

Instruction Manual



SweetSpot10TM Inventory:

- SweetSpot10TM dual-band transmitter – broadcasts on 2.4ghz and 5.8ghz concurrently (includes 1 Gigabit Internet port and 1 Gigabit LAN port)
- Short Ethernet data cable
- Smart PoE injector and 50-foot Cat 5e cable
- Stainless mounting hardware
- Preconfiguration
- SweetSpot10TM infographic and invoice

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General Mounting Considerations

The SweetSpot10™ offered by OMNI-WiFi™ is a self-contained, customized transmitter, receiver, and high-gain antenna all in one. It should be mounted facing most of the wireless users. However, significant signal strength exists behind and beside the SweetSpot10™ due to the presence of a second, special internal antenna.

Elevating the SweetSpot10™ to an upper edge of the highest room or attic in the home and pointing the access point diagonally toward the opposite lower edge of the room usually is the best approach for mounting the equipment.

Where to Mount the SweetSpot10™

The SweetSpot10™ is weather-resistant, meant for indoor or outdoor use. The primary restriction is the length of the power cord and the length of the broadband connecting cables. Take care to mount the SweetSpot10™ close enough to your power source and to your cable or broadband modem. Mounting hardware is included for pole-mounting or 90-degree surface mounting. If 90 degrees is too much or too little, the mount can be bent more or less to suit the environment. You can point the SweetSpot10™ in any direction but its mounting polarity should be observed.

Mounting Outdoors

To service a building from across the street, remember that the SweetSpot10™ is directional by design. We recommend mounting it just inside a window where the cables will be within easy access to the power source and broadband signal inside. There are many successful SweetSpot10™ installations that have the SweetSpot10™ mounted *inside* a window, facing *out* toward the clients. However, some types of LOW-e' glass and glass with metal film will reflect much of the signal back towards the SweetSpot10™ — ***Do not mount behind LOW-e' GLASS or met- al-film solar-blocking glass!***

NOTE: The default configuration is found on the back of this booklet and on the back of the SweetSpot10™.

Mounting Indoors

To service a building from inside that same building, you can mount the SweetSpot10™ on the first floor toward the ceiling, in the ceiling, or on an upper floor, tilting down. The best place to mount the SweetSpot10™ is in an attic, screwed onto a roof rafter or a truss and tilting downward toward the back of the house.

Installation Considerations

Fluorescent lights between the SweetSpot10™ and the clients will reduce the signal quality and thereby reduce the effective distance that the SweetSpot10™ will operate. If you mount the SweetSpot10™ in a suspended ceiling, mount it away from fluorescent lights. Roaming cordless phone systems may also interfere with the operation of the SweetSpot10™ because they use the same frequencies. Your SweetSpot10™ uses a channel listed on the back of it. Set your cordless phone to use a different channel.

Most environments contains items that generate electromagnetic interference (EMI) like refrigerators, microwaves, or vacuum cleaners, so place the SweetSpot10™ where it does not have to push its signal through the EMI of the house- hold appliances. You will likely get better results by mounting the SweetSpot10™ on the floor above the refrigerator than by trying to push the signal into the next room through the refrigerator.

Experimentation

If you are unsure about the best location for your SweetSpot10™ you can try it in various locations. You do not have to plug in the cable to the broadband modem to find a suitable location for your SweetSpot10™. Just plug in the electrical connection to the SweetSpot10™ and start a laptop that has a wireless connection. Since the SweetSpot10™ is very sensitive, any signal level with 2 bars or over will give fast connection speeds. More bars usually indicate a closer connection, but it will not necessarily be the fastest connection.

SweetSpot10™ Mounting

Secure the SweetSpot10™ with the hardware provided. Outdoor or attic mounting is recommended. The mounting bracket can be screwed to a roof rafter at the angle of the roof, aimed downward from the front of the house toward the backyard. This mounting method will provide the entire house with strong connection signals and high speeds. It will generally allow users in the back and side yards to get online as well. Do not mount directly behind a chimney or an air conditioning duct. If mounted outdoors, the mounting hardware packed with your SweetSpot10™ must be used for safety. When mounted properly, the SweetSpot10™ will remain secure even in winds of over 100 mph. Secure the antenna tightly so that wind does not move it!

Basement coverage may be limited if there are pipes or ductwork below the first floor. You may have to experiment with the position of the SweetSpot10™ for best results.

