

# NetLink D 2411 Wireless Bridging

## Secure and robust airwaves

The NetLink family of products provides efficient, cost effective, secured point-to-point and point-to-multipoint networking optimized for building-to-building connectivity, covering distances of more than 120 km (74 miles) in harsh and adverse environments and weather conditions.

NetLink is the ideal solution for connecting buildings, campuses, industrial zones and remote sites, ensuring enterprise and community-wide network connectivity.

Providing robust outdoor wireless infrastructure for optimal range and capacity, the NetLink D 2411 leverages Direct Sequence Spread Spectrum technology, which is ideally suited for fast and consistent building-to-building connectivity, optimizing services to broadband applications in co-located fixed LAN environments.

2411 is designed to transmit in the unlicensed 2.4GHz bands. It combines low-cost cabling, easy installation, rapid scalability and seamless integration into existing Ethernet networks to ensure maximum cost efficiency.

Moreover, quick and easy network installation and SNMP remote management, enables rapid deployment of the D 2411 as well as simple expansion in relation to the changing needs of the network environment. NetLink ensures uncompromising security to prevent hacking, data theft and hostile intrusions. 128 bit WEP keys, MAC Address based association control and proprietary scrambling are just part of a full security package that is designed to protect the wireless link.

## Product Highlights

NetLink D 2411 delivers a comprehensive range of product features, ensuring fast, consistent and reliable networking services, including:

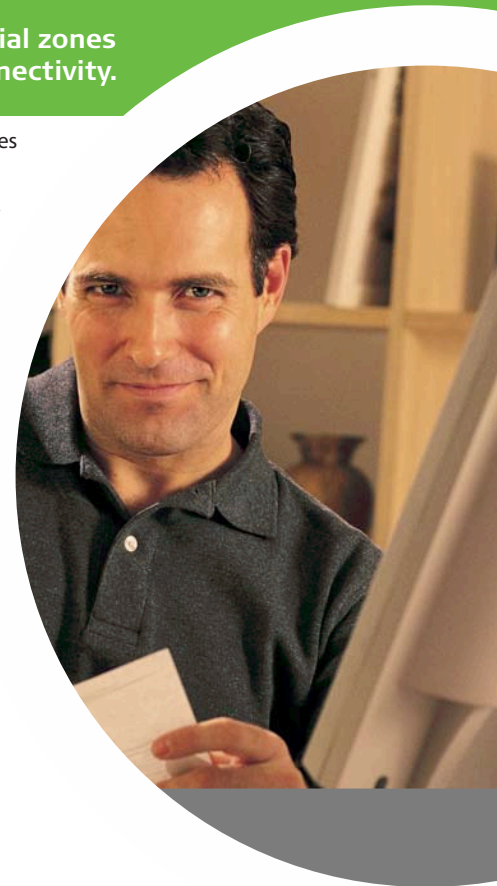
- Outdoor architecture ensures unprecedented performance and reliability
- Data rates of up to 11 Mbps
- Range of more than 120 km (74 miles)
- Multi Layer Security Package including: 128 bit WEP key encryption, MAC Address based association control, proprietary scrambling of data and more
- VLAN support
- Full LED diagnostics, featuring 10-LED RSSI bar display for easy antenna alignment
- Built-in remote diagnostics, which minimize maintenance and maximize savings
- IEEE 802.11b, IEEE 802.3

## NetLink D 2411 System Components

<b>BU-D 2411 Base Unit</b>	Connects directly to the 10Base-T Ethernet backbone and links up to 128 remote sites to the central network point.
<b>RB-D 2411 Remote Bridge</b>	Connects directly to the 10Base-T Ethernet LAN and links the remote Ethernet LAN to the central point via the Base Unit, servicing up to 1024 stations.

## NetLink D 2411

Record-breaking REACH, highly RELIABLE and SECURE



## Specifications

### Radio

Frequency Range	2.4 - 2.4835 GHz ISM band (ETSI, FCC)		
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	1-13	
	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)	<b>Data Rate</b>	<b>Sensitivity</b>	<b>Modulation</b>
	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	64 or 128bit RC4 WEP
Scrambling	Proprietary
Authorization	MAC address based association control

### 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	<b>Indoor Interface Unit</b>	<b>Outdoor Unit</b>
	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 outdoor unit and end-user equipment	100 m (328 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	110VAC, 25W
	220VAC, 24W

### 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	16 x 9 x 6cm	(6.3 x 3.5 x 2.3 in)

### Environmental

Operating Temperature	Indoor unit: 0°C to 40°C (32°F to 104°F)
	Outdoor unit: -40°C to 55°C (-40°F to 131°F)
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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