



LiteBeam[®] M5

5 GHz, 23 dBi airMAX[®] CPE
with InnerFeed[®] Technology

Model: LBE-M5-23

QUICK START GUIDE

Introduction

Thank you for purchasing the Ubiquiti Networks® LiteBeam®. This Quick Start Guide is designed to guide you through installation and also includes warranty terms.

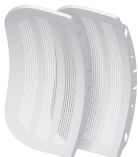
Package Contents



Antenna Feed



Center Reflector Panel



Side Reflector Panels
(Qty. 2)



Feed Receiver



Ball Joint Mount



Metal Strap



Set Screws
(Qty. 2)



PoE Adapter
(25V, 0.2A)



Power Cord



Quick Start Guide

Products may be different from pictures and are subject to change without notice.

TERMS OF USE: Ubiquiti radio devices must be professionally installed. Shielded Ethernet cable and earth grounding must be used as conditions of product warranty. TOUGHcable™ is designed for outdoor installations. It is the professional installer's responsibility to follow local country regulations, including operation within legal frequency channels, output power, and Dynamic Frequency Selection (DFS) requirements.

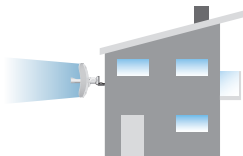
Installation Requirements

- 7 mm socket wrench or screwdriver
- Shielded Category 5 (or above) cabling should be used for all wired Ethernet connections and should be grounded through the AC ground of the PoE.

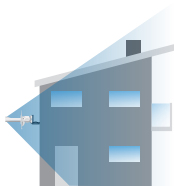
We recommend that you protect your networks from harmful outdoor environments and destructive ESD events with industrial-grade, shielded Ethernet cable from Ubiquiti Networks. For more details, visit www.ubnt.com/toughcable

Application Examples

The LiteBeam mounted outdoors with the reflector installed provides directional outdoor coverage (gain reflector-dependent).



The LiteBeam mounted outdoors without the reflector installed provides outdoor-to-indoor coverage using the 3 dBi *Antenna Feed* only.



Hardware Overview

Bottom View

InnerFeed[®]
Technology

Ethernet
Port

Reset
Button



Antenna Feed



Reflector Assembly

Securing
Arms

Port Cover



Feed Receiver

Lock Nut



Ball Joint Mount

Ports

Ethernet Port Supports 10/100 connections and passive PoE. This port should be connected to the LAN and DHCP server.

Reset Button To reset to factory defaults, press and hold the *Reset* button for more than 10 seconds while the device is powered on. The device may also be reset remotely using the auxiliary *Reset* button located on the bottom of the *PoE Adapter*.

LEDs



Wireless Connection The LED will light green when a wireless connection is established.



Ethernet The LED will light steady green when an active Ethernet connection is made and flash when there is activity.



Power The LED will light green when the device is connected to a power source.

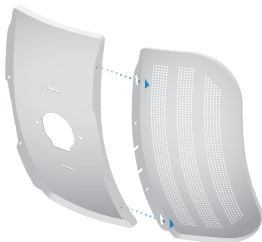
Hardware Installation

The LiteBeam was designed for outdoor use and quick mounting on a pole. Alternatively, the LiteBeam may be mounted on a wall using an optional Wall Mount Kit, model NBE-WMK (sold separately).

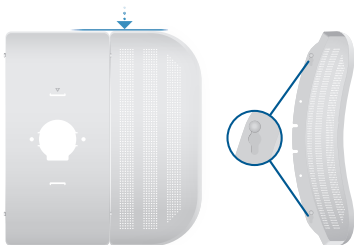


Perform the steps for the appropriate installation:

1. Assemble the antenna reflector by attaching the *Side Reflector Panels* to the *Center Reflector Panel*:
 - a. Insert the heads of the two mounting studs on the *Center Reflector Panel* into the large opening of the slotted holes of a *Side Reflector Panel*.

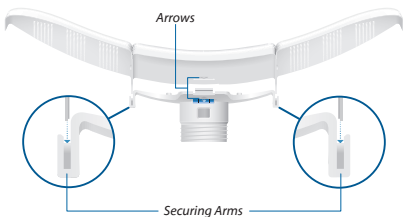


- b. Slide the *Side Reflector Panel* down until the top edges of the panels align. The *Side Reflector Panel* is captured when both heads of the mounting studs are positioned over the narrow opening of the slotted holes.

