BOX A & B

Quick start guide: Hiberband Via gateway.

Here's everything you need to get set up, apart from a drink to celebrate a successful installation: quick start guide, safety instruction and your warranty.

hiber.

Welcome to your Hiberband Via gateway.

Thanks for ordering your Hiberband Via gateway. It really is the easiest and most affordable way to create a private LoRaWAN network in remote locations. The Via gateway connects to the internet via our satellite network and can be powered by a renewable energy source such as solar. Making it perfect for locations where conventional power and internet connectivity are not available.

The Quick Start Guide takes you through a typical Via gateway installation. If you need more detailed installation instructions, please visit **hiber.global/support/via**

To help you out, we've included an image of a complete installation of the Hiberband Via (fig. 01), including satellite connectivity. However, the appearance of the setup may differ depending on your exact installation location. For more information on installing your Via gateway in the best location, please see the **Hiberband Via: Installation Checklist.**

- **A** Hiberband Via gateway.
- **B** Field LoRa antenna.
- **C** BGAN terminal with integrated antenna.
- **D** BGAN mounting arm.

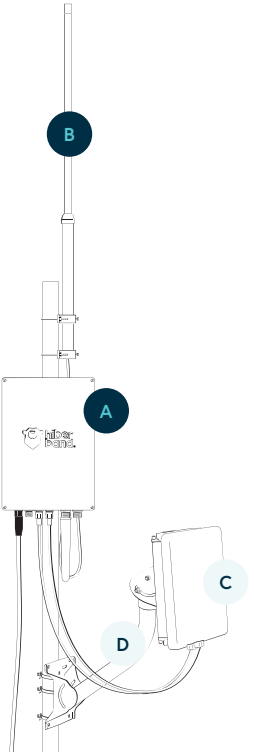

FIGURE 01

QUICK START GUIDE OVERVIEW.

Before you start installation please check you have everything you need in the box. The illustration shows the contents of the box. Please note, the LoRa field antenna is shipped in a separate package **Box B** as the frequency used for LoRa communication differs from country to country. So we have to send out a specific antenna for your country.

Required installation tools.

- (Electric) screwdriver set
- Wrench set
- Allen wrench set
- Power drill (optional)
- Screws and plugs (optional)

BOX A

A01 Hiberband Via gateway

A02 Power cable with MC4 connectors

A03 AC/DC convertor for outdoor usage with MC4 connectors

A04 Wall mount AC/DC adapter with MC4 connectors

A05 4x metal mounting straps

A06 Quick start LoRa antenna (length: ~ 20cm)

A07 LoRa antenna cable

A08 Wi-Fi antenna

A09 Lightning protection (2A. lightning arrestor)

A10 LoRa reference sensor – might look slightly different depending on your country

A11 Ethernet cable

BOX B

B01 Field LoRa antenna (length: ~ 160cm)

