



OVERVIEW

The AWE-W2W Wireless to Wireless Digital Bridge transparently bridges 802.11 (WiFi) radios from one frequency band to another, simply by connecting between the radio and antenna. Units are available with a wide variety of frequency input and output ranges. Compact indoor and outdoor enclosures, standard mounting options, and a wide input voltage range make the AWE-W2W easily retrofitted into many systems.

The AWE-W2W captures each incoming packet and retransmits it on the other interface, thus acting as a transparent bridge. Due to this capture-and-forward architecture, it works with any security scheme with no configuration required.

The AWE-W2W supports all standards based 802.11 operating modes: access points, clients, and ad hoc. The AWE-W2W utilizes Atheros chipset-based Mini-PCI radio modules, and is compatible with all of the modules from Ubiquiti Networks. Many of these radio modules have FCC Part 15 modular approval.

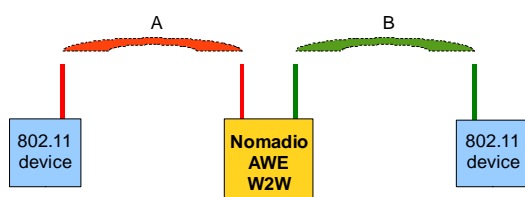
FEATURES

The AWE-W2W makes it simple to change the frequency of legacy 802.11 equipment.

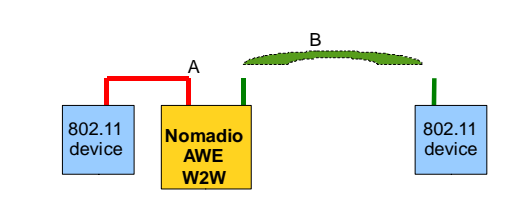
- Support for 802.11a/b/g
- Web-based configuration via Ethernet ports
- Support for antenna diversity – up to 2 local antennas can be connected, and 2 radio output antennas
- Latency – Normally under 2.5ms of added latency
- Automatically detects and adjusts to modulations, speeds and signal widths.

Usage Scenarios

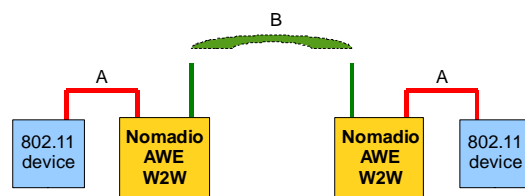
The AWE-W2W can be used to bridge wireless networks in a number of different scenarios.



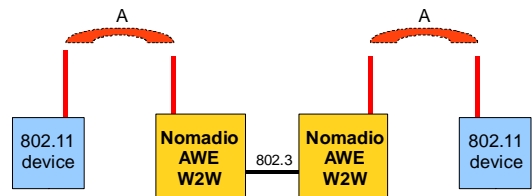
1. Bridge multiple wireless networks at different frequencies



2. Connect wireless devices to networks on different frequency



3. Bridge existing wireless gear to new air frequency



4. Extend wireless network via wired network

PACKAGING OPTIONS

“PCB” - OEM PCB

- PCB Overall Dimensions: 6.0”x 4.0”x 1.2”
- Input Power: MTA-156 Locking Connector
- Two 10/100 RJ45 Ethernet Connectors
- RS-232 Serial Console Port Connector



“INDOOR” - Indoor Enclosure

- Enclosure Overall Dimensions: 7.0”x 4.1”x 1.5”
- Input Power: 2.5mm Barrel Jack Connector
- Two 10/100 RJ45 Ethernet Connectors
- Recessed Pushbutton Reset
- Recessed Status LED
- RS-232 Serial Console Port Connector



“OUTDOOR” - Outdoor Enclosure

- Enclosure Overall Dimensions: 8.4”x 7.0”x 2.2”
- Four Waterproof N-Type Female Antenna Connectors
- Two Waterproof Ethernet RJ-45 Connectors
- Die-Cast Aluminum with NEMA-67 Rating
- 3-Point Silicon Rubber Gasket



PART NUMBER GUIDE

When placing an order, please provide a part number. Part numbers are of the form:

AWE-W2W-PACKAGE-INPUT-OUTPUT

- PACKAGE is one of “PCB”, “INDOOR” or “OUTDOOR”.
- For INPUT and OUTPUT, select modules from below.

For example:

- an indoor 2.4 GHz to 900 MHz AWE-W2W would be “AWE-W2W-INDOOR-2400-900”
- an outdoor, 4.9 GHz to 2.4 GHz AWE-W2W would be “AWE-W2W-OUTDOOR-4900-2400”

RADIO MODULES

The AWE radio has four module slots, and is capable of simultaneous support for any combination of any four of the following. Each module weighs between 1 oz and 1.5 oz and fits within the dimensions of the router board.

The frequency choices are the same for input (local radio) and output (over the air). However the input radio (local radio) is limited to -30 dBm of output power to protect the legacy radio from damage.



| Module | Frequency Band | Channel Widths (MHz) | Max Output Power on OUTPUT | Max Power Consumption | Licensing Restrictions |
|--------|----------------|----------------------|----------------------------|-----------------------|---------------------------|
| 700 | 760-780MHz | 5/10/20 | 28dBm | 3.6W | International or research |
| 900 | 900-930MHz | 5/10/20 | 28dBm | 4W | Unlicensed ISM |
| 2300 | 2.30-2.50GHz | 5/10/20/40 | 28dBm | 4.5W | |
| 2400 | 2412-2462MHz | 5/10/20/40 | 28dBm | 4.6W | Unlicensed ISM |
| 2700 | 2.70-2.90GHz | 5/10/20/40 | 28dBm | 4W | |
| 3400 | 3.40-3.70GHz | 5/10/20/40 | 28dBm | 4W | |
| 3700 | 3.67-3.70GHz | 5/10/20/40 | 28dBm | 4W | Apply for site license |
| 4500 | 4.475-4.725GHz | 5/10/20/40 | 24dBm | 4W | Military |
| 4900 | 4.94-4.99GHz | 5/10/20 | 26dBm | 5.5W | Public Safety |
| 5300 | 5.20-5.825GHz | 5/10/20/40 | 28dBm | 6W | Unlicensed |

SYSTEM SPECIFICATIONS

- Voltage and Temperature Monitor
- Passive Power Over Ethernet
- Reverse Voltage and Transient Protection
- 9 to 48VDC Input Voltage Range
- Operating Temperature: -40°C to 85°C