

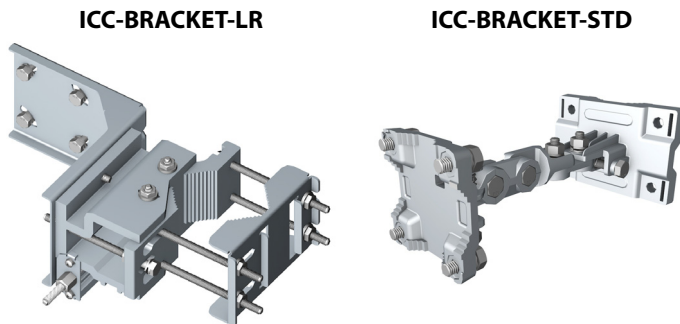
Quick Install Guide

MetroLinq™ Outdoor 60 GHz PTP/PTMP + 5 GHz
ICC-BRACKET-STD | ICC-BRACKET-LR

MetroLinq™ Mounting Brackets

The MetroLinq™ Standard Bracket and Long Range Precision Bracket are designed for wall and pole mounting (25 mm - 80 mm pole diameter). Choose what is best for your location and select hardware accordingly.

- ◆ Standard Bracket ICC-BRACKET-STD
- ◆ Long Range Precision Bracket ICC-BRACKET-LR



i **Note:** For helpful training and user-case information, please go to [ignitenet.com/support](https://www.ignitenet.com/support).

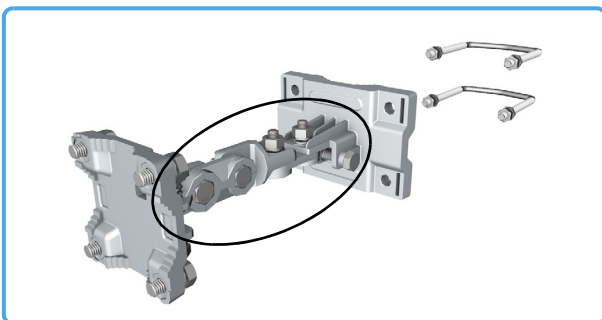
Tools/Items Required

- ◆ 13 mm Socket Wrench
- ◆ Flat-Head Screwdriver

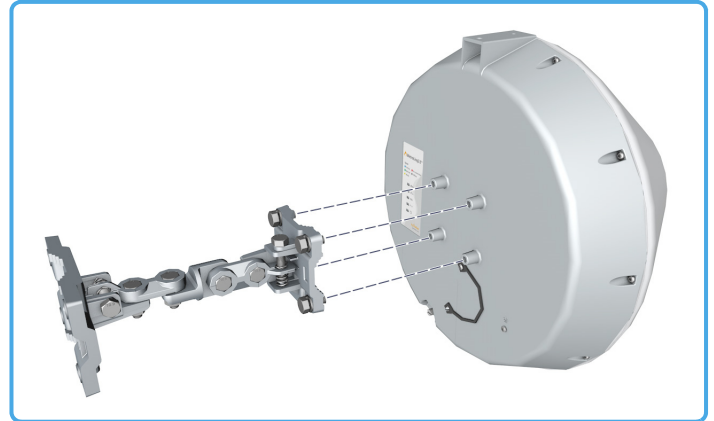
Options

- ◆ Alignment Scope ICC-SCOPE-9x50
- ◆ Impact Driver (highly recommended for ICC-BRACKET-STD)

Standard Bracket Assembly



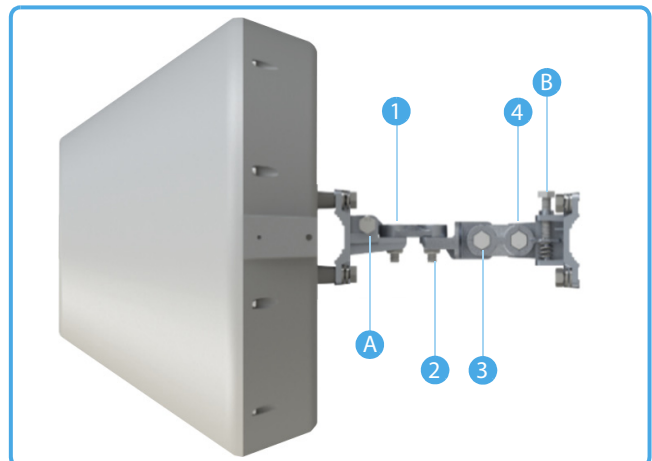
1 Ensure all four position-locking bolts on the Standard Bracket are tight before installing.