B02 Field LoRa antenna clamps

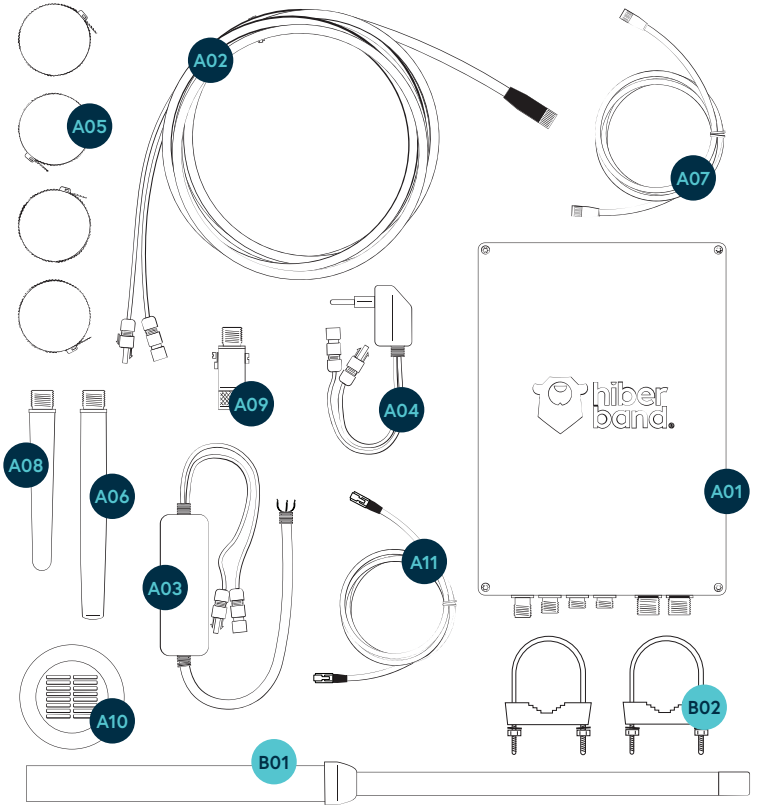

FIGURE 02

Step by step installation.

STEP 1: INSTALLING THE EQUIPMENT.

Why know you can't wait to get started. But please refer to the **Hiberband Via Installation Checklist** before starting with the installation. As not setting up the Via in the right location can really affect performance.

> **Achieve the best LoRa coverage.**
> To ensure your Hiberband Via provides optimal LoRa coverage, mount the LoRa antenna as high as possible to increase coverage of your LoRaWAN network. A tall building, pole or roof are ideal. Only do this if you have previous experience. Otherwise, employ an expert.

> **Protect against lightning strikes.**
> It's also worth remembering that antennas and tall metal objects are great lightning conductors. So please follow our advice and instructions on the best way to ground your antenna such as connecting the lightning protection to an earth connection or large metal object.

Both these topics are covered in depth in the **Hiberband Via Installation Checklist**.

The Via gateway **A01** can be installed on a pole, rail or wall. The mounting bracket on the Via gateway consists of two parts, making it easy for one person to install the Via gateway.

1. On the Via gateway, unscrew the bolt at the bottom of the mounting bracket and remove the holder out of the mounting bracket

2. **Pole or rail installation.**
   Fix the holder on a pole or rail, using the metal mounting straps **A05** (fig. 03.1).

   Wall installation.
   Fix the holder on a wall, using wall plugs and screws – not included. (fig. 03.2).

3. Hang the Via gateway on the holder.

4. Secure the holder on the mounting bracket using the bolt previously removed.

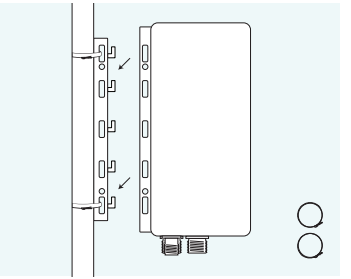

FIGURE 03.1

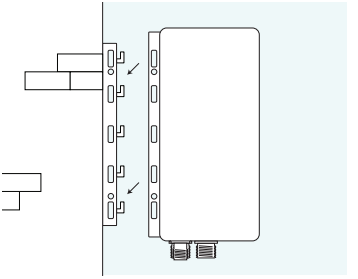

FIGURE 03.2

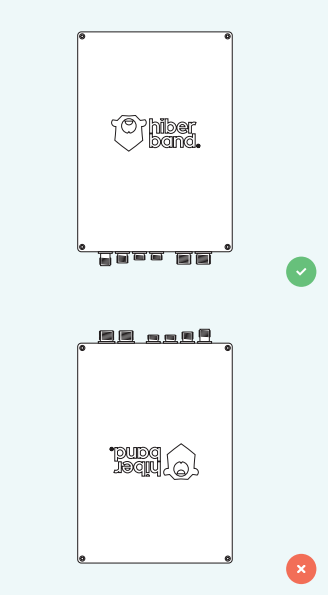

FIGURE 04

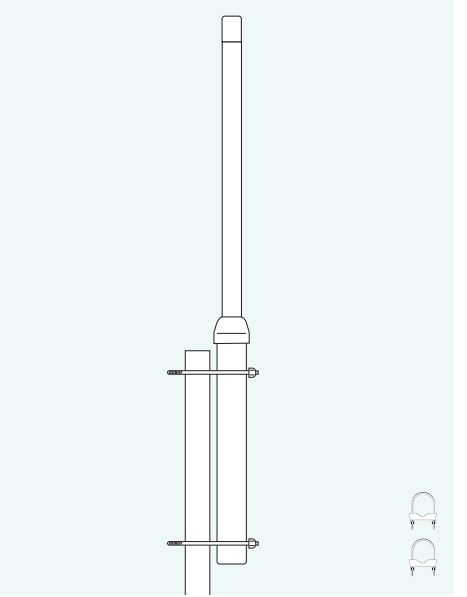

FIGURE 05

Make sure you install the Via gateway with the connectors facing down (fig. 04).

