to provide universal client adaptation and plug-and-play wireless connectivity.
WB-10 / WB-10D Workgroup Bridge	Connects remote Ethernet networks, wired or wireless, to an AP-10 Access Point, enabling high density network traffic.

BreezeNET PRO.11 - High-speed, high-density networking

BreezeCOM and Floware unite











WB-10

SA-PCR

n

## **Specifications**

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AP-10, SA-10, SA-40, WB-10, & Model D bridges	SA-PCR / SA-PCD
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Data rate	Up to 3 Mbps	Up to 3 Mbps
Net throughput	Up to 1.9 Mbps	Up to 1.6 Mbps
Aggregate	Over 15 Mbps (overlapped cells)	

Range		
Integrated antennas	900 m (3,000 ft)	600 m (2,000 ft)
External antennas	up to 5 km ETSI, 8 mi US/FCC	
With amplifiers	up to 50 km (30 mi)*	
Office environment	150 m (500 ft)	150 m (500 ft)
High speed roaming	Up to 90 km/h (60 mph)	Up to 90 km/h (60 mph)
No. of APs per wired LAN	Unlimited	
Max. no. of collocated cells (APs)	15	
Load sharing support	Yes	Yes

#### Wired LAN interface

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Compliant with	Ethernet/IEEE 802.3	Type II slot
Physical interface	10BaseT	Type II slot
Connector type	RJ-45	Type II slot
Networks Operating Systems	All	Win 95, 98, ME, NT, CE, CD, 2000, XP NetWare, Linux, DOS
Network Drivers		NDIS 4, NDIS 3, ODI

Compliant with IEEE 802.11 Compliant with IEEE 802.11 Wireless LAN Interface

#### **Radio Specifications**

Radio Specifications		
Modulation Type	Frequency Hopping	Frequency Hopping
	Spread Spectrum	Spread Spectrum
Frequency Range	2.4 GHz - 2.4835 GHz ISM band	2.4 GHz - 2.4835 GHz ISM band
Antenna System	Dual diversity	Dual diversity
Transmitted Power		
Integrated antennas	10 mW or 100 mW (20 dBm) EIRP	100 mW (20 dBm) EIRP
External antennas	50 mW (17 dBm) at the connector	
	Up to 36 dBm EIRP for 24 dBi antenna	
Sensitivity (at 1/2/3 Mbps)	-81/-75/-67 dBm	-81/-75/-67 dBm
Modulation	2, 4, 8 Multilevel GFSK	2, 4, 8 Multilevel GFSK
Demodulation	DSP based w/adaptive	DSP based w/adaptive
	equalization	equalization
Approvals of Compliance	FCC part 15, ETS 300-328,	FCC part 15, ETS 300-328,
	UL, UL/C, TUV/GS, CE	UL, ÚL/C, TUV/GS, CE

### Management

Configuration and Setup	Local monitor port (serial RS-232) and SNMP	PC-based software
Site Survey	Local monitor port (serial RS-232)	PC-based software
LED indicators	Power on, Wired LAN activity, Wireless LAN synchronization, Wireless LAN signal quality/load	Link status, data traffic
SNMP management	Yes	n/a
S/W upgrade	Yes, using TFTP download	Yes, using PC

#### **Electrical**

External power supply	100 V - 250 V, 50 - 60 Hz 0.5 A	From PCMCIA slot
Input Voltage	5 VDC	5 VDC
Power Consumption	1.5 A (peak)	TX: 360 mA/RX: 285 mA (peak)
Power Save Mode		Avg. TX & RX less than 30 mA

### Size & Weight

Dimensions (w/o antennas)	13 cm x 8.6 cm x 3.4 cm (5.1" x 3.4" x 1.35")	Standard PCMCIA Type II
Weight	0.4 kg (0.9 lb)	32g (1.1 Oz)

Enironmental		
Operating Temperature	0°C - 40°C (32°F - 105°F)	0°C - 40°C (32°F - 105°F)
Operating Humidity	5% - 95% non condensing	5% - 95% non condensing

<sup>\*</sup> dependent on country regulations



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