2 Install the Standard Bracket onto the MetroLinq™ using four M8 bolts, lock washers, and flat washers.

Standard Bracket Alignment

IgniteNet strongly recommends using the ICC-SCOPE-9x50 Alignment Scope for alignment. To install, place the scope on top of the MetroLinq™ housing and secure it with its thumb screw.



i **Note:** Do not adjust bolts A and B without first loosening 1 and 4 respectively.

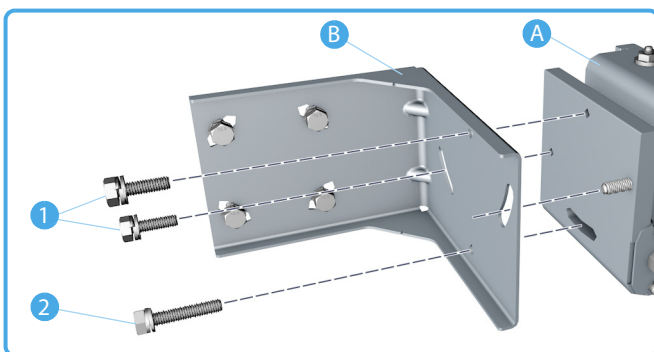
Note: It is recommended to only adjust one axis (vertical or horizontal) at a time.

- 1 Use a general visual estimate or the optical scope for initial alignment before starting on other adjustments. Loosen coarse adjustment bolts 2 and 3 to set the initial alignment. Don't worry, you don't have to be too accurate yet. After you have set the coarse alignment, tighten bolts 2 and 3.
 - 2 Loosen the horizontal fine-tune adjustment bolt 4. Use fine-tune bolt "B" to optimize the horizontal position. Re-tighten bolt 4.
 - 3 Loosen the vertical fine-tune adjustment bolt 1. Use fine-tune bolt "A" to optimize the vertical position. Re-tighten bolt 1.
 - 4 Repeat steps 2 and 3 until the alignment position is optimized.
- i Note:** It is highly recommended to use the built-in Aiming Mode that aids fine tuning by displaying the Receive Signal Strength Indicators (RSSI) for the 60 GHz radio (see "Using Aiming Mode" for more details).
- Note:** The 60 GHz signal strength LED can also be used to optimize the position to a lesser degree of precision than by using the Aiming Mode.
- Note:** It is usually quicker to begin adjustment on one end of the axis and slowly turn the fine-tune adjustment bolt while keeping track of the position and RSSI at the point of maximum signal strength.
- 5 Ensure all bolts are fully tightened, remove the alignment scope (if installed), and enjoy Gigabit interference-free wireless.

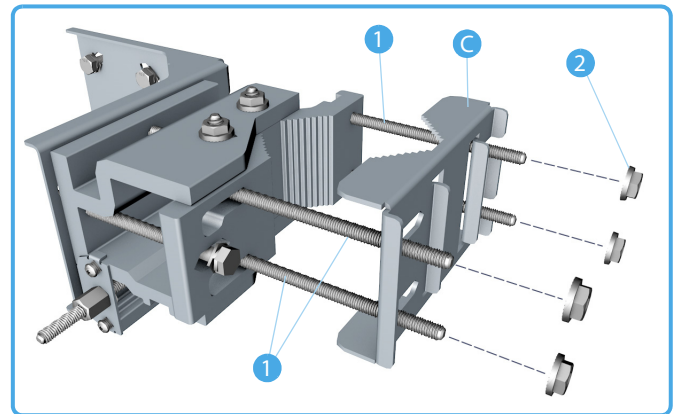
Long-Range Bracket Assembly

The Long-Range Bracket includes these items:

