

## Ruggedized High Power 5.8GHz Wireless Ethernet Bridge With 23 dBi Integrated Antenna

### BR58-LOP Key Features

- ◆ **Throughput (best fit framing)**
  - ◆ 55 Mbps aggregate (Tx + Rcv) UDP traffic @ 40 MHz Bandwidth with 108 Mbps over the air data rate
  - ◆ 37 Mbps aggregate (Tx + Rcv) UDP traffic @ 20 MHz Bandwidth with 54 Mbps over the air data rate
- ◆ **Protocol** - Proprietary high performance Nstreme protocol
  - ◆ Low Protocol overhead, Polling, Policy based Packet Framing, distance independent
  - ◆ OFDM, adaptable data rate with varying power levels
  - ◆ Dynamic Frequency Selection - automatically scans spectrum and selects lowest used frequency
- ◆ **Quality of Service** - Supports extensive QoS capabilities for critical Voice and Data applications including packet marking, queues such as Byte FIFO, Packet FIFO, SFQ, RED, PCQ and HTB. Bandwidth control on wireless and Ethernet
- ◆ **Amplified** Super Range 400 mW (26 dBm) radio with adjustable power settings
- ◆ **Integrated** Flat Panel 23 dBi gain antenna, radio and bridge with routing capabilities
- ◆ **Weatherproof** packaging works indoors or outdoors; connect or supports use of standard CAT-5 RJ45 Ethernet cable
- ◆ **Polarization** - Can be mounted in Vertical or Horizontal Polarized configurations
- ◆ **POE** - Universal Input (110/240 VAC) 48VDC Power Supply with Power Over Ethernet (POE) Injector. Optional low power configuration for 9VDC to 24 VDC operation
- ◆ **VLAN** – Supports 802.1Q VLAN protocol; up to 4095 VLAN interfaces per physical Wired Ethernet interface
- ◆ **VAP** - Supports multiple logical wireless channels (up to 128) with separate security settings. Each wireless channel can be mapped to a VLAN ID
- ◆ **Security** - Wired Equivalent Privacy (WEP) and WiFi Protected Access (WPA2) capable, AES Encryption
- ◆ **Firewall** - built in configurable firewall capability with NAT
- ◆ **Router** - full functionality, DHCP server and client, DNS server and client, and bridging; WLAN peer to peer user access control; RIP v1 / v2, OSPF v2, BGP v4, Universal Plug & Play
- ◆ **DSL Support** - PPoE protocol for connection to DSL modem on the wired Ethernet interface
- ◆ **Management** – Three ways to manage the bridge; Microsoft Windows based application utility, Internet Browser, or Command Line Interface using Telnet or SSH. IP or MAC addressing capability. Tools include ping; traceroute; bandwidth test; ping flood; packet sniffer; Dynamic DNS update tool

### Mechanical (each side)

- ◆ 9° x 9° beam width
- ◆ 12" x 12" x 3.5" dimensions
- ◆ 12 lbs weight
- ◆ 15W max power consumption
- ◆ Beige UV protected housing



### Package Includes

1. 2 each Wireless Ethernet Bridge Segments with integrated Flat Panel 23 dBi antennas.
2. 2 each Cast Aluminum Antenna mounting hardware; for 1.5" to 2.0" OD mast or wall mount.
3. 2 each Power over Ethernet Injectors with Surge Suppressor & 48VDC power supply; 110/240 VAC input. CAT-5 cable can be ordered separately.
4. CDROM with Windows based configuration software.



### Overview

The BR58-LOP is a ruggedized enterprise class wireless Ethernet Bridge developed to provide outstanding functionality in an integrated radio and antenna package. This bridge is ideal for both short distance and long distance links. Connect two buildings in a campus or connect two remote sites more than 10 miles apart. It is easy to install and the benefits of a high-gain directional antenna are achieved without the need for fragile RF adapter cables or bulky coax cables.

Each bridge segment provides an IEEE 802.3 10/100 Ethernet interface for connection to LAN/VLAN on each side. The wireless bridge comes preconfigured with default IP addresses for each segment.