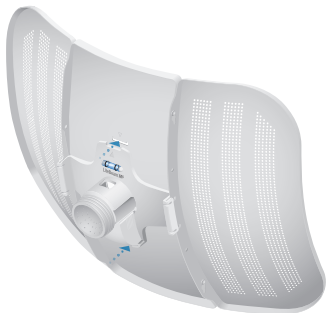


- c. Repeat the assembly for the other *Side Reflector Panel*.

2. Hold the reflector assembly by hand (do not use a tabletop or flat surface) and insert the *Feed Receiver* into the reflector assembly to secure the panels:
- Align the arrows on the *Center Reflector Panel* and the *Feed Receiver*, and insert both edges of the *Side Reflector Panels* and *Center Reflector Panels* into the securing arms of the *Feed Receiver*.



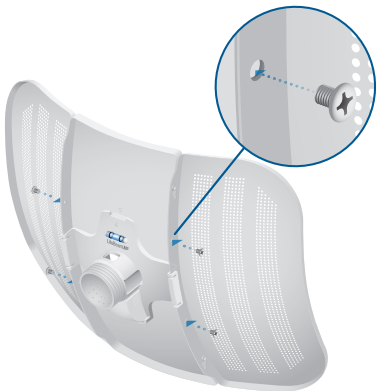
- Insert the *Feed Receiver* into the *Center Reflector Panel* by pressing the top and bottom snap hooks into the slots of the *Center Reflector Panel*.



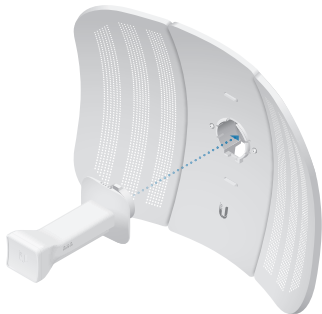
- !** **WARNING:** Do not install the *Feed Receiver* into the reflector assembly by pushing down onto a tabletop or other flat surface as this can deform the panels. Hold the reflector assembly by hand.



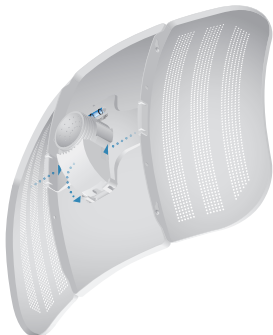
- c. (Optional) For additional support, attach four M3x4 self-tapping screws (not included) to the antenna assembly.



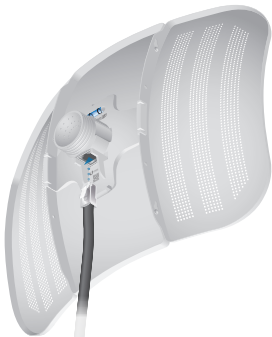
3. Insert the *Antenna Feed* into the *Feed Receiver* until the feed locks into place.



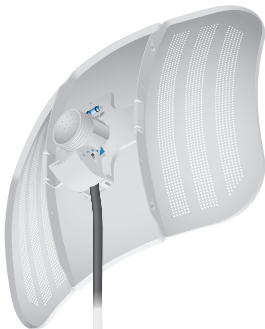
4. Press both sides of the *Port Cover* and detach it from the *Feed Receiver*.



5. Connect an Ethernet cable to the *Ethernet Port*.



6. Reattach the *Port Cover*.



Pole Mounting

1. Attach the *Ball Joint Mount* to the *Feed Receiver* by turning the *Lock Nut* clockwise by hand. Do not tighten the nut.



2. Open the *Metal Strap* and feed it through the base of the *Ball Joint Mount*.



3. Wrap the *Metal Strap* around the pole. Use a 7 mm socket wrench or screwdriver to turn the screw clockwise and securely fasten the strap to the pole.



Wall Mounting

The LiteBeam must be mounted directly to a wood stud or other structurally stable surface using the Wall Mount Kit, model NBE-WMK (sold separately).



Wall Mount Screw



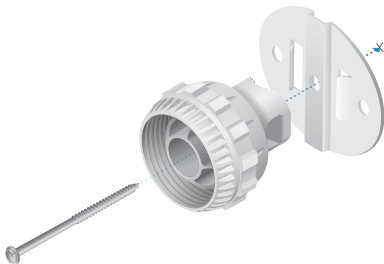
Wall Mount Plate



Note: Center screw included. Two optional screws (not included) may provide additional stability.