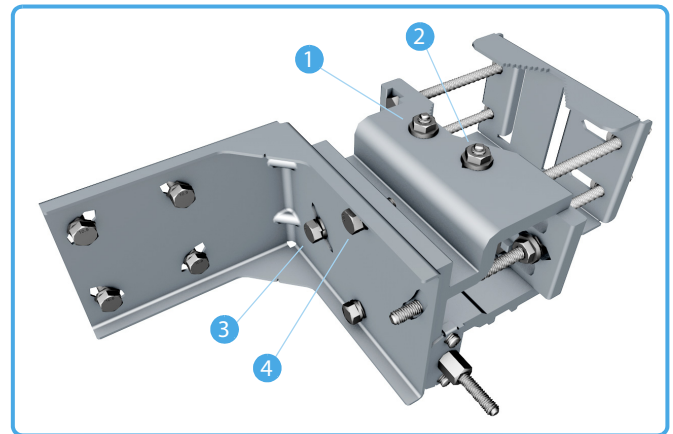
- ♦ 1 x precision-adjustment main assembly
- ♦ 1 x MetroLinq-attachment bracket
- ♦ 1 x pole-attachment bracket
- ♦ 4 x M8 125 mm bolts
- ♦ 1 x M8 40 mm bolt
- ♦ 2 x M8 25 mm bolts
- ♦ 4 x M8 15 mm bolts
- ♦ 7 x M8 flat washers
- ♦ 7 x M8 spring-lock washers
- ♦ 4 x M8 lock nuts



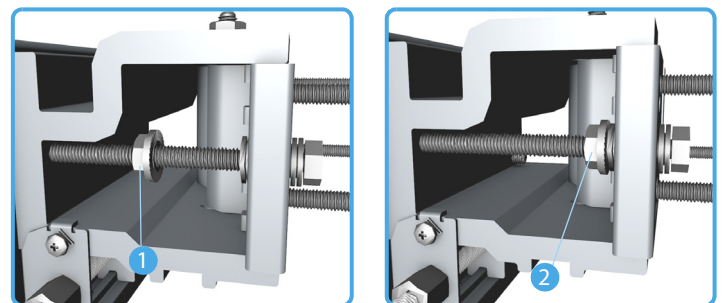
- 1 Attach the MetroLinq-attachment bracket (B) to the main assembly (A) using two M8 25 mm bolts (1), flat washers, and spring-lock washers.
- 2 Use the M8 40 mm bolt (2) with flat and spring-lock washers to attach the bracket to the vertical-adjustment mechanism.



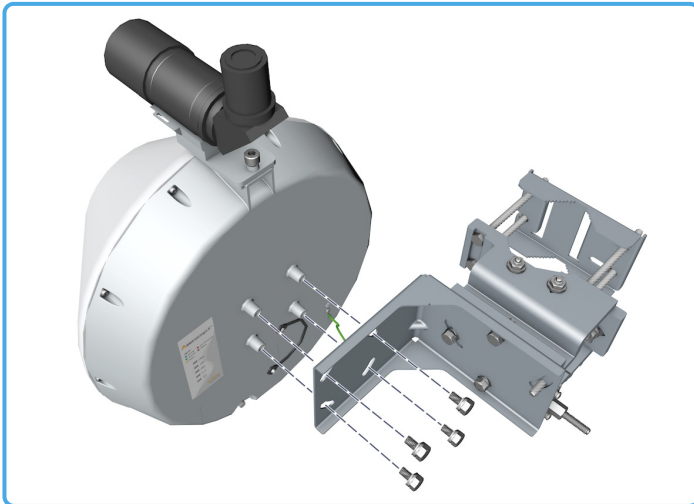
- 3 Seat the four M8 125 mm bolts (1) in the main assembly so that the bolt heads are held in the assembly grooves and are unable to turn.
- 4 Place the pole-attachment bracket (C) over the bolts and secure them with four M8 lock nuts (2). (The pole-attachment bracket needs to be removed and re-attached when mounting on a pole.)