Install the Field LoRa antenna **B01** on a pole or rail using the LoRa antenna clamps **B02** (fig. 05). For testing purposes use the Quick Start LoRa antenna **A06**, no mounting required.

STEP 2: CONNECTING THE CABLES AND ANTENNAS.

The Via gateway has a series of connectors on its base. Please connect the correct cables and antennas to each other as explained below.

1. Two LoRa antennas are provided with the Via gateway. For a test installation, use the Quick start LoRa antenna **A06** by screwing it into the Via gateway connector **A15**.

   For a field installation, connect the LoRa antenna cable **A07** to the Via gateway connector **A15**, and to the Field LoRa antenna **B01**. If grounding is required, first place the Lighting protection **A09** on the gateway connector **A15** before connecting the LoRa antenna cable **A07**.

2. Connect the Wi-Fi antenna **A08** to the Via gateway connector **A14**.

3. Connect the ethernet cable **A11** to the Via gateway connector **A16**, and to an ethernet port with an internet connection.*

* *Please refer to the **Quick Start Guide: Hiberband Via satellite connectivity** provided in **Box C** if you require a satellite-enabled internet connection or visit **hiber.global/support/via***

A12 GNSS (GPS) - not used

A13 Hiberband - not used

A14 2.4 GHz - Wi-Fi

A15 SUB-GHz - LoRa

A16 Ethernet

A17 Power out

A18 Ext. battery - not used

A19 Power in

A20 LED status indicator

A21 Pressure compensation vent

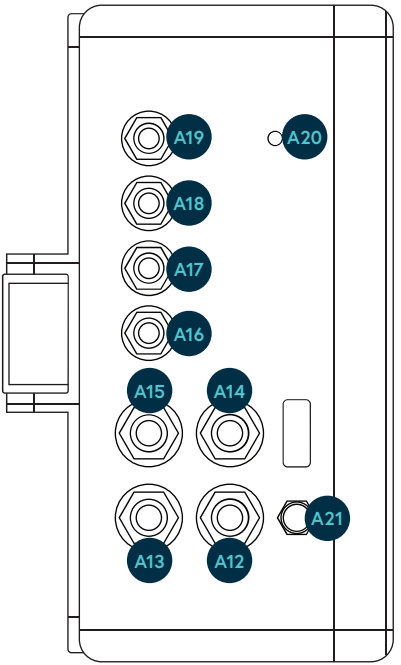

FIGURE 06

STEP 3: POWERING UP THE VIA GATEWAY.

Powering the Via gateway without all antennas connected may damage the device!

Before continuing with the following steps ensure the Wi-Fi antenna **A08** and LoRa antenna **A06** or **B01** are connected to the Via gateway.

Only use the power cable **A02** provided with the Via gateway.

You can power up the Via gateway in two different ways. The box contains the accessories you need for both options.

POWER OPTION 01: INDOOR INSTALLATION.

Use the wall mount adapter **A04**.

1. Connect the MC4 connectors of the power cable **A02** to the MC4 connectors of the wall mount adapter cable **A04** (fig 07).

2. Connect the screw connector of the power cable **A02** to the Via gateway connector **A19** (fig 08).

3. Plug the wall mount adapter **A04** into a power socket.

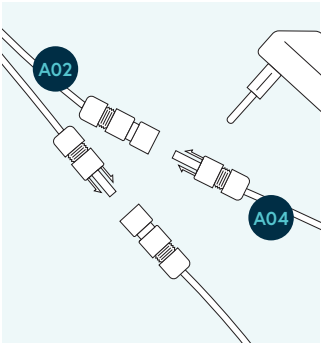

FIGURE 07

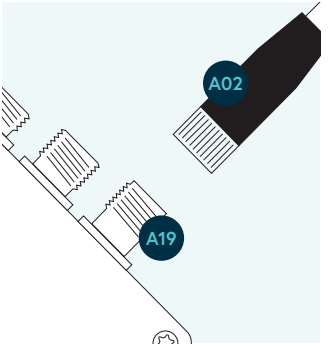

FIGURE 08

POWER OPTION 02: OUTDOOR INSTALLATION.