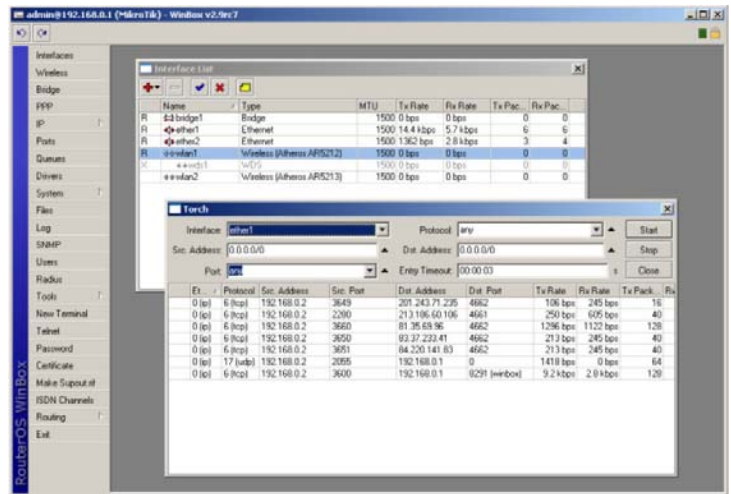
Power is provided by the CAT-5 Ethernet cable using a 48VDC Power Over Ethernet module. The BR58-LOP is designed with a weatherproof Ethernet connector which allows the use of a standard CAT-5 cable and RJ45 connectors. The BR58-LOP includes a full router capability typically available only on standalone enterprise class routers. Flexibility and scalability is the key hallmark of the BR58-LOP Series with features such as full VLAN capability on the Ethernet interface.

## Specifications

RF Band	5.725 GHz to 5.825 GHz - 5 Standard Channels
Channel Size	Configurable 20 MHz (Standard), or 40 MHz (Turbo Mode)
Channel Selection	Manual or Dynamic Frequency Selection
Transmit Power	0 to 26 dBm, Manual or Adaptive with data rate
Receiver Sensitivity	-94 dBm at 6 Mbps to -74 dBm at 54 Mbps
Over the Air Data Rate	54 Mbps at 20 MHz Bandwidth 108 Mbps at 40 MHz Bandwidth
Modulation	OFDM with BPSK, QPSK, 16 QAM & 64 QAM
Forward Error Correction	Coding Rate 1/2, 1/3 and 1/4
Hardware Encryption	AES, TKIP and WEP
Antenna Type	Flat Panel 23 dBi Gain, 9 <sup>0</sup> beam width Az/EI
Range 23 dBi Flat Panel to 23 dBi Flat Panel (With 25-35 dB Fade Margin)	8 Miles @ 6 Mbps, 5 Miles @ 18 Mbps, 4 Miles @ 24 Mbps, 3 Miles @ 36 Mbps, 2 Miles @ 48 Mbps, 1 Miles @ 54 Mbps
Data Rate (Mbps)	Adaptive data rate 6, 9, 12, 18, 24, 36, 48, 54 & 108 (Turbo Mode)
Ethernet Protocol	IEEE 802.3, 10/100 Mbit/s Fast Ethernet port supporting Auto-MDI/X
VLAN	Per IEEE 802.1Q up to 4095 VLAN IDs
VAP	Up to 128 Logical Wireless Channels (VAPs) to segregate traffic over the air with separate security profiles; map VLAN ID to VAP ID for end to end traffic segregation
Quality of Service	Bandwidth control, queues, Byte FIFO, Packet FIFO, SFQ, RED, PCQ, HTB, mangle & stateful packet inspection based firewall capabilities
Remote Management	MS Windows Utility - Winbox Web Browser - Webbox Command Line Interface - Telnet or SSH Firmware Upgrades via FTP SNMP Monitoring Configurable Logging

## Provisioning & Monitoring

The BR58-LOP can be provisioned with a MS Windows based application utility called "Winbox". Other options to provision the BR58-LOP include a Telnet or SSH capability, using a powerful command line interface. Runtime configuration and monitoring can be performed on the BR58-LOP. Some of the monitoring functions include a Wireless Sniffer to sniff packets from the wireless network, a net watch tool, and a traffic monitor tool. The traffic monitor tool is used to execute scripts when the interface traffic crosses a threshold.



Power	48 VDC Operation Standard (15 Watts max) 9-22 VDC low voltage Option External Universal AC Power Supply (110/240 VAC, 50/60 Hz) with POE Injector
Environmental	Operating: -20 <sup>0</sup> C to +55 <sup>0</sup> C Storage: -40 <sup>0</sup> C to 80 <sup>0</sup> C Humidity: 5% to 95% Typ (Non-condensing)
Certification	FCC Part 15C, Class B Device

## Ordering Information (Professional Installation Required)

Type	Model	Description	Part #
Dual Panel	BR58-LOP-TD	<ul style="list-style-type: none"> <li>5.8 GHz high power Wireless Ethernet Bridge to include two each integrated 23 dBi flat panel 12"x12"x3.5" antennas and radios (for both ends of link)</li> <li>Two each AC/DC power supplies with Power Over Ethernet Injectors</li> <li>Two each cast Aluminum pole mount and wall mount hardware</li> </ul>	131-5823-0000

Specifications subject to change without notice:

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