- 5 Ensure all four position-locking bolts on the Long-Range Bracket are tight before installing.



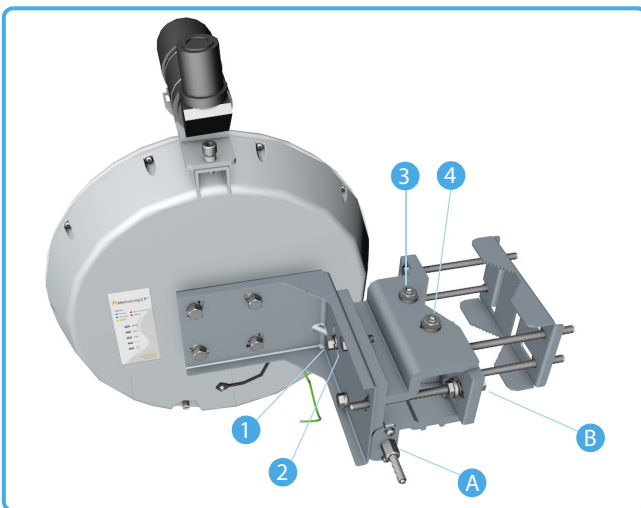
- 6 Before aiming, ensure the horizontal adjustment bolt and nut is tightened. The bracket is shipped with the nut in a loose position.



- 7 Install the Long-Range Bracket onto the MetroLinq™ using four M8 15 mm bolts, spring-lock washers, and flat washers.

Long-Range Bracket Alignment

IgniteNet strongly recommends using the ICC-SCOPE-9x50 Alignment Scope for alignment. To install, place the scope on top of the MetroLinq™ housing and secure it with its thumb screw.

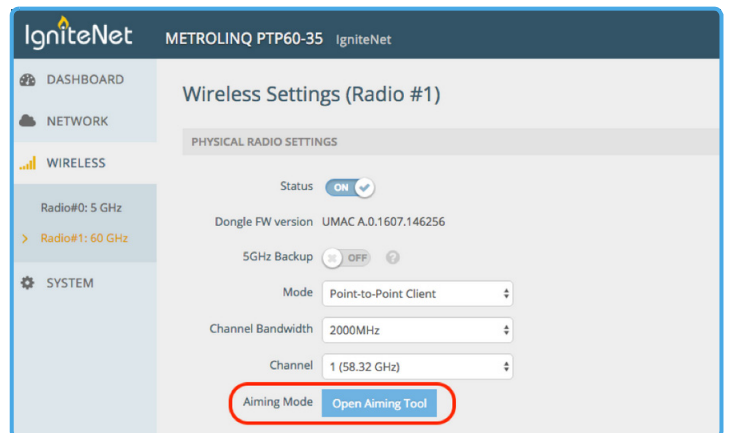


- Note:** Do not adjust bolts A and B without first loosening 1, 2, 3, and 4 respectively.
- Note:** It is recommended to only adjust one axis (A for vertical or B for horizontal) at a time.

- 1 Use a general visual estimate or the optical scope for initial alignment before starting on other adjustments.
 - 2 Loosen the horizontal adjustment bolts 3 and 4. Use fine-tune bolt "B" to optimize the horizontal position. Re-tighten bolts 3 and 4.
 - 3 Loosen the vertical adjustment bolts 1 and 2. Use fine-tune bolt "A" to optimize the vertical position. Re-tighten bolts 1 and 2.
 - 4 Repeat steps 2 and 3 until the alignment position is optimized.
- Note:** It is highly recommended to use the built-in Aiming Mode that aids fine tuning by displaying the Receive Signal Strength Indicators (RSSI) for the 60 GHz radio (see "Using Aiming Mode" for more details).
 - Note:** The 60 GHz signal strength LED can also be used to optimize the position to a lesser degree of precision than by using the Aiming Mode.
 - Note:** It is usually quicker to begin adjustment on one end of the axis and slowly turn the fine-tune adjustment bolt while keeping track of the position and RSSI at the point of maximum signal strength.
- 5 Ensure all bolts are fully tightened, remove the alignment scope (if installed), and enjoy Gigabit interference-free wireless.

