Quick Start Guide

MetroLinq™ Outdoor 60GHz PTP + 5GHz + 2.4GHz

ML1-60-35 | ML1-60-19

Welcome to MetroLinq™

Interference-Free Gigabit Wireless

Unboxing

After opening the box, you will find…

- MetroLinq™ (ML1-60-35, or ML1-60-19)
- PoE Power Supply
- Power Cable

Tools/Items Required

- 13 mm Socket Wrench
- Flat-Head Screwdriver
- Ethernet Cables

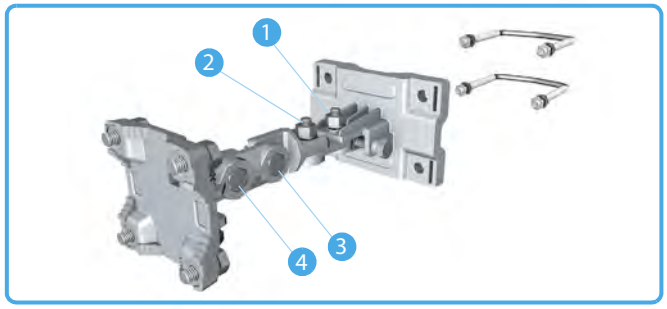
Options

- Standard Bracket ICC-BRACKET-STD
- Long Range Precision Bracket ICC-BRACKET-LR
- Alignment Scope ICC-SCOPE-9x50

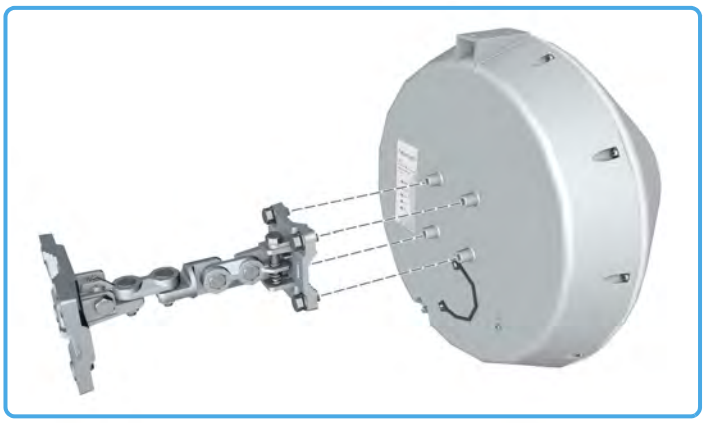
For helpful training and user-case information, please go to ignitenet.com/support

Assembly

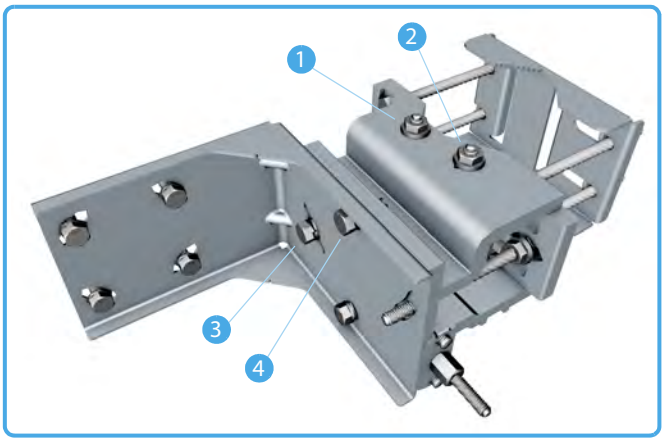
The MetroLinq™ Standard Bracket and Long Range Precision Bracket (both ordered separately) are designed for wall and pole mounting (25 mm - 80 mm pole diameter). Choose what is best for your location and select hardware accordingly.



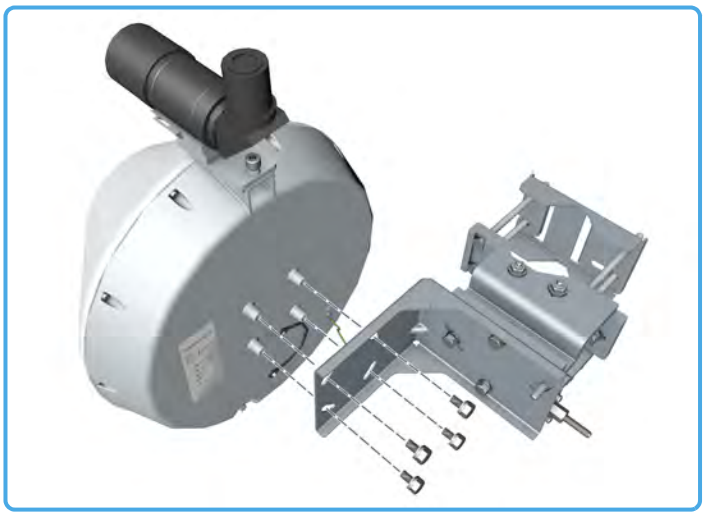
1. Ensure all four position-locking bolts on the Standard Bracket are tight before installing.