Use the AC/DC convertor **A03**:

1. Connect the MC4 connectors of the power cable **A02** to the MC4 connectors of the AC/DC convertor **A03** (fig. 09).

2. The bare wires coming out of the AC/DC convertor **A03** need to be properly connected to an AC power source. Consult a qualified electrician if in doubt.

3. Connect the screw connector of the power cable **A02** to the Via gateway connector **A19**. (fig. 10).

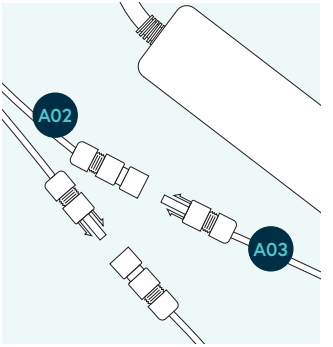

FIGURE 09

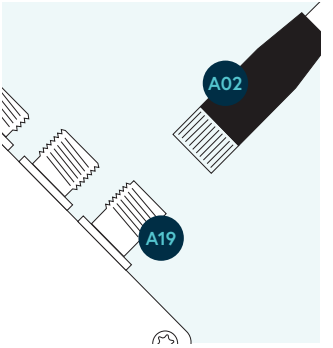

FIGURE 10

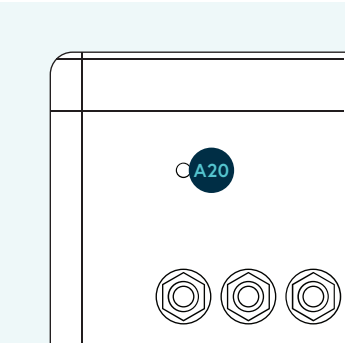

FIGURE 11

Once powered, the LED status indicator **A20** turns white while the Via gateway is booting up. (fig. 11).

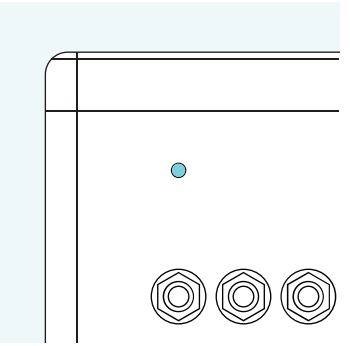

FIGURE 12

Within 5 minutes the LED should turn blue, indicating that the Via gateway has booted up successfully and is fully operational. (fig. 12).*

* If the LED does not turn blue within 5 minutes, please see **Table 01: LED status indicator**, which is after **step 4**, for more information.

STEP 4: CONNECTING TO HIBERBAND VIA GATEWAY WI-FI HOTSPOT.

Once operational, the Hiberband Via gateway creates a Wi-Fi hotspot. You can use this to connect and access the Via configuration page. From the configuration page you can add additional LoRaWAN devices, see the status of the system and safely reboot or shut down the Via gateway.

To reduce the power consumption of the Via gateway, the Wi-Fi hotspot is not continuously available. Once the Via gateway is powered up, the hotspot will remain available for 30 minutes. After 30 minutes, the hotspot turns on and off during a 20 minute cycle. (For the first 5 minutes it is active and remains visible, then for the next 15 minutes it is inactive and not visible.) Once you are connected to the Wi-Fi hotspot, it will remain active until you disconnect from it again.

To connect to the hotspot, follow these steps:

1. Scan the QR code left of this text or on the back page of this guide with your phone, computer or tablet to automatically connect to the Wi-Fi hotspot.

2. Alternatively, you can manually connect to the hotspot through the Wi-Fi settings on your device using the Wi-Fi SSID and password on the front page of this guide.

3. Once connected to the hotspot, visit **http://www.hiber.gateway** in an internet browser to access the gateway configuration page.

4. From the configuration page, follow the instructions on the screen to add new LoRaWAN devices or see the status of the system.

5. Switch on the LoRa reference sensor **A10** and follow the instructions on the Via gateway configuration page.

6. A message will appear to confirm the reference sensor has joined the network successfully.

TABLE 01: LED STATUS INDICATOR TABLE.