Using Aiming Mode

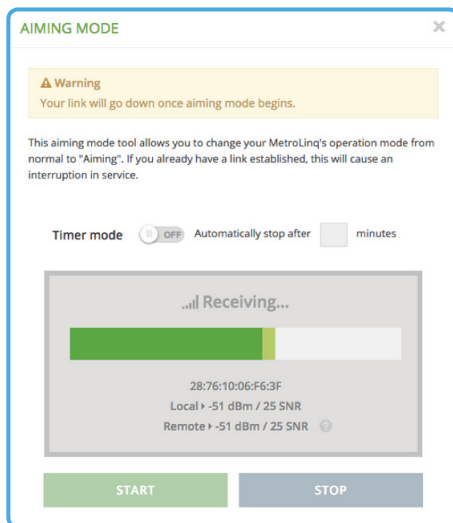
The Aiming Mode tool is available from the Wireless Settings page of the MetroLinq web management interface.



PTP Alignment

There are two operational modes for the radio, Master and Client. For Aiming Mode to operate normally, one side has to be the Master, and the other side has to be the Client. The Client is the side that starts the internal Aiming Mode process, and while the Master side will display the relevant signal information when the Aiming Mode is started on that side, the Client side is what drives the operation.

- 1 Before beginning alignment, configure the radios and make sure the channels on both sides are the same, the SSIDs are the same, and the ACK settings are set for the appropriate distance.
- 2 To use the Aiming Mode, set one side to Client and the other side to Master. On the Client side, click on the **Open Aiming Tool** button.



- 3 Once the Aiming Mode page pops up, click **Start** and it will start scanning for Master units.

When the Client sees a Master unit, it will display the MAC of the Master, the Local and Remote RSSI and SNR values, and a signal bar that shows the current signal strength and the highest level seen.

When logged into the web interface on the Master, you can also see this alignment information. It looks quite similar to the Client info, but this time showing the MAC of the Client radio.

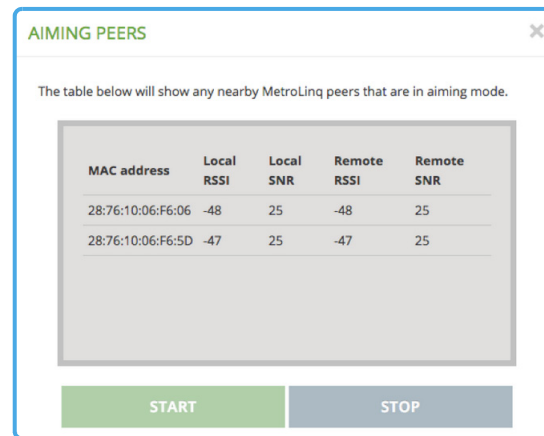
- Note:** Once you start the Aiming Mode from the Client side, the link will drop (if previously associated) and you will not be able to reach the other side via the link. If you are aiming one side at a time, you can set the timer on the Client side (while adjusting Master Side) to run for a number of minutes at a time. This will allow for the link to re-establish so you can reach the other side again after the timer expires.

Note: The MAC shown is the MAC address of the 60GHz interface of the other side, and not its main system MAC. You can find the 60GHz MAC address of a device in question by looking at the Wireless Status section of the Dashboard as seen below. We suggest noting all MAC's used for a link during initial updating and configuration to keep in your records. If the Client sees two Master units in the scan, both will be displayed with corresponding MAC addresses and signal bars.

- 4 When the Aiming Mode is operational, begin making your alignment adjustments. Be sure to make small adjustments, and mark or remember the positioning when you first start to see link numbers reported so you can always return to that point if you lose alignment.