The OMNI-WiFi SweetSpot10™ ships with a short Ethernet cable attached to an RJ-45 connector. You can plug a longer cable into this connector if necessary but the overall length should be less than 200 feet. Plug the Ethernet cable into a broadband modem, switch, or router. Please note that this is a plain-vanilla cat-5e cable. It is not a crossover cable unless you specified one for your configuration. The SweetSpot10™ should automatically and internally simulate a cross-over cable if one is needed.

Next configure a wireless laptop computer as a DHCP client. This computer is going to be called, “the SweetSpot10™ management computer”. You will manage the SweetSpot10™ with this wireless computer.

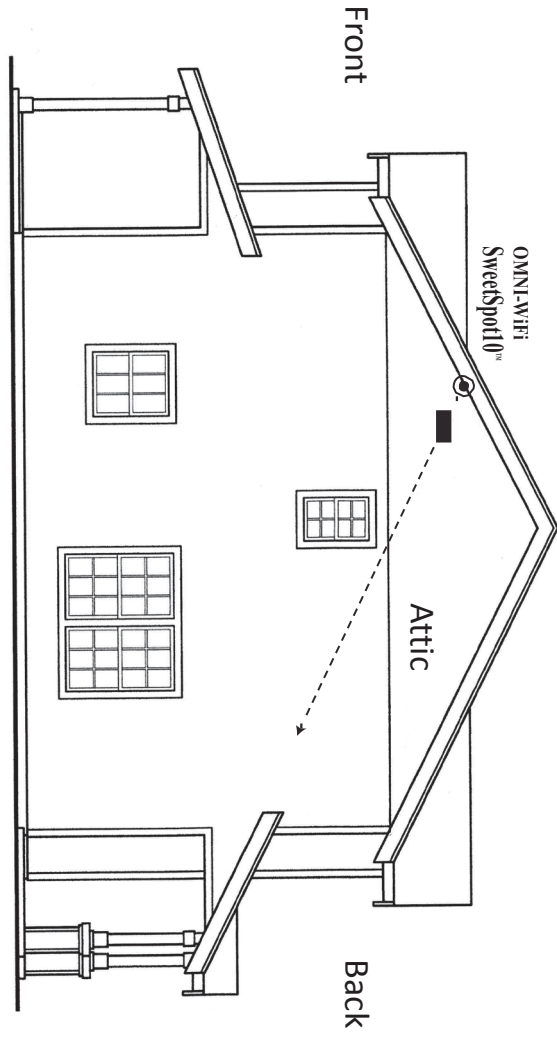


Figure 1: SweetSpot10™ Optimal Installation and Approximate Broadcast

Now power the SweetSpot10™. Next, power the broadband device that feeds the SweetSpot10™. When you power the SweetSpot10™, you should see a link-light indicator led light up on the broadband modem, switch, or router where the SweetSpot10™ is connected into it. The lights on the modem should all be blue or green. Most modems have a slow-blinking blue or green light as they are acquiring their address on their network. This slow-blinking light turns solid after “acquiring”. NOTE: You must press the ‘reset’ button on *some* cable modems to release the old MAC address information and force the cable modem to get a new MAC address from your ‘new’ SweetSpot10™. This is true if you have previously used the cable modem with a direct connection into a computer.

Managing via Wireless Connection

Go to the management computer and configure its wireless card to connect to the SweetSpot10™ by opening ‘Connect To’ and selecting ‘View all wireless connections’. The wireless SweetSpot10™ connection SSID is ‘SweetSpot10’. Select ‘SweetSpot10’ and click the ‘Connect’ button. Then start up the Internet browser. You may see a DNS error message. This is normal until the SweetSpot10™ is connected to the broadband signal. Start the browser program (Internet Explorer, Mozilla, etc.).

The SweetSpot10™ is shipped plug-and-play, but if you need to configure it, enter the SweetSpot10™ IP address into the URL box (this address is written on the label on the back of the SweetSpot10: <http://192.168.188.253>) and press the [ENTER] key. You will see the management interface. The administrative password is ‘**omniomni**’.

Wireless Clients

Power up the nearest client and switch its wireless connection on. Go to ‘Network Connections’ from the control panel and select ‘View All Connections’ if you have that option. Double click the wireless connection. You should see the OMNI-WiFi access point within range. Click the ‘Connect’ button to connect to this SweetSpot10™. You may be asked for a ‘key’. The ‘key’ is ‘**omniwifi**’.