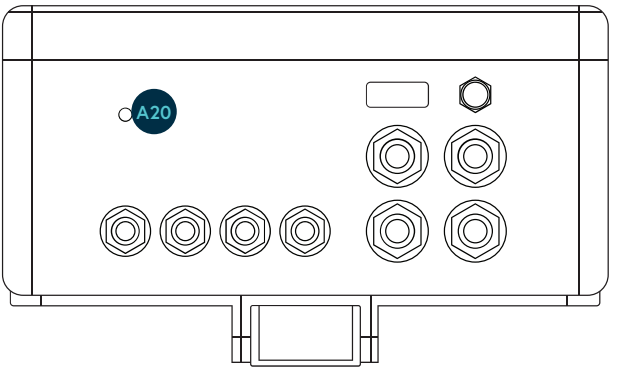

FIGURE 13

Cyan.
The Via gateway is powered, operational, and connected to the internet.

White.
The Via gateway is powered and starting up.

1 time blinking · White.
The Via gateway is shutting down.

2 times blinking · White.
The Via gateway is rebooting.

Orange.
The gateway cannot connect to the internet.

1 time blinking · Orange.
The Via gateway encountered an internal server error. Please log in to the Wi-Fi hotspot and check the system status.

2 times blinking · Orange.
The Via gateway encountered an error with the LoRaWAN stack. Please log in to the Wi-Fi hotspot and check the system status.

Product information.

Here's everything you need to know about the product and technical specifications of your Hiberband Via gateway. Just in case.

Support.
If you need any help, you'll find most answers online or you can email us.
Documentation: **hiber.global/support/via**
Email: **support@hiber.global**

LoRaWAN.

- 8-channel LoRa concentrator for outdoor use (868/915/923 MHz versions available).
- Integrated LoRaWAN network- and application server.
- Supported LoRaWAN classes: A and C.

Power.

- 5W continuous consumption.
- 12-24VDC, 10A max. Input.
- 12-24VDC, 2.5A max. Output.
- Output voltage is equal to input voltage.

Maximum transmit power

Supported radio networks	*Operating frequency bands*	*Maximum transmitted radio-frequency power*
WLAN	ISM 2.4GHz	17.0 dBm
LoRaWAN EU868 (EU)	ISM 863-870MHz	27.5 dBm
LoRaWAN US915 (US)	ISM 902-928MHz	23.9 dBm
LoRaWAN AS923 (Japan)	ISM 920-923Mhz	23.9 dBm

Environmental.

- Operating temperature range: -20°C/+60°C.
- Ingress protection level: IP67 with pressure relief valve.

IP connectivity.

- Industrial ethernet port for IP connection.
- Optimised connectivity logic for third party satellite networks.

Dimension incl. mounting bracket.

- 330mm x 230mm x 140mm
- 4 kg

Adapter wiring.

Power in.

M12 female L-coded 4 or 5 pin adapter:

- Position 1: GND
- Position 2: GND
- Position 3: NC
- Position 4: VCC (power)
- Position 5 (FE): GND

Position 1 and 2 shorted:

- The short in the adapter acts as the power switch of the gateway.

Power out.

M12 male A-coded 5 pin adapter:

- Position 1: NC
- Position 2: VCC (power)
- Position 3: Signal
- Position 4: GND
- Position 5: GND

Battery.

M12 female A-coded 4 pin adapter:

- Position 1: NC
- Position 2: VCC (power)
- Position 4: GND
- Position 5: GND

Position 3 and 4 shorted:

- The short in the adapter acts as the switch between internal and external battery.
- This allows for a 12V internal battery, whilst connecting a 24V battery externally.

Ethernet.

M12 male D-coded 5 pin adapter:

- Position 1: TX+
- Position 2: RX+
- Position 3: TX-
- Position 4: RX-
- Position 5: Shield

Certification.

Manufacturer.
Hiber B.V.
Keizersgracht 209-sous
1016 DT Amsterdam
The Netherlands

EU Declaration of Conformity
The following statements only concern the Hiberband Via gateway EU868 version. Hereby, Hiber B.V. declares that the radio equipment Hiberband Via gateway EU868 is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address: **hiber.global/support/via**

CE

FCC Notice / Canada.
FCC ID: 2ASDVVIA1
IC: 24744-VIA1

The following statements only concern the Hiberband Via gateway US915 version.

