GM1020 gigaMESH Quick Start Guide

This document provides general installation practices for the Calix GM1020 gigaMESH.

This document also provides guidance for site preparation, installation, and basic troubleshooting.

 Scan the QR code at left to access the installation instructions for this product. All product documentation is available online from the Calix Resource Center (support. calix.com).

Package Contents

- ✔ gigaMESH Satellite - Model GM1020
- ✔ GM1020 gigaMESH Quick Start Guide (this guide)
- ✔ Product identification labels with login credentials (x2)

A Quick Look

AC Power → Reset

LED Light Bar

WPS Button

LAN/WAN Port

7931
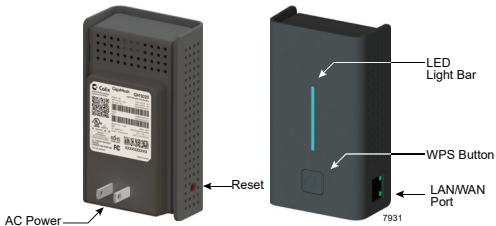
Brief Overview

The GM1020 gigaMESH offers the following key features:

Mesh Enhanced Carrier Class Wi-Fi - In conjunction with the gigaSPIRE and Calix Support Cloud (CSC), the GM1020 gigaMESH provides an end-to-end wireless network over the dual 802.11b/g/n/ac 2.4 GHz and 5 GHz radios. In addition to the wireless functionality, the GM1020 can be connected via Ethernet Cable to the gigaSPIRE's WAN port creating a wired Access Point deeper into the home.

Easy Installation - The subscriber pairs the gigaMESH to the gigaSPIRE by initiating the WPS feature on both devices at the same time. Both devices begin the pairing process and once complete, discovery, configuration, and synchronization steps are completed automatically. If a wired connection is preferred, connect an Ethernet cable to the gigaSPIRE WAN port which automatically discovers the GM1020 via a TR-069 interface to CSC.
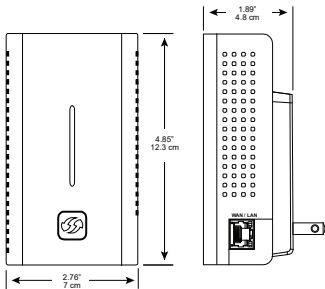
Mounting the gigaMESH

The GM1020 gigaMESH must be plugged into an AC power outlet. Orientation can be either up or down relative to the power outlet.

To power the equipment:

1. Unbox the gigaMESH and remove the outer plastic bag.

2. Set the SSID/barcode label aside temporarily.

3. Plug the gigaMESH into an available wall socket.

   Note: The gigaMESH can be oriented in an up or down position (relative to the power plug) however for maximum Wi-Fi coverage, Calix recommends installing in an "up" position.

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Managing the gigaMESH

The initial set-up and ongoing maintenance including software upgrades of the gigaMESH is managed remotely by your service provider.

Connecting the gigaMESH to your Network

To complete the network connection, ensure the gigaMESH has completed boot-up and connect in either of two options:

1. Connect the GM1020 gigaMESH to the upstream gigaSPIRE using a CAT5 or better Ethernet cable. The gigaMESH will automatically synchronize with the upstream gigaSPIRE.

2. For wireless connections, press the WPS button on both the gigaMESH and gigaSPIRE and hold for three seconds. Once pairing is completed, LED will illuminate blue.

About the Received Signal Strength Indicator

The LED array on the front of the gigaMESH is a dual-segment indicator. This array offers two primary functions:

1. Displays different colors based on its relative location to the upstream gigaSPIRE with respect to its signal strength.

2. Displays current connectivity status of the GM1020 gigaMESH.

LED State	gigaMESH State
	In pairing mode, the gigaMESH is too close to the host (gigaSPIRE).
	In pairing mode, the gigaMESH is too far away from the host (gigaSPIRE).
	The gigaMESH is ideally located.

Note that LED states above reflect a GM1020 in an "up" position (WPS button on the bottom of the unit).

Frequently Asked Questions

Q: **How do I reset the device without having to unplug the unit?**

A: If the RESET button is depressed for less than 10 seconds, it resets the unit using the current configuration settings.

Q: **How do I reset the device back to factory settings?**

A: Pressing the RESET button on the back of the unit for at least 10 seconds.

Q: **What if the User Name or password are forgotten for the gigaSPIRE?**

A: Press the reset button of the gigaSPIRE for at least ten seconds.

