

## Industrial Strength Wireless Ethernet for Entertainment Applications from Goddard Design Company

Goddard Design was the first to do wireless lighting data. Our systems have always been based on the best available industrial communication technologies. With the advent of lighting sent over Ethernet it made practical and economic sense to use wireless Ethernet technology, Hence our trail blazing WOW product was replaced by a wireless system using our DMX-LINK Art-Net product and 802.11 bridges.



Figure 1 E-LINK2.4

However, in some mission critical applications 802.11 products are neither rugged or reliable enough for the small scale war that is theatrical touring, The very popularity of 802.11 is one of the problems. Many a venue now has wireless Ethernet in the front office. Interference and much lower than expected thru put is a real possibility.

We felt a need for something more for our rental division and for our customers who have mission critical wireless applications. It does not matter if they are running our DMX-Link product or PathPorts, you need a robust product that can work in an environment that already has too many 802.11 products running!

We are happy to be able to offer E-Link2.4. This is the latest in high speed/long range industrial wireless networking product from an established leader in spread spectrum wireless products since 1987. The E-Link2.4. is THE Ethernet bridge for theatrical applications.

E-Link2.4 utilizes fourth generation proprietary frequency hopping technology. Major industrial powerhouses including Siemens and GE already use these techniques - why shouldn't entertainment lighting?

E-Link2.4 products offer 840Kbps of usable data throughput, either point-to-point, or multi-point. This ensure errorless data via CRC error checking combined with outstanding range, coverage, and link reliability.

The E-link2.4/X puts the radio in a NEMA 4X remote assembly that can be mounted up to 300 feet from the Ethernet connection. This allows optimal radio placement without the need for long RF cable runs.



Figure 2 E-LINK2.4/X

Goddard Design is pleased to be able to offer a truly professional grade product at a price considerably lower than some other 'customized' theatrical units. The E-link2.4 is FCC certified and CE marked.

- High Speed: Up to 840Kbps throughput
- Long Range: 1.5 miles using a 4" unity-gain dipole antenna (included). Easily extended using high gain antennas (available).
- Excellent immunity to jamming and multi-path fading.
- Broadcast and Multicast filtering can make the unit protocol aware.
- No user site license required anywhere in the world.
- Standard Ethernet 10/100 Base-T interface
- Packaged for rugged industrial use
- -30°C to + 70°C operation

## SPECIFICATIONS

### Front Panel Indication for:

Power  
Ethernet Transmit  
Ethernet Receive  
Link Status

RF Link

### Rear Panel Connectors for:

RF Output/TNC  
Power/2-Pin DIN  
Console/RJ11  
Sync In/Sync Out/RJ11  
Ethernet/RJ45

### RF Transceiver:

Type certified for worldwide license-free operation under FCD Part 15.247 and ETS 300.328

11 user selectable channel sets:

2400-2483MHz (43 channels)  
2430-2483MHz (27 channels, avoids 802.11b 1&2)  
2400-2410, 2440-2483MHz (27 channels, avoids 802.11b 3&4)  
2400-2420, 2450-2483MHz (27 channels, avoids 802.11b 5&6)  
2400-2430, 2460-2483MHz (27 channels, avoids 802.11B, 7&8)  
2400-2440, 2470-2483MHz (27 channels, avoids 802.11b, 9&10)  
2400-2450, 2480-2483MHz (27 channels, avoids 802.11b, 11&12)  
2422-2447MHz (France, Israel - 15 channels)  
2453-2479MHz (Canada, Mexico - 15 channels)

Output Power 100mW (using short whip antenna, included)

500 mW (using gain antenna)

Total over-the-air bandwidth: 1.23Mbps

### Enclosure:

Aluminum  
Dimensions: 7.9"x5.7"x2.1"

### Network Protocol:

64 user-selectable hopping patterns  
1.23 Mbps over-the-air data rate  
840 Kbps data throughout (usable)  
Dynamically assigned TDMA network protocol  
24 bit CRC with automatic repeat request  
Point-to-point or point-to-multipoint

### Power Requirements:

12-24 VDC (external AC power supply included)

### Operating Temperature Range:

-30°C to +70°C  
0-95% humidity, non-condensing

**Systems start as low as \$2,800.**

**\$1,400. Per end**

**GODDARD  
DESIGN** 

**Goddard Design Company  
51 Nassau Avenue  
Brooklyn NY 11222**

**718 599- 0170 718 599-0172 fax [www.goddarddesign.com](http://www.goddarddesign.com)**