FCC Part 15.21 Warning: Changes or modifications not expressly approved by the manufacturer, Hiber B.V., could void the user's authority to operate the equipment.

FCC Part 15.19(a) 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."

FCC/ISED RF Exposure Guidance Statement: In order to comply with FCC/ISED RF Exposure requirements, this device must be installed to provide at least **20 centimeters** separation from the human body at all times. Afin de respecter les exigences de la FCC/ISED concernant l'exposition aux fréquences radio, ce système doit être installé pour assurer une séparation d'au moins 1m du corps humain à tout instant.

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'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Japan.

The following statements only concern the Hiberband Via gateway AS923 version. Japanese Radio Law and Japanese Telecommunications Business Law Compliance.

This device is granted pursuant to the Japanese Radio Law (電波法) and the Japanese Telecommunications Business Law (電気通信事業法).

This device should not be modified (otherwise the granted designation number will become invalid).

Radio requirements according Ordinance Regulating Radio Equipment (無線設備規則) issued by a RCB recognized test laboratory.

Telecommunication requirements according Ordinance Concerning Terminal Facilities etc. (OCTF) (端末設備等規則) issued by a RCB recognized test laboratory.

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Safety guide and warranty.

Introduction.
Read these simple guidelines. Not following them may be dangerous or against local laws and regulations. For further information, read the user guide and visit **hiber.global/support/via**.

Protection from lightning strikes.
Lightning is not good for anything electrical. So grounding the Hiberband Via gateway is highly recommended in cases where the LoRa antenna and/or the Hiberband Via gateway are placed higher than surrounding objects. Simply connect the lightning protection to an electrical earth connection. If this isn't available, connect the lightning protection to a large conducting surface like a metal beam, preferably a conducting surface connected to earth. Consult a qualified electrician if in doubt.

Safety distance.
The Hiberband Via gateway emits a radio frequency. So to be safe, you need to keep a minimum of 1m away from the device when it is operating and always turn it off before carrying out any work. Also, never install it where it will be closer than 1m to people when operating.

Avoid sea water.
Do not use the device in marine environments as this may damage the enclosure.

Damage.
If the device is damaged contact **support@hiber.global**. Only qualified personnel may repair this device.

Safety distance.
Due to radio frequency exposure limits the gateway should be installed and operated with a minimum distance of 1m between the device and the body of the user or nearby persons.

Storage.
Always store and use the device with any covers attached and store in the provided packaging.

Small children.
Your device is not a toy. It may contain small parts. Keep them out of the reach of small children.

Care and maintenance.

Handle your device with care. The following suggestions help you keep your device operational.

- **The device may only be opened by a specialist or an instructed person.**
- Unauthorized modifications may damage the device and violate regulations governing radio devices.
- Do not drop, knock, or shake the device. Rough handling can break it.
- Do not clean the device with solvents, toxic chemicals or strong detergents as they may damage your device and void the warranty.
- Do not paint the device. Paint can prevent proper operation.

If the device needs maintenance, contact **support@hiber.global**. Only qualified personnel may perform maintenance on this device.

Recycle.

Check the local regulations for proper disposal of electronic products.

The Directive on Waste Electrical and Electronic Equipment (WEEE), which entered into force as European law on 13th February 2003, resulted in a major change in the treatment of electrical equipment at end-of-life.

The purpose of this Directive is, as a first priority, the prevention of WEEE, and in addition, to promote the reuse, recycling and other forms of recovery of such wastes so as to reduce disposal. The crossed-out, wheelie-bin symbol on your product, battery, literature, or packaging reminds you that all electrical and electronic products and batteries must be taken to a separate collection at the end of their working life. Do not dispose of these products as unsorted municipal waste: take them for recycling. For info on your nearest recycling point, check with your local waste authority.

Warranty and service license agreement.
"By using the Hiberband Via gateway", you are agreeing to be bound by the terms of Hiber services terms and conditions, unless you return the Hiberband Via gateway as part of the return policy".

Hiber warranty, and Hiber services terms and conditions documents are available at the following internet address:
https://hiber.global/legal-documents/

hiber

Support
If you need any help, you'll find most answers online or you can email us.

Documentation:
hiber.global/support/via

Email: **support@hiber.global**

Version:
VIAAB0920V1A2001