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



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



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

Grounding

1. Ensure the structure on which the unit is to be mounted is properly grounded and in compliance with local and national electrical codes.
2. Verify that there is a good electrical connection to a grounding point (no paint or isolating surface treatment). Use the included (M4) screw to attach a grounding wire (not included) to the grounding point on the unit, and then to ground.

Caution: The earth connection must not be removed unless all supply connections have been disconnected.

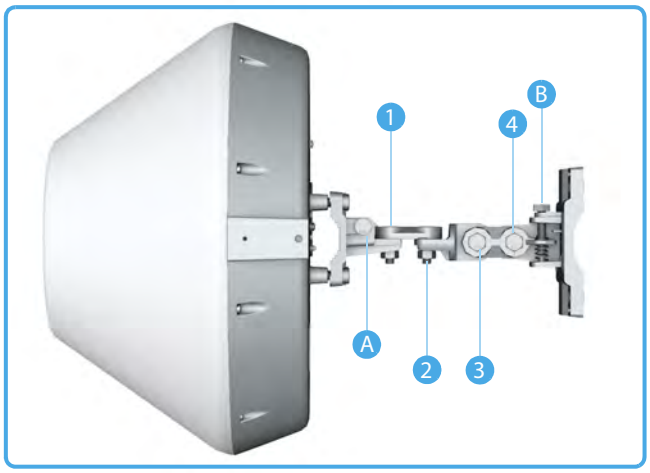
Power Up

1. Connect an Ethernet cable from the MetroLinq™ ETH PoE IN port to the PoE port on the power supply.

2. Connect Ethernet cable from the “LAN” port on the power supply to your LAN device.
3. Connect the power cord to a nearby AC power source.

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.



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

1. Loosen coarse adjustment bolts 2 and 3 and set 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. Initial alignment should be based on optical or visual alignment. After you achieve this, repeat steps 2 and 3 while watching the 60 GHz signal strength LED. Optimize position to the LED indicator.
5. Ensure all bolts are fully tightened, remove the alignment scope (if installed), and enjoy Gigabit interference-free wireless.

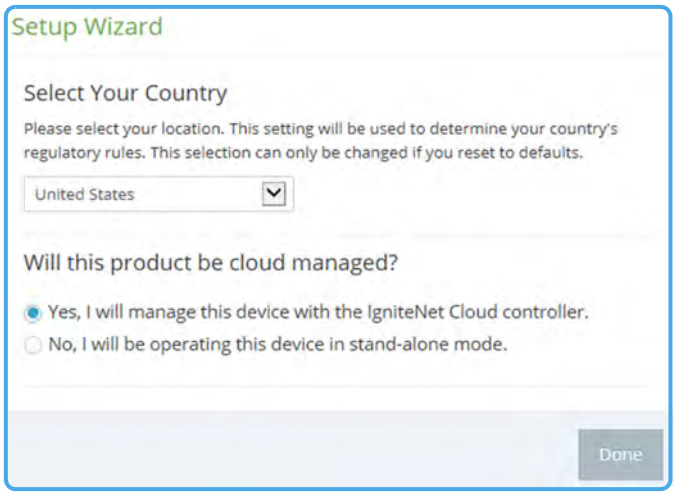
Software

1. To configure your MetroLinq, connect your computer to the device through the LAN port of the power supply or directly to the ETH1 port on the device.

   The default IP mode is DHCP client, so if the device obtains an address from a DHCP server on the network, then use that IP (you can use the Discovery Tool from the IgniteNet support site to find the DHCP address). If the device does not obtain a DHCP address, it reverts to the fallback IP of 192.168.1.20 and you can access it on that IP. Direct your web browser to the correct IP and log in.

   username: root
   password: admin123

2. After you have logged in, follow the steps in the Setup Wizard to configure the device for your network.



2. After you have logged in, follow the steps in the Setup Wizard to configure the device for your network.

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

Safety and Regulatory Information

FCC Class B

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 off and on, the user is encouraged to try to correct the interference by one of the following measures:

- 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 to 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 this equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

For product available in the USA/Canada market, only channel 1–11 can be operated. Selection of other channels is not possible.

IMPORTANT NOTE:
FCC Radiation Exposure Statement:

For Model Name : ML1-60-35

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 65 cm between the radiator & your body.

Industry Canada

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

For product available in the USA/Canada market, only channel 1~11 can be operated. Selection of other channels is not possible.

Pour les produits disponibles aux États-Unis / Canada du marché, seul le canal 1 à 11 peuvent être exploités. Sélection d'autres canaux n'est pas possible.

IMPORTANT NOTE:
IC Radiation Exposure Statement:

For Model Name : ML1-60-35

This equipment complies with IC RSS-102 radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 66 cm betweenthe radiator & your body.

Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 66 cm de distance entre la source de rayonnement et votre corps.