PTMP Alignment

Using Aiming Mode for PTMP alignment is quite similar to PTP alignment. The PTMP Client is identical to the PTP Client. The PTMP Master is slightly different however, in that instead of displaying a signal bar for a single Client, it can show multiple Aiming Peers at one time. This is done so that you can monitor multiple Client devices being aimed at the Master from the Master side at once.



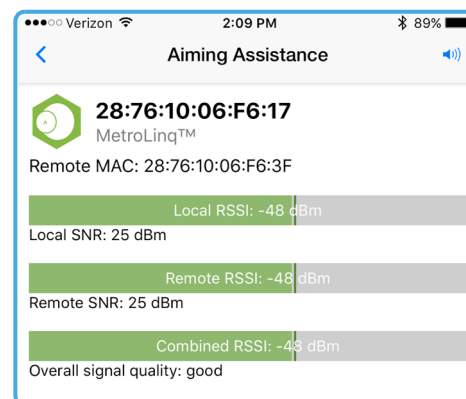
Using Linq Assist™

The Linq Assist app (available for iOS and Android operating systems) puts the power of the Aiming Mode in the palm of your hand. Linq Assist allows you to use your mobile device to quickly and easily see alignment information while directly making alignment adjustments without handling a bulky laptop or relaying signal levels back and forth from someone on the ground.

Insert a Bluetooth USB dongle into the MetroLinq that you want to aim, and then Linq Assist is able to communicate with the MetroLinq radio itself to poll and display local and remote signals in real time.

- 1 Install a USB Bluetooth dongle in the MetroLinq's USB port.
- 2 Open the Linq Assist app and click on the radio MAC address of the MetroLinq device into which you have installed the Bluetooth USB dongle. The app displays alignment information from the radio.
- 3 Slowly begin making alignment adjustments, and once the local end sees signal information from the other side, it will display on the app.

The app displays the local signal, remote signal, and a combined signal strength. It will also sound an audio tone (the faster the tone interval, the stronger the signal) which can be muted if desired from the volume button on the top right-hand corner.



- 4 Once alignment is complete, remove the USB Bluetooth dongle from the MetroLinq's USB port. Your link will establish and you can pass data across it.

Note: The Bluetooth USB dongle used is a standard Bluetooth 4.0 USB dongle you can purchase from a number of sources. Most units tested from common sources such as Amazon have worked well.

Note: As the app references the radio MAC address, be sure to take note of the MACs in use during initial configuration so that you have it on hand when aligning.

Note: The app will display signal information from radios in either of the four modes: PTP-Client, PTP-Master, PTMP-Client, or PTMP-Master. The only main difference is that when using it with a PTMP-Master, the app will only show a single Aiming Peer that has the strongest current signal (whereas the web interface will show all Aiming Peers).

Bracket Guide

Product	Ships With	Works With ?			
		ICC-BRACKET-STD	ICC-BRACKET-LR	ICC-BRACKET-WP	ICC-BRACKET-WW
ML-60-35	ICC-BRACKET-STD	Yes	Yes	No	No
ML-60-19	ICC-BRACKET-STD	Yes	Yes	No	No
ML2.5-60-35	None	Yes	Yes	No	No
ML2.5-60-19	None	Yes	Yes	No	No
ML2.5-60-BF-18	None	Yes	Yes	No	No
ML-60-LW	ICC-BRACKET-WP	Yes	Yes	Yes	Yes
ML-60-LW-DO	ICC-BRACKET-WP	Yes	Yes	Yes	Yes
ML-60-10G-360	ICC-BRACKET-OMNI	Yes	Yes	No	No
SP-W2-AC1200	ICC-BRACKET-WW	Yes*	Yes*	Yes	Yes
SP-W2M-AC1200	Command Strips	No	No	No	No
SS-W2-AC2600	ICC-BRACKET-WW	Yes*	Yes*	Yes	Yes

* Works when paired with ICC-BRACKET-WP

For more configuration details and training, please go to ignitenet.com/support