



Quick Installation Guide

Emerge™ HGA51G-DIR30

High Gain 5.1 GHz Directional Antenna

The following will help you install your directional antenna easily. Should you require further assistance, please contact Avocent Technical Support.

Extended Range Operation

The HGA51G-DIR30 directional antenna is an accessory for EmERGE wireless extenders, which are factory-equipped with omni-directional antennas. Directional antennas provide extended range operation by focusing the energy of radio waves into an intensified directional beam. Extended distance operation requires installation of at least one directional antenna onto a transmitter and one onto a receiver. Installation of two antennas per unit will guard against signal blockage but will not increase transmission distance.

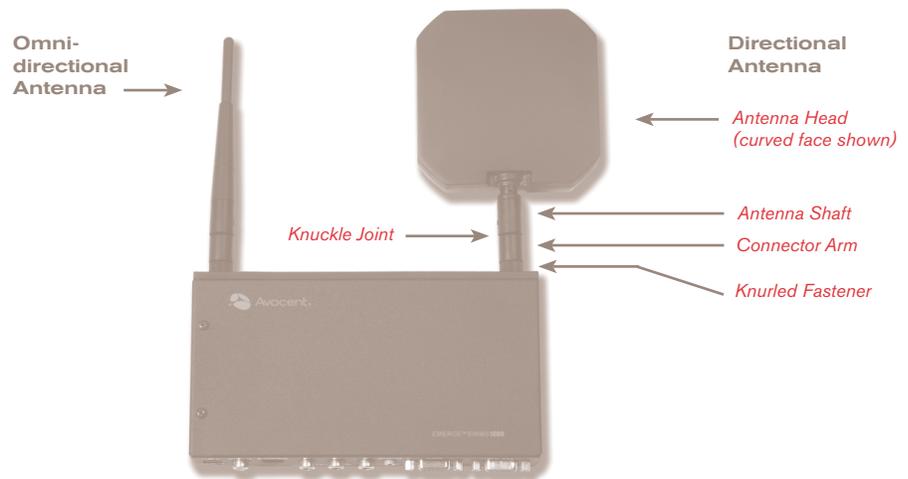
If your wireless extenders are not already properly placed and connected to audio, video, power and control sources, then please refer the appropriate product documentation before proceeding with the instructions provided in this document.

1 Facing the product, remove the omni-directional antenna from the left-hand antenna jack on both the transmitter and receiver. The antennas loosen from the antenna jack by turning the knurled fastener in a counter-clockwise manner.

2 Select either directional antenna and extend the assembly such that its connector

Emerge HGA51G-DIR30 Antenna

Shown with EWMS1000 Extender



arm and antenna shaft are parallel with each other at the knuckle joint.

3 Engage the center socket of the antenna connector arm onto the center pin of the transmitter antenna jack. Turn the knurled fastener clockwise until finger tight to secure the antenna.

4 If the transmitter is to be shelf or rack mounted, raise the antenna head such that the antenna shaft is pointed upward and perpendicular to the connector arm at the knuckle joint. This motion requires proper alignment of the knuckle joint, which can be accomplished by rotating the antenna shaft. Once vertical, swivel the curved antenna face toward the intended receiver.

5 If the transmitter is to be wall-mounted, allow sufficient clearance for the curved antenna face to swivel freely in all directions.

6 Repeat steps 2 through 5 for the receiver. For best results, position the wireless extenders so they are on the same horizontal plane.

7 Using the signal strength LEDs for guidance, swivel the curved face of transmitter antenna head toward the directional antenna on the receiver.

8 Using the signal strength LEDs for guidance, swivel the curved face of receiver antenna head toward the directional antenna on the transmitter.

To Contact Avocent Technical Support:

CALL (888) 793-8763 USA or 353-61-715292 Shannon, IR

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Additional Information

Emerge extenders feature an intelligent dual antenna system, in which the antenna with the strongest receive signal becomes the active antenna for transmission while the other becomes passive. For this reason the directional antenna, due to its increased sensitivity, will become the active transmission antenna when environmental conditions are static. Under such conditions there is no reason to install multiple directional antennas on a single device. Transient environmental conditions, however, as might occur in a warehouse in which boxes are routinely stacked and moved, can impair the signal of the active antenna, resulting in activation of the passive antenna. Under these shifting conditions, it might be advantageous to install two directional antennas on a single Emmerge wireless extender.

Emerge HGA51G-DIR30 directional antennas are compatible with each other as well as with omni-directional antennas. It is recommended to install at least one directional antenna on both the transmitter and receiver because the receiver's acknowledgements must be properly received by the transmitter.

Emerge HGA51G-DIR30 Directional Antenna Shown with EWMS1000 Extender



Transmitter and receiver pair with properly aligned antennas

The directional antenna achieves extended range by concentrating its radiated power in a narrow (approximately 30 degree) arc. Therefore, care must be taken to ensure that all receivers paired with a transmitter are located within the 30 degree arc of its directional antenna.

Because a directional signal is focused into a relatively narrow arc, it is easily blocked by

objects such as steel beams, HVAC ducts and re-bar. For this reason, care must be taken to avoid obstructions in the signal path. Moving the transmitter or receiver a few feet may improve performance significantly.

The HGA51G-DIR30 antenna is designed to provide 8 dB of gain within the 5.150 – 5.825 GHz UNII bands.

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