Performance Testing

This is a method for demonstrating the performance difference in OMNI-WiFi equipment, measuring speed and distance, and outperforming other APs - even more powerful APs. This demonstration takes only a few minutes. Even when wireless clients see a strong Wi-Fi signal, they may be unable to connect to it. Look-alike antennas do not perform like the OMNI-WiFi SweetSpot10™.

This is the fastest and simplest way to demonstrate the OMNI-WiFi performance difference. On the following page there is an explanation about why a simple “Signal Strength Test” such as the Microsoft Wi-Fi signal quality indicator in the tray (at the bottom of the screen) is not a reliable indicator of connection speed with OMNI-WiFi SweetSpot10™ APs.

The simple demonstration:

Do not plug in the SweetSpot10™ yet. First establish baseline performance of your previous access point. Place it up high on a desk or shelf. Connect to the existing AP, a non-OMNI-WiFi AP. Note the channel of the existing AP. Then after establishing a connection, run the speed test from Speakeasy (www.speakeasy.net/speedtest) while walking away from the AP. Continue to run the speed test until the connection is lost, while at the same time slowly walking away from the AP. Mark the spot where the signal is lost.

Now unplug the original AP and plug in the OMNI-WiFi AP and place it in the same location as the original AP was placed, but up as high as possible per the mounting suggestions given on pp. 3-4. Put the SweetSpot10™ on the same channel as the old AP to create a fair comparison. Connect to the SweetSpot10™. Then after establishing a connection, run the same speed test from Speakeasy (www.speakeasy.net/speedtest) while walking away from the OMNI-WiFi AP. Continue to run the speed test until the connection is lost, all the while slowly walking away from the AP. Mark the spot where the signal is lost. This time you should be able to walk considerably farther from the OMNI-WiFi unit, even upstairs or outside before the signal disappears and the speed test stops running. This test will work even with other “strong” APs, which is why the signal strength indicator may be good, but not the best measure of connection quality or speed.

How it Works:

The OMNI-WiFi™ SweetSpot10™ has several modified receiving panel antenna that increase wireless client signal strength by a factor of 10. Since the wireless client generally has the weakest signal in the Wi-Fi network, adding strength to its signal significantly increases the distance and speed of the overall wireless connection.

The OMNI-WiFi™ SweetSpot10™ has a special circuit to eliminate interference and to broadcast *only* the highest quality signal possible. The signal may *not* be as strong as the signal from other APs, but the combination of the super sensitive radio, custom antenna, and special noise elimination circuit give it the *highest quality*. Therefore, the client computer will usually connect a good deal farther away from the SweetSpot10™ than from any other AP, regardless of how many bars are showing in the wireless signal strength icon at the bottom of the screen. With other APs, up to one-half of the signal strength bars represent noise or a distorted signal.

FCC Compliance

Device meets current FCC Radio Frequency Exposure Guidelines under FCC Rules and Regulations Part 15.247 for IEEE 802.11 transmitter and receiver Wi-Fi devices.

IMPORTANT:

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm (about 8 inches) between radiator and your body. The antennas used for this transmitter should not be co-located or operating in conjunction with any other antenna or transmitter.

Appendix

Federal Communications Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment on and off, the user is encouraged to try to correct the interference by using one of the following methods:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that in which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Technical Support:

Email: engr@omni-wifi.com

Phone: 1-800-610-6711 x 7

SPECIAL NOTE regarding interference and coverage: Aim the SweetSpot10™ slightly downward instead of straight ahead to ensure coverage into dips and valleys. Avoid transmitting into or close to appliances, radios, cordless phones, baby monitors, wireless security systems or wireless cameras.

OMNI-WiFi Trademark

The SweetSpot10™ is a service trademark of OMNI-WiFi, LLC. OMNI-WiFi™ is a federally registered trademark.

Environmental Specifications:

Operating Temperature: -20 to + 120 degrees F.

Operating Humidity: 5% to 80%, non-condensing

Enclosure: NEMA-4 rated, to withstand direct water spray, and to withstand ice formation on enclosure.

Warranty and Exclusions:

90-day limited warranty.

Not guaranteed against water damage or electrical surge.

Not guaranteed against storm or lightning damage.

Shipping and Handling Damage Claims:

All shipping damage claims are the purchaser's responsibility. Inspect each shipment on delivery and report all damage immediately to the carrier. There may be time limits and inspection may be required, depending on the carrier.

WARNING:

OPENING the CASE or BREAKING the SEALS VOIDS the WARRANTY.

Wireless Password: **omniwifi**

	Administrative Username: root	Password: omniomni
	IP address: 192.168.188.253	Channel: 9



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