

# MACHINE Q™



Area 8C User Manual

Model GII-AD-B

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# 1 Product Summary

MachineQ's flagship Area 8c gateway is the perfect way to unlock the power of IoT. Sleek and compact, this gateway is ideal for almost any indoor environment. This manual describes how to set up and use the gateway.

## 1.1 What's in the Box

The following items are included:

- Area 8c Gateway
- External LoRa antenna
- AC power adapter
- Mounting Plate
- Mounting Hardware






## 1.2 Prerequisites

Before setting up your gateway, you must have:

1. DHCP-enabled Ethernet port connected to the Internet, if you want to provision it via Ethernet connection
2. An AC power outlet or POE switch
3. Provisioned on MQcentral (<https://login.machineq.net/signup>)

## 1.3 LED Indicators

The following indicator lights are displayed from left to right on the gateway.

Status	Description	
Off	No Power	
Slow blinking	Initial power up and boot	
Solid on	Device is connected	
Fast blinking	Failed (bootloader)	
Slow blinking	Firmware update	

**Key:**



## 2 Installing the Gateway

1. Place the Area 8c on a horizontal level surface or use the mounting plate to mount it on the wall or ceiling using the included hardware.
2. Connect an Ethernet cable to the gateway and to an available port on your ethernet switch
3. Connect the external antenna for best performance if mounting on a wall
4. Connect the provided AC adapter plug to the gateway and plug it into a suitable electrical outlet.
5. Wait approximately three minutes until the gateway's LED turns solid blue
6. Check your connections and contact MachineQ support if the LED does not turn solid blue

## 3 Included Accessories

<i>Items</i>	<i>Quantity</i>	<i>Description</i>
Power adapter	1	100-240 VAC 50/60 Hz to 48 VDC / 0.5 A
LoRa Antenna	1	860~930 MHz, 0 dBi
LoRa Antenna Holder	1	
Mounting Hole Screw	6	
Mounting Hole Anchor	2	
T-bar clip	2	
Mounting Bracket	1	

# 4 Specifications

## 4.1 General Specifications

<i>Items</i>	<i>Description</i>
Product Name	Area 8c
Product Category	LoRa 8-Channel Indoor Gateway, LTE and Ethernet
Model #	GII-AD-B
Antenna Type (LoRa)	<ul style="list-style-type: none"><li>• External Antenna</li><li>• Internal Antenna</li></ul> <p>Note: Internal antenna is disabled when external antenna is connected</p>
LoRa Frequency Band	LoRaWAN US915 (902~928 MHz)
LoRa Channels	8 concurrent LoRa channels
LoRa Transmit RF Power (max)	27 +/- 5% dBm
LoRa Receiving Sensitivity	Typical -133 dBm @ SF10, 125 KHz
<i>Other Specification</i>	
Working Temperature	<ul style="list-style-type: none"><li>• Operating: 0°C ~ 40°C</li><li>• Storage: -10°C ~70°C</li></ul>
Working Humidity	<ul style="list-style-type: none"><li>• Operating: 10 ~ 85% (Non-Condensing)</li><li>• Storage: 5 ~ 90% (Non-Condensing)</li></ul>
Power Supply	Input 100-240 VAC 50/60 Hz Output 48 VDC/ 0.5 A
Internal Antennas	<ul style="list-style-type: none"><li>• Built-in LoRa antenna</li><li>• Built-in LTE antenna</li></ul>
External Antenna	Accessory LoRa antenna, SMA connector
Indicators	RGB LED indicator
Dimensions	L:210 x W:130 x H:33 mm
Weight	Approx. 520 g



## 5 FCC Notice of Compliance

### **Federal Communication Commission Interference Statement**

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 or more 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.

**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.

### **IMPORTANT NOTE:**

#### **FCC 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.

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

## 6 ISED Notice of Compliance

### **Industry Canada statement:**

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

(1) This device may not cause interference

(2) This device must accept any interference, including interference that may cause undesired operation of the device

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique 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.

**Radiation Exposure Statement:**

This equipment complies with Canada 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.

**Déclaration d'exposition aux radiations:**

Cet équipement est conforme Canada limites d'exposition aux radiations dans un environnement non contrôlé. Cet équipement doit être installé et utilisé à distance minimum de 20cm entre le radiateur et votre corps.