

Gap Wireless 3G+ antenna kit installation

When properly installed, the Gap Wireless 3G+ antenna kit will increase the reception level of your Ericsson W35 modem which in turn will provide better data throughput and decrease dropped calls for voice communications.

This kit includes:

- One enclosed yagi antenna, model number SPDY-0825-9C
- One 50-foot 240 series cable with SMA-male to N-male connectors, model number 121C24014106000
- One 1-foot jumper cable with SMA-female to MCX-male connector, model number 142C10020100120
- One foot of miracle tape for weatherproofing connections, model number CTB-15-00120

Tools and accessories required for this installation:

- Power drill with 1/2" (13 mm) drill bit (bit type and length depends on which material you will be piercing thru.
- Ladder for accessing antenna mounting position
- Wrench
- Electrical tape
- UV stable tie straps or wire clips

Preparing for the installation:

Your Ericsson W35 modem communicates wirelessly with the cell phone tower of your service provider. In order to increase signal strength, the enclosed yagi antenna must be pointed towards this cell phone tower with minimal obstructions between it and the tower.

- 1) Locate the direction of the closest cell phone tower belonging to your service provider (This is not any tower, it must be your provider's site; keep in mind the same tower can co-locate multiple providers). If you are not sure where your service provider's tower is, use the following web tool: http://www.eryu.org/steven_nikkel/cancellsites.html. Deactivate all other service providers but yours and locate the tower nearest to your location. Estimate the direction of the tower in regards to the building you will be installing the antenna on.
- 2) Determine what structure you will be mounting to. The enclosed yagi antenna comes with two U-Bolts and an L-bracket for mounting to a 1-1/8" to 2" (30 to 50 mm) diameter pole. Consider mounting to an existing TV antenna tower or a satellite arm, ensuring the structure is on the same side of the building as the cell tower or making sure the structure is above the roof line. Avoid using the mains electrical mast as this is a potential hazard. If you do not have a structure to mount the antenna to, contact Gap Wireless for mounting solutions.
- 3) Determine where the 240-series cable will be installed and where it will enter the building from outside. Make sure the length of cable required does not exceed 50 feet. Should you require more cable, contact Gap Wireless for other cable solutions.
- 4) If practical, consider weatherproofing the connection between the enclosed yagi antenna and the 240-series cable while on the ground (see Installation points #3 and #4)

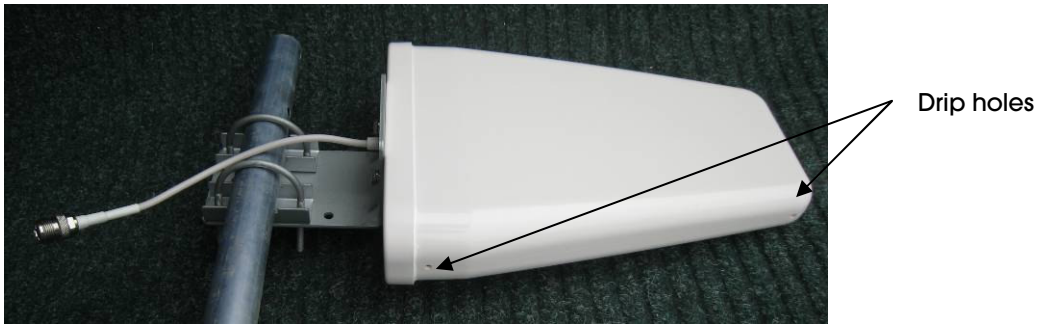
Installing the 3G+ antenna kit:

- 1) Assemble mounting bracket of enclosed yagi antenna by removing the two screws on the back side, inserting the pigtail thru the star-shaped hole of the L-bracket and screwing the L-bracket

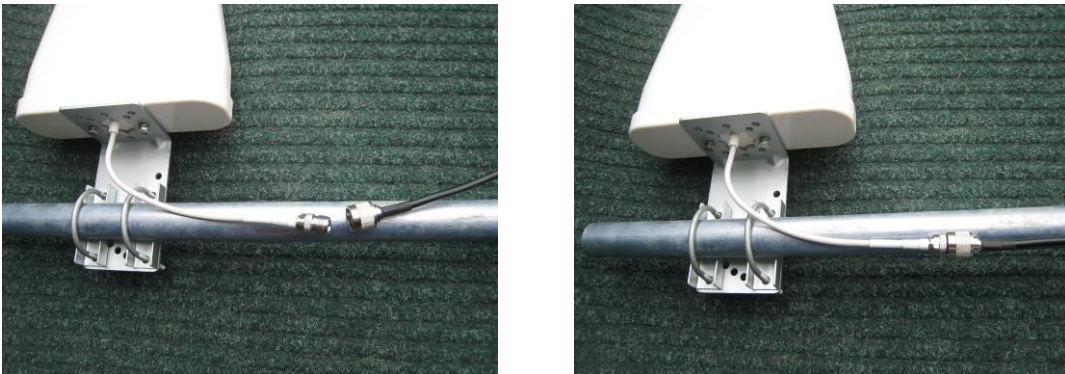
back in place choosing the best orientation possible for your installation. Insert U-bolts thru the opposing side of the L-bracket.



