

# Trailblazer™ EB-Max

## WIRELESS BRIDGE – MESH NETWORK

Fast and Secure (up to 108 Mbps) in the 4.940–5.850 GHz



### Trailblazer™ EB-Max

#### PRODUCT HIGHLIGHTS

The *Trailblazer™ EB-Max* series delivers a comprehensive range of product features, ensuring fast, secure and reliable networking services, including...

- Pre-WiMax Radio
- Integrated Architecture
- Data Rates of 1 to 108 Mbps
- Configurable Channel bandwidth (5, 10, 20 or 40 MHz)
- Range up to 30 miles (50km)
- 802.1q, 802.1p, VPN Router and Switch Compatibility
- Real-time Antenna Alignment Tool
- Power over Ethernet
- Secure RF Bridge Authentication (AES-128/WEP data encryption)
- Real-time NMS Monitoring
- Point to Multipoint broadband data distribution
- Services: Broadband data, video and VoIP

### The *Trailblazer™ EB-Max* offers an unmatched set of features:

#### Integrated Architecture

The architecture of *Trailblazer™ EB-Max* outdoor bridges provides ease of installation, maximum range and capacity, delivering outstanding performance in a fully integrated design. Utilizing OFDM technology in the 5 GHz (4.940-5.850 GHz) frequency range, *Trailblazer™ EB-Max* bridges operate at a range of up to 30 miles (50Km) and at speeds up to 108 Mbps.

#### Optimized Performance

Ideally suited for bandwidth-hungry applications that require fast, affordable, reliable, and secure multipoint and point-to-point connectivity, the fully-integrated outdoor series of *Trailblazer™ EB-Max* bridges provides optimal delivery of IP voice, broadband data, and video services. With CWT's exclusive 5, 10, 20 and 40 MHz wide channel plan, more than 170 available channels can be used to meet your capacity, speed, scalability, and user needs, while optimizing frequency usage and complying with local regulations.

#### Configuration Flexibility

Built-in support for point to multipoint (up to 32 subscribers per base station radio), point to point, and repeating modes means you can use one product family to support many different types of applications. Whether you are connecting two buildings, a campus, or a city-wide network, the *Trailblazer™ EB-Max* architecture provides you with the flexibility to deploy fast, affordable and robust outdoor fixed wireless bridge solutions.

#### Advanced Security

*Trailblazer™ EB-Max* security is provided with *Trailblazer™ EB-Max* bridge authentication and AES-128/WEP-152 data encryption options, ensuring the prevention of hacking, data theft and unauthorized intrusions.

#### Integrated Antenna Alignment and Link Monitoring Tool

*Trailblazer™ EB-Max* antenna alignment and link optimization is easy using this real-time tool. During setup, simply run the tool between any two points and the signal strength in dB is streamed across your computer screen, allowing you to maximize signal quality and improve the performance and reliability of your wireless links. While in operation, you can also monitor signal strength between local and remote locations in real time to check for changes in the environment and troubleshoot technical problems.



8 Lbs. / 3.62 kg  
13 x 11 x 6 inches  
33 x 28 x 15 cm



CARLSON WIRELESS  
TECHNOLOGIES, INC.

