

Specifications

Radio			
Frequency Range	2.4 - 2.4835 GHz ISM band (ETSI, FCC) 2.4 - 2.497 GHz (Japan)		
Radio Type	Direct Sequence Spread Spectrum (DSSS)		
Wireless LAN Standards	Compliant with IEEE 802.11b HR		
Selectable sub Channels	FCC	1-11	
	ETSI	1-13	
	Japan TELEC	1-14	
	France	10-13	
Output Power (at the antenna port)	FCC	-4, -2, 4, 6, 12, 14, 20, 24	(dBm)
	ETSI	-4, -2, 4, 6, 12, 14	(dBm)
	Japan TELEC	-4, -2, 4, 6, 12, 14	(dBm)
Sensitivity (BER 1E10-6)	Data Rate	Sensitivity	Modulation
	11 Mbps	-85 dBm	256 CCK
	5.5 Mbps	-88 dBm	16 CCK
	2 Mbps	-90 dBm	DQPSK
	1 Mbps	-93 dBm	DBPSK
Processing Gain	10.4 dB Nominal		
Integrated Antenna Type	Flat Panel 16 dBi, 20° Vertical /Horizontal		

Range	
Europe/ ETSI (20 dBm EIRP)	Up to 10 km
US FCC	Up to 25 km (15 miles)

Security	
Authentication and Data Encryption	40-bit RC4 WEP

Configuration and Management							
Management and Setup	SNMP based enhanced windows platform configuration utility						
Site Survey Tool	Integrated into the configuration utility						
SNMP Agents	MIB II, Bridge MIB, DS.11 Private MIBs						
Software Upgrade	Simultaneous multiple units software upgrade using the configuration utility TFTP download						
LED Indicators	<table border="1"> <tr> <th>Indoor Interface Unit</th> <th>Outdoor Unit</th> </tr> <tr> <td>Power status</td> <td>Power Status</td> </tr> <tr> <td>End-to-end Ethernet status</td> <td>10-LED display bar: RSSI in the RB/ Load Gauge in BU Ethernet Status / Traffic Wireless Link Status / Traffic</td> </tr> </table>	Indoor Interface Unit	Outdoor Unit	Power status	Power Status	End-to-end Ethernet status	10-LED display bar: RSSI in the RB/ Load Gauge in BU Ethernet Status / Traffic Wireless Link Status / Traffic
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Power status	Power Status						
End-to-end Ethernet status	10-LED display bar: RSSI in the RB/ Load Gauge in BU Ethernet Status / Traffic Wireless Link Status / Traffic						

Outdoor Unit-to-Indoor Unit Communication	
Cable Type	Cat 5 FTP 4x2x24 Double Jacket
Maximum Cable length between indoor and outdoor units	90 m (280 feet)

Interfaces	
RF (antenna) connector in the outdoor unit	N-Type jack, lightning protected
Baseband (indoor-to-outdoor units)	Outdoor units: Shielded RJ-45 with special water proof sealed cap Indoor units: Shielded RJ-45
Ethernet	Indoor units: 10BaseT, (RJ-45) with 2 embedded LEDs

Electrical	
Power Consumption	110 / 220 V 500 / 250 mA

Mechanical Dimensions		
Outdoor Unit	30.5 x 12 x 5 cm	12 x 4.7 x 2 in
Outdoor Unit with Integrated Antenna	30 x 30 x 7.2 cm	12 x 12 x 2.8 in
Indoor Unit	15.4 x 8.4 x 5.6 cm	6.1 x 3.3 x 2.2 in

Environmental	
Operating Temperature	Indoor unit: 0°C to 40°C Outdoor unit: -40°C to 55°C
Operating Humidity	5% to 95% non-condensing. Outdoor units are weather protected

Standards Compliance, General	
EMC	EN 300-385, FCC Part 15
Safety	EN 60950, UL 1950
Environmental	ETS 300 019, Bellcore GR-63-CORE
Wireless LAN Standards	ETSI ETS 300 328, FCC Part 15

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Wireless Access Solutions

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ACCESS anywhere

BreezeNET® DS.11

Wireless Outdoor Bridging

The BreezeNET DS.11 Wireless Outdoor Bridge offers a whole new dimension in reliable, high performance, wireless connectivity. Bridging campuses, buildings or any remote sites, BreezeNET DS.11 Wireless Outdoor Bridge provides the ideal point-to-point and point-to-multipoint solutions in the unlicensed 2.4GHz ISM band.

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Highlights

- Indoor-outdoor architecture for maximum range and reliability
- Optimized for outdoor building-to-building applications
- Dynamic output power range for maximum distances in all regulatory domains (-4 dBm to +24 dBm)
- Up to 25 km (15 miles) distance in FCC and 10 km in ETSI @ 11 Mbps
- Extremely high sensitivity
- RC4 40-bit key WEP encryption
- Extensive LED diagnostics including 10-LED RSSI bar display for easy antenna alignment
- IEEE 802.11b and 802.3 compatible
- User friendly configuration and management utility

Optimized for Outdoor Applications

The unique indoor-outdoor architecture of the BreezeNET DS.11 Wireless Outdoor Bridge enables unprecedented range and capacity. The outdoor unit, containing the radio, is placed together with the antenna. The indoor and outdoor units are connected at baseband frequencies, allowing the use of a low cost, easy to install UTP cable with no signal loss.