1. Locate the mounting point on the center of a wall stud or other structurally stable surface.
2. If needed, drill a pilot hole for the *Wall Mount Screw*.

3. Insert the *Wall Mount Screw* through the *Ball Joint Mount*, the center hole of the *Wall Mount Plate*, and into the wall. Securely fasten the screw.

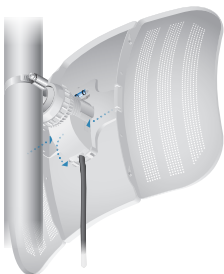


4. Attach the *Feed Receiver* to the *Ball Joint Mount* by turning the *Lock Nut* by hand. Do not tighten the nut.

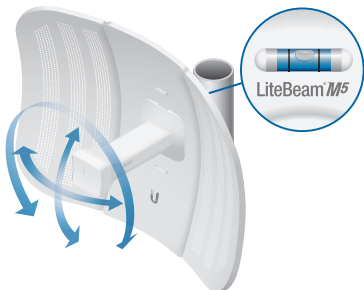


Aiming

1. Remove the *Port Cover* and then loosen the *Lock Nut* on the *Ball Joint Mount*.

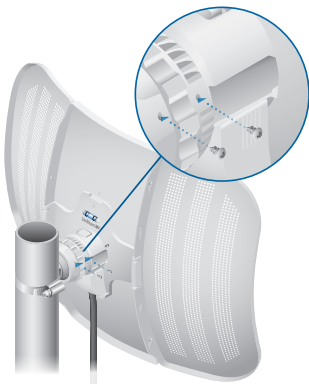


2. Aim the *Antenna Feed* toward the other end of the wireless link. Use the bubble level to ensure level alignment, and then lock the aim by hand-tightening the *Lock Nut*.



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3. Replace the *Port Cover*.
4. Locate the two holes on the *Lock Nut*, and fasten a *Set Screw* into each hole to securely lock the aim.



Connecting Power over Ethernet

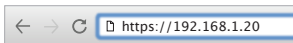
1. Connect the Ethernet cable from the device to the **POE** port on the *PoE Adapter*.
2. Connect an Ethernet cable from your LAN to the **LAN** port on the *PoE Adapter*.
3. Connect the *Power Cord* to the *PoE Adapter*, and then plug the *Power Cord* into a power outlet.



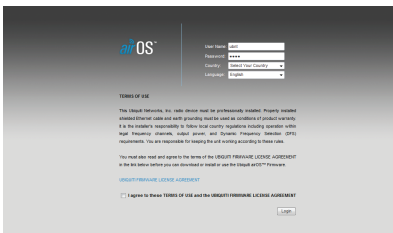
Accessing airOS

Verify connectivity in the airOS® Configuration Interface.

1. Connect your host machine to the device via Ethernet.
2. Configure the Ethernet adapter on your host system with a static IP address on the 192.168.1.x subnet.
3. Launch your web browser. Type **https://192.168.1.20** in the address field. Press **enter** (PC) or **return** (Mac).



4. Enter **ubnt** in the *Username* and *Password* fields. Select your *Country* and *Language*. You must agree to the *Terms of Use* and the *Ubiquiti Firmware License Agreement* to use the product. Click **Login**.



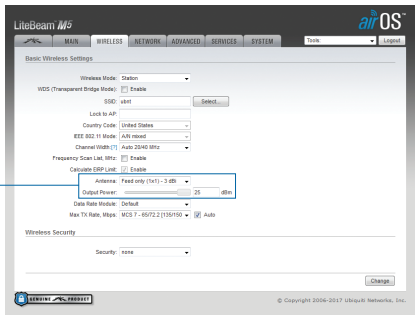
Note: The *Country* setting for U.S. product versions is restricted to a choice of Canada, Puerto Rico, or the U.S. to ensure compliance with FCC/IC regulations.

The airOS Configuration Interface will appear, allowing you to customize your settings as needed. For additional details on the airOS Configuration Interface, refer to the User Guide available at www.ubnt.com/download/airmax

You can also manage your device using the Ubiquiti Network Management System. Setup using the UNMS™ app requires the U-Installer, sold separately.

