BreezeACCESS® 900

Broadband Access for Mobile Public Safety and Foliage-Dense Areas

Supporting both fixed and mobile subscribers, BreezeACCESS 900 offers operators important opportunities for additional revenue sources. Designed to provide coverage in areas with many obstructions such as trees that block line-of-sight, BreezeACCESS 900 is an effective, real-time mobile and fixed communication system for use by public safety agencies. Whether trying to connect police cars, ambulances, fire trucks, or other emergency vehicles to the public safety network, or wanting to provide a network connection to residential users in areas where signals might otherwise be obstructed, BreezeACCESS 900 is the ideal solution.

Product Highlights

To ensure fast, consistently reliable data and voice services, the BreezeACCESS 900 features a comprehensive range of technology and product benefits including:

More customers more revenues

In many areas, reaching potential customers with broadband wireless can be greatly limited due to dense foliage, which obstructs the broadband signal. BreezeACCESS 900 immediately increases the percentage of servable customers, resulting in the ability to tap a significant new source of revenue.

Minimal capital investment:

Even better, BreezeACCESS 900 allows existing BreezeACCESS-based operators to serve additional customers with no modification of their base station sites at all. When deployed using the cell extender (CX) option, BreezeACCESS 900 requires minimal capital investment while fully leveraging existing BreezeACCESS deployments in both the 2.4 and 5 GHz bands.

Mobile public safety option:

BreezeACCESS 900 is also specially designed to support mobile subscribers. Secure, robust and reliable mobile access over metro or rural areas can be created with 10 times less infrastructure than mesh systems.

Field proven features:

Designed with field-proven features, such as hybrid digital modulation to achieve superior range, reliability, and flexibility, BreezeACCESS 900 enables carriers to customize frequency operation away from sources of interference. It also features variable antenna polarity, as well as a comprehensive built-in spectrum analyzer utility for site surveys, network planning, system configuration and troubleshooting.

The benefits of belonging to Complete Spectrum™ Solution:

Part of Complete Spectrum solution, the BreezeACCESS 900 integrates seamlessly with existing BreezeACCESS deployments and leverages the capacity of BreezeACCESS 2.4 and 5 GHz networks. As a result, operators can significantly increase their revenues by growing their networks and subscriber base with little additional investment.

Additional Product Highlights

- CX architecture to leverage operational BreezeACCESS networks
- Range of 2-3 miles in NLOS and 1/2 mile through very heavy foliage
- Customizable frequency agility and time diversity for unmatched interference immunity
- Excellent sensitivity for longer links and better foliage penetration
- Spectrum analyzer utility and full LED diagnostics for easy antenna alignment and association count
- Ethernet port for local subscriber acquisition
- Remote telnet, SNMP, or local serial port management
- Integrated 16 dBI antenna on backhaul radio for faster deployment
- External antennas on access units for flexible deployment of coverage
- Mobile subscriber options designed for in-vehicle installation

Specifications

900 MHz Radio

Frequency	902- 928 MHz ISM band		
Operation mode	Time Division Duplex (TDD)		
Radio access method	FH-CDMA		
Standard compliance	FCC Part 15.247		
Channel bandwidth	2 MHz		
Central frequency resolution	1 MHz		
SU antenna	10 dBi, 65° x 65° VPOL/HPOL		
AU antenna	13 dBi, 90° x 16°, Sector - Dual polarity		
	10 dBi, 65° x 65°, Flat Panel (H/V)		
	9 dBi Omni, 360° x 10°, VPOL		
Maximum input power (at antenna port)	-20 dBm		
Output power (at antenna port)	23 dBm typical		
Gross bit rate	1, 2, 3 Mbps	SU-I/ID	AU-E
Sensitivity, typical (dBm at antenna port, BER 10E-6)	Gross Rate	Sensitivity	Sensitivity
	1 Mbps	-90 dBm	-92 dBm
	2 Mbps	-84 dBm	-87 dBm
	3 Mbps	-77 dBm	-80 dBm
Modulation	GFSK modulation, 2, 4, 8 level (1, 2, 3 bits/symbol)		
Symbol rate	1 Msymbol/sec		

Data Communication

Standard compliance	IEEE 802.3 CSMA/CD
VLAN support	Based on IEEE 802.1Q
Traffic prioritization	Based on IEEE 802.1p, IP ToS according to RFC791

Configuration and Management

Management	Via Telnet, SNMP, TFTP
SNMP agents	SNMP ver 1, MIB II, Bridge & Private MIBs
Security	RC4 WEP option (encryption of the authentication process)
	VLAN according to IEEE 802.1Q
	IP address filtering for management
Authentication and accounting	RADIUS client in the SU according to RFC 2865 and 2866
Allocation of IP parameters	Configurable or automatic (DHCP client)

Standards Compliance, General

EMC	FCC Parts 15.203,15.204,15.207,15.209	
Safety	IEC 60 950 US/C (TUV), FCC 1.1307	
Environmental	Operation	ETS 300 019 part 2-3 class 3.2E for indoor units
		ETS 300 019 part 2-4 class 4.1E for outdoor units
	Storage	ETS 300 019-2-1 class 1.2E
	Transportation	ETS 300 019-2-2 class 2.3
Lightning protection (CX antenna connections)	EN 61000-4-5, Class 3 (2kV)	
Radio	FCC part 15.247, 15.203	

Subscriber Unit Environmental

Operating temperature	0°C to 40°C (32°F to 104° F)
Operating humidity	5%-95% non condensing

Subscriber Unit Mechanical

Metal box, desktop or wall mountable	Dimensions (cm)	Weight (kg)
	15 x 8.7 x 3.7	0.35

Subscriber Unit Electrical

External power supply; AC	100-240 Vr.m.s.,47-63 Hz
DC power output	5.1V, 2A max.

Cell Extender Stand-Alone AU Specifications

Refer to the 2.4 GHz BreezeACCESS II specifications on the 2.4 GHz side and for the stand alone AU. Subscriber 900 MHz specifications are as above.

IF interface (2.4 GHz and 900 MHz ODU)

IF frequency	440 MHz
IF cable impedance	50 ohm
Maximum IF cable attenuation	15dB
Maximum IF cable DC Resistance	1.5 ohm

Environmental

Operating temperature	Interface unit	-10°C to 55°C (-14°F to 131°F)
	Outdoor unit	-40°C to 55°C (-40°F to 131°F)
Operating humidity	Outdoor unit	100% RH Condensing

Mechanical

	Dimensions (cm)	Weight (kg/Lbs)
Interface unit	Metal box, wall mountable	28 x 23 x 11 5.9 / 13
Outdoor unit	Metal box, 2"-3" pole mountable	30.6 x 30.6 x 7. 2 2.5 / 5.5

Electrical

110-240 VAC, 50-60Hz, 1.4A max

Features and specifications are subject to change without further notice.

AIRLINX Communications, Inc.
Box 253
Greenville, NH 03048
E-mail: sales@airlinx.com
Tel: (888) 224-6814
Fax: (603) 878-0530