Fast and Reliable

The BreezeNET DS.11 Wireless Outdoor Bridge accommodates network links at up to 11 Mbps, covering distances of up to 25 km (15 miles) in diverse environments, unaffected by adverse weather conditions such as fog, rain, snow and wind. Dynamic output power range allows the unit to maximize range in a variety of regulatory domains.

Cost Effective

Comparable in functionality with higher priced wireless bridging products, the BreezeNET DS.11 Wireless Outdoor Bridge product uses low cost cabling and connects to inexpensive enterprise Ethernet switches and routers. Easy installation, network management and use of the unlicensed spectrum achieve low cost of ownership.

Standards Compliant

The BreezeNET DS.11 Wireless Outdoor Bridge adheres to the IEEE 802.11b standard for high speed wireless LANs, is Wi-Fi compliant and is interoperable with other 802.11b compliant products. It complies with both FCC and ETSI regulations for wireless point-to-point and point-to-multipoint communications in the unlicensed 2.4GHz ISM band.

The Products

A BreezeNET DS.11 Wireless Outdoor Bridge solution includes a base unit and one or more remote bridges. Both the base unit and the remote bridge are comprised of an indoor unit and an outdoor unit. The outdoor unit is available with an integrated antenna, or with an RF connection to an external antenna.

BU-DS.11 Base Unit is used to connect the central site to up to 128 remote sites. The base unit connects directly to a 10Base-T Ethernet network via an RJ-45 connection.

RB-DS.11 Remote Bridge connects a remote Ethernet network to the central site via the base unit and can handle a network of up to 1024 stations. The remote bridge connects to the Ethernet network via a 10Base-T RJ-45 connection.

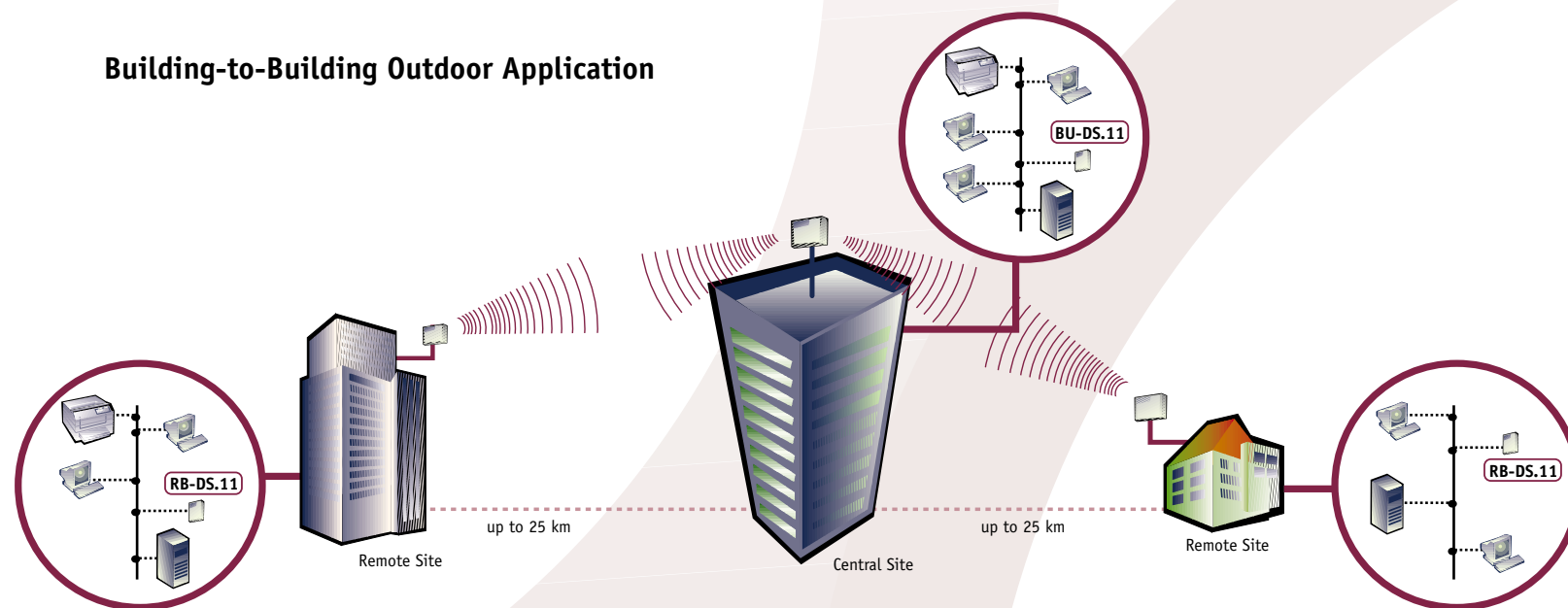
Security

The BreezeNET DS.11 Wireless Outdoor Bridge features advanced security architecture to prevent eavesdropping and hacking when using the wireless network. Wired equivalent privacy (WEP), using RC4 40-bit key encryption algorithm as defined in the IEEE 802.11 standard, enable users to benefit from high-performance connectivity with data transfer at privacy levels equivalent to those of wired systems.

Effortless Installation

The indoor-outdoor architecture of the BreezeNET DS.11 Wireless Outdoor Bridge allows for quick deployment by a single installer. The unit is easily mounted and cables are simple to connect. Antenna alignment is achieved using a 10 LED Radio Signal Strength Indicator bar display, located in the outdoor unit. Implementation of a DHCP client allows for dynamic allocation of IP addresses. A remote configuration utility eliminates the need to locally set parameters.

Building-to-Building Outdoor Application



Indoor Unit



Outdoor Unit