Q: **What mounting options are available for installing the GM1020 gigaMESH?**

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A: The gigaMESH must be plugged into any available 110 VAC standard outlet. The unit can be oriented in any direction.

Q: **What is the difference of "Ethernet-WAP mode" vs "Wi-Fi backhaul mode" of the gigaMESH?**

A: In Ethernet-WAP mode, the 5 GHz Wi-Fi bandwidth is shared with all client devices and employs an Ethernet cable to support backhaul traffic.

In the Wi-Fi backhaul mode, the 5 GHz Wi-Fi bandwidth is shared with the backhaul traffic on all client devices.

Q: **Who do I contact for service and support?**

A: Contact your service provider.

Potentially Explosive Atmosphere

Do not use the gigaMESH in an area where a potentially explosive atmosphere exists.

Atmosphère potentiellement explosive

N'utilisez pas le gigaMESH dans un endroit où existe une atmosphère potentiellement explosive.

Intended Use

This product is classified as telecommunication equipment not intended for direct purchase by the public.

This product is designed and approved for use in an indoor location only.

⚠️ **CAUTION!** Use of any controls, adjustments, or procedures other than those specified herein may result in hazardous radiation exposure.

Utilisation prévue

Ce produit est classé comme équipement de télécommunication non destiné à l'achat direct par le public.

Ce produit est conçu et approuvé pour utilisation en intérieur uniquement.

⚠️ **MISE EN GUARDE !** L'utilisation de contrôles, réglages ou procédures autres que ceux spécifiés dans ce manuel peut entraîner une exposition dangereuse à des rayonnements.

Power Supply

- Ensure that a suitable AC power outlet is situated near the intended deployment point and easily accessible.

Alimentation électrique

- Assurez-vous qu'une prise de courant alternatif appropriée est située près du point de déploiement prévu et facilement accessible

Children

Do not allow children to play with the gigaMESH. It contains small parts that could become detached and create a choking hazard.

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Environmental Conditions

Maximum environmental values during use:

Temperature: 0° C to +40° C (32° to 104° F), Humidity: 10% to 90% RH, non-condensing, 200 - 10,000 feet altitude.

License Information

Open Source Software Utilization Notice

The gigaMESH uses Open Source Software Programs. Such software programs are made available subject to certain third-party terms and conditions.

The fact that you are about to begin using or have purchased this product requires that you be informed of the use of these software packages and or libraries and in some cases, the third-party terms and conditions applicable to such software. This information can be found on the manufacturer's support portal. Refer to the appropriate software release notes for additional information on Open Source Software Programs used by this product.

Federal Communication Commission Interference Statement

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 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 transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Operations in the 5.15-5.25GHz band are restricted to indoor usage only.
This device meets all the other requirements specified in Part 15E, Section 15.407 of the FCC Rules.

Radiation Exposure Statement:

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

Industry Canada statement:

This device complies with ISED's licence-exempt RSSs. 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.

Le présent appareil est conforme aux CNR d' ISED applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) le dispositif ne doit pas produire de brouillage préjudiciable, et (2) ce dispositif doit accepter tout brouillage reçu, y compris un brouillage susceptible de provoquer un fonctionnement indésirable.

Caution :

(i) the device for operation in the band 5150-5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems;

(ii) where applicable, antenna type(s), antenna models(s), and worst-case tilt angle(s) necessary to remain compliant with the e.i.r.p. elevation mask requirement set forth in section 6.2.2.3 shall be clearly indicated.

Avertissement:

Le guide d'utilisation des dispositifs pour réseaux locaux doit inclure des instructions précises sur les restrictions susmentionnées, notamment :

(i) les dispositifs fonctionnant dans la bande 5150-5250 MHz sont réservés uniquement pour une utilisation à l'intérieur afin de réduire les risques de brouillage préjudiciable aux systèmes de satellites mobiles utilisant les mêmes canaux;

(ii) lorsqu'il y a lieu, les types d'antennes (s'il y en a plusieurs), les numéros de modèle de l'antenne et les pires angles d'inclinaison nécessaires pour rester conforme à l'exigence de la p.i.r.e. applicable au masque d'élévation, énoncée à la section 6.2.2.3, doivent être clairement indiqués

Radiation Exposure Statement:
This equipment complies with ISED radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with greater than 23cm between the radiator & your body.

Déclaration d'exposition aux radiations:

Cet équipement est conforme aux limites d'exposition aux rayonnements ISED établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé à plus de 23 cm entre le radiateur et votre corps.