

devolo MAGIC

Manual
devolo Magic 2 LAN ¹⁻¹



devolo Magic 2 LAN¹⁻¹



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1 Preface

Welcome to the fantastic world of devolo Magic!

In no time at all, devolo Magic transforms your house into a multimedia home that is ready for the future today. devolo Magic gives you noticeably higher speeds, more stability and greater range, providing the perfect Internet experience as a result!

1.1 About this manual

Carefully read all instructions before setting up the device and store the manual and/or installation guide for later reference.





After a brief introduction to „devolo Magic“ and to the devolo Magic 2 LAN¹⁻¹ in **Chapter 2**, **Chapter 3** tells you how to successfully start using the adapter in your network.





Chapter 4 describes in detail the setting options of the built-in configuration interface.





Tips for bandwidth optimisation, information about environmental compatibility of the device, as well as our warranty terms, can be found in **Chapter 5** at the end of the manual.

Description of the icons

This section contains a brief description of the icons used in this manual and/or on the rating plate, the device connector, as well as the icons used on the package:

| Icon | Description |
|---|---|
|  | Very important safety symbol that warns you of hazardous electrical voltage which if not avoided can result in serious injury or death. |
|  | Very important safety symbol that warns you of a potentially dangerous situation which if not avoided can result in serious injury or death. |
|  | An important safety symbol that warns you of a potentially burn hazard which if not avoided can result in minor injuries or damage to property. |
|  | An important safety symbol that warns you of a potentially dangerous situation involving a tripping hazard which can result in injuries. |

| Icon | Description |
|---|--|
|  | An important note that should be observed which can potentially lead to material damages. |
|  | The device may only be used indoors in dry conditions. |
|  | The device is a Class I product. All electrically conductive (made of metal) housing parts where a voltage can be applied during operation or maintenance in the event of an error must be continuously connected to the earth wire. |
|  | The manufacturer/distributing company uses the CE marking to declare that the product meets all applicable European regulations and has been subjected to the prescribed conformity assessment procedures. |

| Icon | Description |
|---|---|
|  | The manufacturer/distributing company uses the UKCA marking to declare that the product meets all applicable regulations of Great Britain and has been subjected to the prescribed conformity assessment procedures. |
|  | It is used to prevent the occurrence of waste electrical and electronic equipment and to reduce this type of waste through reuse, recycling and other forms of utilisation. The WEEE Directive establishes minimum standards for handling waste electrical and electronic equipment in the EU, EFTA and UK. |
|  | Additional information, background material and configuration tips for your device. |
|  | Indicates a completed course of action |

1.2 Intended use

Use devolo devices, devolo software and the provided accessories as described to prevent damage and injury.

Products

devolo devices are communication devices designed for indoors.* Depending on the product, they are equipped with a **PLC** - (**P**ower**L**ine **C**ommunication) and/or a Wi-Fi module and/or a broadband module. The devices communicate with each other by means of, depending on the product, PLC, data and telephone line (e.g. coaxial or twisted pair) and/or Wi-Fi.

devolo devices do not replace the existing router. They enable transmission of the existing Internet/data signal over the in-house wiring and via Wi-Fi and integrate Internet-compatible terminal devices into the home network.

Under no circumstances may devolo devices be used outdoors, because large temperature fluctuations and moisture can damage both the device and the power line*. devolo devices may not be installed at a height above **two metres** unless an additional fastening mechanism is available. The

products are intended for operation in: EU, EFTA and UK.

* This does not include devolo outdoor devices, which are suitable for outdoor applications based on their IP classification.

Software

devolo devices can be used only with the free, downloadable programs approved and available on devolo AG's website (www.devolo.global) and in app stores (iOS and Google Play). Any modifications to the product-specific firmware or software could damage the products and, in the worst-case scenario, render them unusable, negatively affect conformity and cause the warranty claims to become void.

Always use the most up-to-date software version to make sure you have the latest security functions and device updates. The installed devolo software notifies you automatically if a new software version is available.

Accessories

Use only the provided accessories.

1.3 CE conformity



This product complies with the technical requirements of the directives **2014/35/EU, 2014/30/EU, 2011/65/EU** und **2009/125/EC**.

This product is designed for use in the EU, EFTA and Northern Ireland.

A printout of the simplified CE declaration of this product is separately included.

The CE declaration and can also be found under www.devolo.global/support/ce.