# Trailblazer™ Series – Designed and Built for Plug-and-Play

## Specifications for Trailblazer™ EB-Max

<b>Radio</b>	
Multiple Frequency Bands Supported. 40, 20, 10, 5 MHz wide channel selections (Local regulations apply)	
4.940 to 4.990 GHz Public Safety Band (FCC Part 70, licensed Intl.)	Non-overlapping Channels: 8 x 5 MHz, 4 x 10 MHz, 2 x 20 MHz, 1 x 40 MHz
5.25-5.35 GHz license-exempt (FCC, Industry Canada, Mexico)	Non-overlapping Channels: 19 x 5 MHz, 9 x 10 MHz, 4 x 20 MHz, 2 x 40 MHz
5.47-5.72 GHz license-exempt (ETSI, FCC, ITU) with TPC and DFS	Non-overlapping Channels: 44 x 5 MHz, 22 x 10 MHz, 11 x 20 MHz, 5 x 40 MHz
5.725-5.850 GHz license exempt UNII & ISM Bands (ETSI, FCC, MII)	Non-overlapping Channels: ISM, UNII: 25 x 5 MHz, 12 x 10 MHz, 5 x 20 MHz, 2 x 40 MHz
Radio Type	Orthogonal Frequency Division Multiplexing (OFDM)
Standards Compliance	802.3, 802.11i, 802.11a hardware with proprietary bridging extensions
Total System EIRP and radio output power	Radio output power: Max: 21dBm (Set to local regulatory requirements to comply with transmit, conducted and EIRP power limits)

### Radio Receiver Sensitivity

Data Rate	1 to 108Mbps
Sensitivity (dBm)	-73 to -91
Modulation	64QAM, 16QAM, QPSK, BPSK
Trailblazer™ EB-Max Operating Modes	Point to Multipoint, Point to Point, Repeater
Antenna Types (5 GHz)	Sector, omni, parabolic grid/solid or flat panel directional

### Range

FCC & Industry Canada and other Local Regulations as applicable	Up to 7.5 miles (12Km) with 23dBi panel antennas Up to 30 miles (50Km) with 35dBi antennas
---	---

### Security

Authentication and Encryption	SecureRF Architecture - Multi-layer link authentication. AES-128/WEP 152-bit data encryption options, support for radius authentication.
-------------------------------	---

### Configuration and Management

Configuration Utility	Built-in webserver, Telnet
Software Upgrades	FTP Download
Antenna Alignment Tools	Built-in RSSI (Signal Strength), link optimization/throughput utility
LED Status Indicator	Remote Power Indicator
Real-Time Link Monitoring	Secure Management Interface - real time signal strength, authentication data, system uptime, data rate, channel selection

### Unit Communications

Cable Type	Cat-5e 4 x 2 x 24AWG gel-filled (UV protected, weatherized)
Maximum Distance	328 ft (100m) between network connection and outdoor units

### Interfaces

RF (antenna) connector	Integrated or N-Type female
Baseband	RJ-45
Ethernet	10/100Mbps autosensing Ethernet (RJ-45)

### Electrical

Remote Power System	Input: 100-240V, 0.5A Auto-ranging (50Hz-60Hz) Output: 48V, 0.3 A Max for Remote Power System (PoE)
---------------------	--

### Mechanical Dimensions

Trailblazer™ EB-Max	8 Lbs. / 3.62 kg; 13 x 11 x 6 inches; 33 x 28 x 15 cm
Outdoor Unit Mounting	Includes mast mounts and clamp kits for 1" (26mm) diameter thru

### Environmental

Operating Temperature	-20°C to 55°C
Operating Humidity	5% to 95% non-condensing

### Compliance and Certification

EMC	US, Canada, Brazil, Mexico, Phillipian Islands, Morocco
Safety	FCC Part 15, Industry Canada RSS-210, Mexico, ETSI
Safety	UL - Canada, USA, CE Radio Public
Safety	(Part 70 fixed wireless) FCC 15.407 (UNII, ISM), Industry Canada RSS-210, ETSI (w/TPC and DFS)

Warranty	1 Year Parts and Labor
----------	------------------------

**IMPORTANT NOTE:** The 4.9GHz band is an FCC licensed band. It is the responsibility of the user to obtain the corresponding operating license from the FCC.  
SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

Distributed by:



1180-B Evergreen Rd., Redway, CA 95560 USA  
tel: +1 707-923-3000 • fax +1 707-923-1913  
carlsonwireless.com • sales@carlsonwireless.com

\*US Registered Patents 5,745,480; 5,959,982; 6,693,890

© 2006 Carlson Wireless Technologies, Inc.