Installer Compliance Responsibility

Devices must be professionally installed and it is the professional installer's responsibility to make sure the device is operated within local country regulatory requirements.



Since Ubiquiti Networks equipment can be paired with a variety of antennas and cables, the *Antenna Gain* and *Output Power* fields are provided to the professional installer to assist in meeting regulatory requirements.

Specifications

LBE-M5-23	
Dimensions	347 x 260 x 208 mm (13.66 x 10.24 x 8.19")
Weight	0.7 kg (1.54 lb)
Operating Frequency Worldwide USA	5150 - 5875 MHz 5150 - 5250, 5725 - 5850 MHz
Networking Interface	(1) 10/100 Ethernet Port
Antenna Gain	23 dBi
Max. Power Output	25 dBm
Max. Power Consumption	4W
Power Supply	25V, 0.2A PoE Adapter
Power Method	Passive PoE (Pairs 4, 5+; 7, 8 Return)
Wind Survivability	200 km/h (125 mph)
Wind Loading	176.86 N @ 200 km/h (39.76 lbf @ 125 mph)
ESD/EMP Protection	±24kV Contact / Air
Shock and Vibration	ETSI300-019-1.4
Operating Temperature	-40 to 70° C (-40 to 158° F)
Operating Humidity	5 to 95% Noncondensing
Certifications	CE, FCC, IC

Safety Notices

1. Read, follow, and keep these instructions.
2. Heed all warnings.
3. Only use attachments/accessories specified by the manufacturer.



WARNING: Do not use this product in a location that can be submerged by water.



WARNING: Avoid using this product during an electrical storm. There may be a remote risk of electric shock from lightning.

Electrical Safety Information

1. Compliance is required with respect to voltage, frequency, and current requirements indicated on the manufacturer's label. Connection to a different power source than those specified may result in improper operation, damage to the equipment or pose a fire hazard if the limitations are not followed.
2. There are no operator serviceable parts inside this equipment. Service should be provided only by a qualified service technician.
3. This equipment is provided with a detachable power cord which has an integral safety ground wire intended for connection to a grounded safety outlet.
 - a. Do not substitute the power cord with one that is not the provided approved type. Never use an adapter plug to connect to a 2-wire outlet as this will defeat the continuity of the grounding wire.
 - b. The equipment requires the use of the ground wire as a part of the safety certification, modification or misuse can provide a shock hazard that can result in serious injury or death.
 - c. Contact a qualified electrician or the manufacturer if there are questions about the installation prior to connecting the equipment.
 - d. Protective earthing is provided by Listed AC adapter. Building installation shall provide appropriate short-circuit backup protection.
 - e. Protective bonding must be installed in accordance with local national wiring rules and regulations.

Limited Warranty

UBIQUITI NETWORKS, Inc (“UBIQUITI NETWORKS”) warrants that the product(s) furnished hereunder (the “Product(s)”) shall be free from defects in material and workmanship for a period of one (1) year from the date of shipment by UBIQUITI NETWORKS under normal use and operation. UBIQUITI NETWORKS’ sole and exclusive obligation and liability under the foregoing warranty shall be for UBIQUITI NETWORKS, at its discretion, to repair or replace any Product that fails to conform to the above warranty during the above warranty period. The expense of removal and reinstallation of any Product is not included in this warranty. The warranty period of any repaired or replaced Product shall not extend beyond its original term.

Warranty Conditions

The above warranty does not apply if the Product:

- (I) has been modified and/or altered, or an addition made thereto, except by Ubiquiti Networks, or Ubiquiti Networks’ authorized representatives, or as approved by Ubiquiti Networks in writing;
- (II) has been painted, rebranded or physically modified in any way;
- (III) has been damaged due to errors or defects in cabling;
- (IV) has been subjected to misuse, abuse, negligence, abnormal physical, electromagnetic or electrical stress, including lightning strikes, or accident;
- (V) has been damaged or impaired as a result of using third party firmware;
- (VI) has no original Ubiquiti MAC label, or is missing any other original Ubiquiti label(s); or
- (VII) has not been received by Ubiquiti within 30 days of issuance of the RMA.

In addition, the above warranty shall apply only if: the product has been properly installed and used at all times in accordance, and in all material respects, with the applicable Product documentation; all Ethernet cabling runs use CAT5 (or above), and for outdoor installations, shielded Ethernet cabling is used, and for indoor installations, indoor cabling requirements are followed.