1.4 UKCA conformity



This product complies with the technical requirements of the following regulations:

- Electromagnetic Compatibility Regulations 2016 (**SI 2016 No. 1091**)
- Electrical Equipment (Safety) Regulations 2016 (**SI 2016 No. 1101**)
- Ecodesign for Energy-Related Products and Energy Information (Amendment) (EU Exit) Regulations 2010 (**2010 No. 2617**)

- Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012 (**SI 2012 No. 3032**)

This product is designed for use in UK.

A printout of the simplified UKCA declaration of this product is separately included.

The UKCA declaration and can also be found under www.devolo.global/support/UKCA.

1.5 Safety notes

It is essential to have read and understood all safety and operating instructions before the devolo device is used for the first time; keep them safe for future reference.



DANGER! Electrical shock caused by electricity

Do **not** reach into the electrical socket.

Do **not** open the device.

Do **not** insert any objects into the electrical socket or into the ventilation openings



DANGER! Electric shock caused by electricity

Device must be plugged into a power socket with a connected earth wire

devolo devices may be operated only on a **mains power supply** as described on the **rating plate**.



CAUTION! Tripping hazard

Lay the network cable in a barrier-free manner;
ensure that the electrical socket and the connected network devices are easily accessible

To disconnect devolo devices from the mains supply, unplug the device from the electrical socket.



CAUTION! Damage to the device caused by ambient conditions

Only use device indoors in dry conditions



CAUTION! Heat development during operation

Certain housing components can become very hot in certain situations. Attach device so that it is touch-proof, observing optimal positioning

devolo devices should only be installed at locations that guarantee adequate ventilation. Slots and openings on the housing are used for ventilation:

- Do **not** cover devolo devices during operation.
- Do **not** place **any objects on** devolo devices.

- Do **not** insert **any objects into** the **openings** of devolo devices.
- devolo devices must **not** be placed directly **next to** a naked **flame** (such as fire or candles).
- devolo devices must **not be exposed to direct heat radiation** (e.g. radiator, direct sunlight).

Users do **not** need to carry out any **maintenance** on devolo devices. In the event of damage, disconnect the devolo device from the mains supply by pulling it or its plug out of the electrical socket. Then contact qualified specialist personnel (after-sales service) exclusively. **Damage** is deemed to have occurred, for example,

- if a button is damaged.
- if the power plug is damaged.
- if the devolo device has been showered with liquid (such as rain or other water).
- if the devolo device is inoperable.
- if the housing of the devolo device is damaged.



CAUTION! Damage to housing from cleaning agents containing solvents

Clean only electroless and with dry cloth



Do not plug devolo devices directly into each other. Devices that are plugged into each other can experience a decrease in transmission rate.

1.6 devolo on the Internet

For detailed information on our products, visit www.devolo.global.

There you will find product descriptions and documentation, and also updates of devolo software and your device's firmware.

If you have any further ideas or suggestions related to our products, please don't hesitate to contact us at support@devolo.global!

2 Introduction

2.1 devolo Magic

Home is where devolo Magic is – in no time at all, devolo Magic transforms your house or flat into a multimedia home of the future with noticeably higher speed, more stability and greater range, providing the perfect Internet experience as a result!

Be inspired by products that are astonishingly easy to install, with impressive, innovative technology and unbeatable performance.

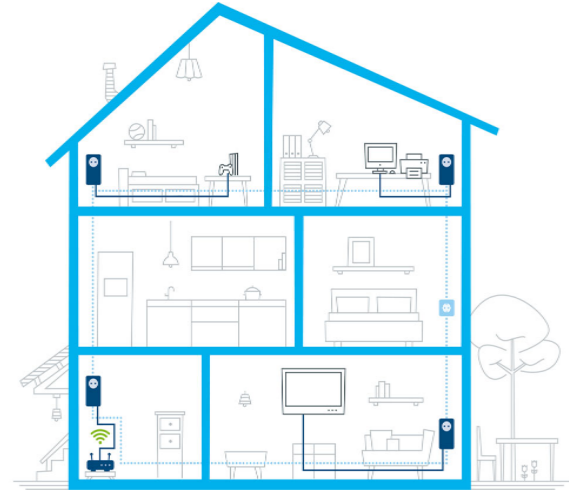



Fig. 1 devolo Magic throughout the home

Be ready for the technology of the future today

devolo Magic embodies the new generation of the tried-and-tested Powerline technology (PLC) based on the cutting-edge G.hn architecture. G.hn was developed by the International Telecommunication Union (ITU) with ongoing development provided primarily by the HomeGrid Forum industry association. devolo Magic products are certified

according to HomeGrid standards and are compatible with other HomeGrid-certified products.

