



## Outdoor DS11 Wireless Series Ethernet

### Key Features

- ▶ Optimised for outdoor point-to-multipoint applications
- ▶ Architecture supports maximum reliability and range - up to 10km at 11Mbps
- ▶ Direct Sequence Spread Spectrum radio technology
- ▶ Dynamic output power range for maximum distances in all regulatory domains (-4 dBm to 24 dBm)
- ▶ Secure communications using RC4 40-bit key Wired Equivalent Privacy (WEP) encryption
- ▶ Extensive diagnostics, including a 10-LED bar display for ensuring radio signal strength and antenna alignment on all remote bridges
- ▶ IEEE 802.11b and 802.3 compatible
- ▶ Includes user-friendly configuration and management utility

### Overview

The Outdoor DS11 Wireless Series Ethernet offers a whole new dimension in reliable, high performance, wireless connectivity. Bridging campuses, buildings or any remote sites, the Outdoor DS11 provides the ideal point-to-point and point-to-multipoint solutions in the unlicensed 2.4GHz ISM band.

### Optimised for Outdoor Application

The unique indoor-outdoor architecture of the Outdoor DS11 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 Outdoor DS11 accommodates network links at up to 11 Mbps, covering distances of up to 25km (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 maximise range in a variety of regulatory domains.

## **Standards Compliant**

The Outdoor DS11 adheres to the IEEE 802.11b standard for high speed wireless LANs, is Wi-Fi compliant and is interoperable with over 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.

## **Security**

The Outdoor DS11 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 Outdoor DS11 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

## **Cost Effective**

Comparable in functionality with higher priced wireless bridging products, the Outdoor DS11 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.

## **The Products**

An Outdoor DS11 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.

## Specifications

### *Radio:*

**Distance (Maximum)** - ETSI (20 dBm EIRP): 10 km

**Frequency Range** - 2.4-2.4835 GHz ISM band (ETSI)

**Integrated Antenna Type** - Flat-panel 16 dBi, 20° vertical/horizontal

**Output Power** - At the antenna port: ETSI: -4, -2, 4, 6, 12, 14 dBm

**Processing Gain** - 10.4 dB nominal

**Radio Type** - Direct Sequence Spread Spectrum

**Security** - 40-bit WEP authentication and data encryption

**Selectable Subchannels** - ETSI 1-13

**Sensitivity (BER 1E10-6)** - Data rate: 1-2, 5.5, 11 Mbps; Sensitivity: -85, -88, -90 and -93 dBm; Modulation: 256 CCK, 16 CCK, DQPSK, DBPSK

**Wireless LAN Standards** - Compliant with IEEE 802.11b HR (5.5 and 11 Mbps); Wi-Fi compliant

### *General:*

**Management** - Utility: SNMP-based enhanced (Windows® 95/98, Windows 2000, Windows NT®) configuration utility with integrated site-survey tool; SNMP agents: MIB II, bridge MIB, DS11 private MIBs; Software agents: Simultaneous multiunit software upgrade using configurations utility's TFTP download

**Connectors** - RF (antenna) connector on outdoor units: N-type jack, lightning protected; Baseband: Outdoor units: Shielded RJ-45 with special waterproof sealed cap; Indoor units: Shielded RJ-45; Ethernet: 10BASE-T (RJ-45)

**Operating Humidity** - 5% to 95% noncondensing; outdoor units are weather protected

**Operating Temperature** - Outdoor units: -40 to +55°C; LAN interface/power supply units: 0 to 40°C

**Indicators** - LEDs: LAN interface/power supply units: Power, End-to-End Ethernet Status; Outdoor units: Power Status, Ethernet Status/Traffic, Wireless Link Status/Traffic, 10-LED display bar (RSSI in LW2001A-UK, LW2003A-UK; Load Gauge in LW2005A-UK, LW2007A-UK)

**Power** - Consumption: 110/220 VAC; 500/250 mA

**Size** - LW2001A-UK, LW2005A-UK outdoor units: 30H x 30W x 7.2D cm; LW2003A-UK, LW2007A-UK outdoor units: 30.5H x 12W x 5D cm; LAN interface/power supply units: 15.4H x 8.4W x 5.6D cm.

# Ordering Information

Item	Code
<b>First order your base unit and remote bridge(s)...</b>	
DS11 Series Wireless Ethernet	
Base Unit with Integrated 16-dBi Antenna	LW2005A-UK
Base Unit for Use with Detached Antenna	LW2007A-UK
Remote Bridge with Integrated 16-dBi Antenna	LW2001A-UK
Remote Bridge for use with Detached Antenna	LW2003A-UK

**If you've ordered the LW2007A-UK or LW2003A-UK, you need a detached antenna. Please call Tech Support to discuss your application and the available antenna options.**

**You may also need...**

DS11 Series Indoor/Outdoor Cat5 Cable,	50-m (164.0-ft)	LW2050A
	90-m (295.2-ft)	LW2090A
Shielded Ethernet Connectors, 10-Pack		LW2022A
Modular Crimp Tool (Frame Only)		FTM40
Die Sets (for RJ-45 Connectors)		FTM50