Returns

No Products will be accepted for replacement or repair without obtaining a Return Materials Authorization (RMA) number from UBIQUITI NETWORKS during the warranty period, and the Products being received at UBIQUITI NETWORKS’ facility freight prepaid in accordance with the RMA process of UBIQUITI NETWORKS. Products returned without an RMA number will not be processed and will be returned freight collect or subject to disposal. Information on the RMA process and obtaining an RMA number can be found at: www.ubnt.com/support/warranty

Disclaimer

EXCEPT FOR ANY EXPRESS WARRANTIES PROVIDED HEREIN, UBIQUITI NETWORKS, ITS AFFILIATES, AND ITS AND THEIR THIRD PARTY DATA, SERVICE, SOFTWARE AND HARDWARE PROVIDERS HEREBY DISCLAIM AND MAKE NO OTHER REPRESENTATION OR WARRANTY OF ANY KIND, EXPRESS, IMPLIED OR STATUTORY, INCLUDING, BUT NOT LIMITED TO, REPRESENTATIONS, GUARANTEES, OR WARRANTIES OF MERCHANTABILITY, ACCURACY, QUALITY OF SERVICE OR RESULTS, AVAILABILITY, SATISFACTORY QUALITY, LACK OF VIRUSES, QUIET ENJOYMENT, FITNESS FOR A PARTICULAR PURPOSE AND NON-INFRINGEMENT AND ANY WARRANTIES ARISING FROM ANY COURSE OF DEALING, USAGE OR TRADE PRACTICE IN CONNECTION WITH SUCH PRODUCTS AND SERVICES. BUYER ACKNOWLEDGES THAT NEITHER UBIQUITI NETWORKS NOR ITS THIRD PARTY PROVIDERS CONTROL BUYER'S EQUIPMENT OR THE TRANSFER OF DATA OVER COMMUNICATIONS FACILITIES, INCLUDING THE INTERNET, AND THAT THE PRODUCTS AND SERVICES MAY BE SUBJECT TO LIMITATIONS, INTERRUPTIONS, DELAYS, CANCELLATIONS AND OTHER PROBLEMS INHERENT IN THE USE OF COMMUNICATIONS FACILITIES. UBIQUITI NETWORKS, ITS AFFILIATES AND ITS AND THEIR THIRD PARTY PROVIDERS ARE NOT RESPONSIBLE FOR ANY INTERRUPTIONS, DELAYS, CANCELLATIONS, DELIVERY FAILURES, DATA LOSS, CONTENT CORRUPTION, PACKET LOSS, OR OTHER DAMAGE RESULTING FROM ANY OF THE FOREGOING. In addition, UBIQUITI NETWORKS does not warrant that the operation of the Products will be error-free or that operation will be uninterrupted. In no event shall UBIQUITI NETWORKS be responsible for damages or claims of any nature or description relating to system performance, including coverage, buyer's selection of products (including the Products) for buyer's application and/or failure of products (including the Products) to meet government or regulatory requirements.

Limitation of Liability

EXCEPT TO THE EXTENT PROHIBITED BY LOCAL LAW, IN NO EVENT WILL UBIQUITI OR ITS SUBSIDIARIES, AFFILIATES OR SUPPLIERS BE LIABLE FOR DIRECT, SPECIAL, INCIDENTAL, CONSEQUENTIAL OR OTHER DAMAGES (INCLUDING LOST PROFIT, LOST DATA, OR DOWNTIME COSTS), ARISING OUT OF THE USE, INABILITY TO USE, OR THE RESULTS OF USE OF THE PRODUCT, WHETHER BASED IN WARRANTY, CONTRACT, TORT OR OTHER LEGAL THEORY, AND WHETHER OR NOT ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

Note

Some countries, states and provinces do not allow exclusions of implied warranties or conditions, so the above exclusion may not apply to you. You may have other rights that vary from country to country, state to state, or province to province. Some countries, states and provinces do not allow the exclusion or limitation of liability for incidental or consequential damages, so the above limitation may not apply to you. EXCEPT TO THE EXTENT ALLOWED BY LOCAL LAW, THESE WARRANTY TERMS DO NOT EXCLUDE, RESTRICT OR MODIFY, AND ARE IN ADDITION TO, THE MANDATORY STATUTORY RIGHTS APPLICABLE TO THE LICENSE OF ANY SOFTWARE (EMBEDDED IN THE PRODUCT) TO YOU. The United Nations Convention on Contracts for the International Sale of Goods shall not apply to any transactions regarding the sale of the Products.