This radio transmitter [3857A-ML16035] has been approved by Innovation, Science and Economic Development Canada to operate with the antenna types listed below, with the maximum permissible gain indicated. Antenna types not included in this list that have a gain greater than the maximum gain indicated for any type listed are strictly prohibited for use with this device.

Le présent émetteur radio (3857A-ML16035) a été approuvé par Innovation, Sciences et Développement économique Canada pour fonctionner avec les types d'antenne énumérés ci-dessous et ayant un gain admissible maximal d'antenne. Les types d'antennes non inclus dans cette liste qui ont un gain supérieur au gain maximal indiqué pour tout type listé sont strictement interdits pour une utilisation avec cet appareil.

WLAN Function:

Set	Brand	P/N (Model Name)	Antenna Type	Connector	Antenna Gain (dBi)		Cable Loss (dB)		True Gain (dBi)	
					2.4GHz	5GHz	2.4GHz	5GHz	2.4GHz	5GHz
1	FT-RF	OS-242509-NM	Dipole	N-Male	9	-	1.18	-	7.82	-
2	Accton	120G00000174X	Dish Ant.	MMCX	-	20	-	-	-	20
3	Accton	120G00000175X	Dish Ant.	MMCX	-	13.4	-	-	-	13.4

60GHz Function:

Ant.	Brand	Part Number	Antenna Type	Connector	Gain (dBi)
1	Accton	123400001485A	Dish Ant.		42
2	Accton	123400001486A	Dish Ant.	N/A	38

CE Statement

This equipment complies with EU radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm between the radiator and your body.

All operational modes:
2.4 GHz: 802.11b, 802.11g, 802.11n (HT20), 802.11n (HT40)
5 GHz: 802.11a, 802.11n (HT20), 802.11n (HT40), 802.11ac (VHT20), 802.11ac (VHT40), 802.11ac (VHT80), 802.11ac (VHT160)

The frequency and maximum transmitted power limit in EU are listed as below:
2412-2472 MHz: 20 dBm
5500-5700 MHz: 30 dBm
57-66 GHz

CE

Europe - EU Declaration of Conformity

Hereby, **IgniteNet Inc.** declares that the radio equipment type: MetroLinq™ Outdoor 60GHz PTP + 5GHz + 2.4GHz, ML1-60-35 and ML1-
60-19, is in compliance with Directive 2014/53/EU and Directive 2014/35/EU.

The full text of the EU declaration of conformity is available at the following Internet address: www.ignitenet.com -> support.

Warnings and Cautionary Messages

Warning: This product does not contain any serviceable user parts.
Warning: Installation and removal of the unit must be carried out by qualified personnel only.
Warning: When connecting this device to a power outlet, connect the field ground lead on the tri-pole power plug to a valid earth ground line to prevent electrical hazards.

Caution: Wear an anti-static wrist strap or take other suitable measures to prevent electrostatic discharge when handling this equipment.
Caution: Do not plug a phone jack connector in the RJ-45 port. This may damage this device.
Caution: Use only twisted-pair cables with RJ-45 connectors that conform to FCC standards.

Hardware Specifications

Chassis	
Size (L x W x H:)	ML1-60-35: 350 x 350 x 200 mm (13.78 x 13.78 x 7.87 in.) ML1-60-19: 190 x 190 x 120 mm (7.48 x 7.48 x 4.72 in.)
Weight	ML1-60-35: 3.5 kg (7.72 lb) ML1-60-19: 2 kg (4.41 lb)
Temperature	Operating: -30 °C to 55 °C (-22 °F to 131 °F) Storage: -40 °C to 70 °C (-40 °F to 158 °F)
Humidity	Operating: 10% to 90% (non-condensing)
Network Interfaces	
Ports	**ETH** RJ-45 Port: 1000BASE-T, passive PoE **SFP** Port: 1000BASE-X
60 GHz Radio	Proprietary
5 GHz Radio	IEEE 802.11ac
Radio Frequencies	5150 – 5250 MHz (FCC) 5725 – 5850 MHz (FCC) 5745 – 5825 MHz (China) 5180 – 5320 MHz (ETSI) 5500 – 5700 MHz (ETSI) 58.32 – 65.88 GHz
Power Supply	
PoE	24–48 VDC passive PoE
Power Consumption	24 W maximum
Regulatory Compliances	
Radio	EN 300 328 V1.8.1:2012 EN 301 893 V1.7.1:2012 EN 301 489-1 V1.9.2 (2011-09) EN 301 489-17 V2.2.1:2012 FCC Part 15C 15.247/15.207 (2.4-2.4835GHz) FCC Part 15E 15.407 (5.150GHz-5.250GHz, 5.725-5.850GHz)
Emissions	EN 55022 2010+AC:2011 EN 61000-3-2 2006+A1:2009+A2:2009 FCC Class B Part 15
Immunity	EN 55024 : 2010 EN 61000-4-2 : 2009