- 2) Mount the antenna to the pole previously identified while making sure the drip holes on the antenna are pointing down, and coarsely adjust the direction of the antenna towards the direction of the closest cell site for your provider



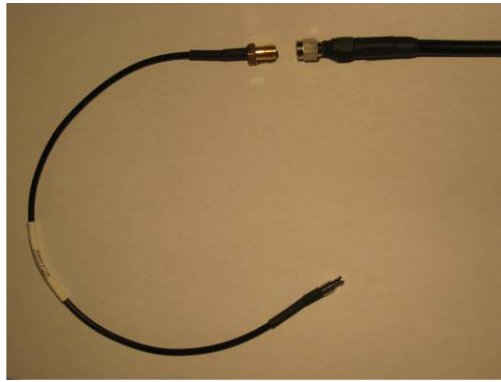
- 3) Mate the N-male connector on the 240-series cable to the N-female connector on the pigtail of the enclosed yagi antenna. Be sure to tighten the connection but DO NOT over-torque as this will damage the connector.



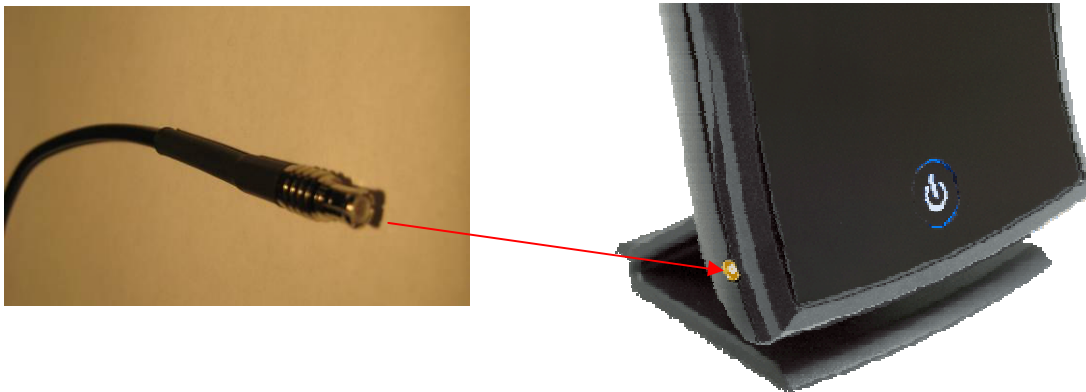
- 4) Using the supplied weatherproofing tape, wrap the tape generously around the connectors starting from the cable side and moving up towards the pigtail on the antenna. For each turn, stretch the weatherproofing tape so that it "moulds" itself to the components. Once the entire connection is covered, cut exceeding tape and firmly press the tape at seams so that the rubberized material becomes one solid piece. For better protection, add a layer of electrical tape over the weatherproofing tape and a tie-strap at both ends.



- 5) Secure the cable along the building.
- 6) Using a 1/2" drill bit, drill a hole thru the building where the cable will penetrate inside.
- 7) Push the SMA-male side of the cable thru the hole and inside the building. We suggest putting a small piece of tape over the cable to prevent particles lodging themselves in the connector.
- 8) Once inside, clean the connection making sure no foreign objects stayed inside the connector.
- 9) Continue securing the cable inside the building until it gets to the modem.
- 10) Connect the supplied SMA-female to MCX-male jumper cable to the SMA-male connector of the 240-series cable.



11) Connect the MCX-male connector on the jumper to the antenna port of the Ericsson W35 modem.



12) Verify signal level on modem. If required, pan or tilt enclosed yagi antenna until signal strength is optimal.

Installation tips for optimal signal level:

- These modems do not require direct line of sight to function, however any and all obstructions will attenuate the signal. Try getting above tree lines when possible (trees, especially pine trees, are like sponges for radio frequencies and will absorb signals).
- Contrary to a satellite antenna, these antennas have a very broad beam width (80° vs. a few degrees). Coarse adjustments of the enclosed yagi antenna are generally sufficient.
- Although your service provider may have a tower in your neighbourhood, the service you are trying to enhance may not actually come from that service provider. If your signal does not improve after installation, it is possible that you need to point the enclosed yagi antenna towards another service provider's cell tower.