Compliance

FCC

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the 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.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operations of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

This radio transmitter (FCC ID: SWX-LBE5M) has been approved by FCC to operate with the antenna types listed below with the maximum permissible gain and required antenna impedance for each antenna type indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

- Grid antenna, gain: 23 dBi

ISED Canada

CAN ICES-3(A)/NMB-3(A)

This device complies with ISED Canada licence-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.

This radio transmitter (IC: 6545A-LBE5M) has been approved by ISED Canada to operate with the antenna types listed below with the maximum permissible gain and required antenna impedance for each antenna type indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

- Grid antenna, gain: 23 dBi

CAN ICES-3(A)/NMB-3(A)

Le présent appareil est conforme aux CNR d'ISDE 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;
2. l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Le présent émetteur radio (IC : 6545A-LBE5M) a été approuvé par ISDE Canada pour l'exploitation avec l'antenne types énumérés ci-dessous avec le gain maximal admissible et requis l'impédance de l'antenne pour chaque type d'antenne indiqué. Types d'antenne non inclus dans cette liste, ayant un gain supérieur au gain maximal indiqué pour ce type, sont strictement interdits pour une utilisation avec cet appareil.

- Antenne grille, gain : 23 dBi

RF Exposure Warning

The antennas used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be located or operating in conjunction with any other antenna or transmitter.

Les antennes utilisées pour ce transmetteur doivent être installé en considérant une distance de séparation de toute personnes d'au moins 20 cm et ne doivent pas être localisé ou utilisé en conflit avec tout autre antenne ou transmetteur.

Australia and New Zealand



Warning: This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

CE Marking

CE marking on this product represents the product is in compliance with all directives that are applicable to it.

CE

Country List



AT	BE	BG	CY	CZ	DE	DK	EE	EL	ES	FI	FR	HR	HU
IE	IT	LV	LT	LU	MT	NL	PL	PT	RO	SE	SI	SK	UK

BFWA (Broadband Fixed Wireless Access) members noted in blue



Note: This device meets Max. TX power limit per ETSI regulations.

The following apply to products that operate in the 5 GHz frequency range:



Note: This device is restricted to indoor use only when operating in the 5150 - 5350 MHz frequency range within all member states.



Note: All countries listed may operate at 30 dBm. BFWA member states may operate at 36 dBm.



Note: Operation in the 5.8 GHz frequency band is prohibited in BFWA member states. Other countries listed may use the 5.8 GHz frequency band.

RoHS/WEEE Compliance Statement



English

European Directive 2012/19/EU requires that the equipment bearing this symbol on the product and/or its packaging must not be disposed of with unsorted municipal waste. The symbol indicates that this product should be disposed of separately from regular household waste streams. It is your responsibility to dispose of this and other electric and electronic equipment via designated collection facilities appointed by the government or local authorities. Correct disposal and recycling will help prevent potential negative consequences to the environment and human health. For more detailed information about the disposal of your old equipment, please contact your local authorities, waste disposal service, or the shop where you purchased the product.

Deutsch

Die Europäische Richtlinie 2012/19/EU verlangt, dass technische Ausrüstung, die direkt am Gerät und/oder an der Verpackung mit diesem Symbol versehen ist, nicht zusammen mit unsortiertem Gemeindeabfall entsorgt werden darf. Das Symbol weist darauf hin, dass das Produkt von regulärem Haushaltsmüll getrennt entsorgt werden sollte. Es liegt in Ihrer Verantwortung, dieses Gerät und andere elektrische und elektronische Geräte über die dafür zuständigen und von der Regierung oder örtlichen Behörden dazu bestimmten Sammelstellen zu entsorgen. Ordnungsgemäßes Entsorgen und Recyceln trägt dazu bei, potentielle negative Folgen für Umwelt und die menschliche Gesundheit zu vermeiden. Wenn Sie weitere Informationen zur Entsorgung Ihrer Altgeräte benötigen, wenden Sie sich bitte an die örtlichen Behörden oder städtischen Entsorgungsdienste oder an den Händler, bei dem Sie das Produkt erworben haben.