Like the HomePlug AV technology used in established devolo dLAN devices, devolo Magic uses the household mains supply for data transmission and secures ideal performance and stability in locations where network cables are not viable or desired and/or the Wi-Fi frequently falls short due to ceilings and walls.

 *To set up a devolo Magic network, you need at least two devolo Magic devices. For technical reasons, devices from the devolo Magic series are not compatible with dLAN devices.*

2.2 Introduction to the devolo Magic adapter:


Unpack – plug in – get started and be ready for the new generation of tried-and-tested Powerline technology:

- **Speed and stability** – thanks to consistent data transmission speed at up to **2400 Mbps** over distances of **up to 500 meters**, the devolo Magic 2 LAN¹⁻¹ promises entertainment at the highest level.

- **Security** – with **128-bit AES** Powerline encryption
- **Energy-efficiency** – the integrated PowerSave mode cuts energy consumption automatically **during low data traffic**.
- A devolo Magic 2 LAN¹⁻¹ transforms any electrical socket in your household electrical wiring into a Gigabit LAN Internet access point.
- Its integrated electrical socket can be used (like a normal wall socket) to supply power to an additional network device or a power strip.
- The Gigabit LAN port on the devolo Magic 2 LAN¹⁻¹ lets you connect a stationary network device – such as a game console, television or media receiver – to your Internet access point over the Powerline network (e.g. Internet router).

The devolo Magic 2 LAN¹⁻¹ features

- One Gigabit network connection
- One indicator light

 *The LED status display can be disabled. You can find more information about this in Chapter 4 Configuration.*

- One PLC/reset button (next to the network connection)

- One integrated electrical socket



Fig. 2: devolo Magic 2 LAN ¹⁻¹ with country-specific connector and power socket

2.3 Pairing

devolo Magic adapters that are in factory default condition, i.e. have been purchased or successfully reset (see Chapter **Resetting a devolo Magic adapter or removing it from a devolo Magic network**), automatically start to attempt to pair with another devolo Magic adapter when reconnected to the mains supply.

Starting up a new devolo Magic network

After plugging the devolo Magic adapters into available power sockets, a new devolo Magic network is established automatically within 3 minutes.

Expanding an existing devolo Magic network by adding another devolo Magic adapter

In order to use a new devolo Magic 2 LAN ¹⁻¹ in your devolo Magic- network, first you have to connect it to your existing devolo Magic adapters devices as a network. This is accomplished by using a shared password, which can be assigned in various ways:

- Using **devolo Cockpit** or the **devolo Home Network App** (see Chapter **3.4 Installation of devolo software**)
- Using the **web interface** (see Chapter **4.2.2 Powerline**)
- Using the **PLC/reset button** as described below.
- ① To do so, plug the new devolo Magic adapter into an available power socket and, for approximately 1 second, press the PLC/reset button on a devolo Magic adapter in your existing devolo Magic network.

- 2 The new devolo Magic adapter pairs automatically so no button needs to be pressed. The LED of this adapter now also flashes white.



After a short time, the flashing LED becomes a steady white light. The devolo Magic adapter has been successfully integrated into your existing devolo Magic network.



For each pairing operation, only one additional devolo Magic adapter can be added at a time.

*You can find detailed information about installing devolo Magic adapters in Chapter 3.3 **Connecting the devolo Magic 2 LAN**¹⁻¹.*



Keep in mind that all settings that have already been made will be lost!

Resetting a devolo Magic adapter or removing it from a devolo Magic network

- 1 To remove a devolo Magic adapter from your devolo Magic network and successfully restore its entire configuration to the factory default settings, press and hold the reset button longer than 10 seconds.
- 2 Wait until the LED flashes white and then disconnect the devolo Magic adapter from the mains supply.

2.3.1 Reading the indicator light

The integrated indicator light (**LED**) shows the status for the devolo Magic 2 LAN ¹⁻¹ by illuminating and/or flashing:

| | LED | Flashing behaviour | Meaning | LED status display (web interface*) |
|---|---------|--|---|-------------------------------------|
| 1 | Red LED | Lights up for up to 2 sec. | Start-up process | Cannot be disabled |
| 2 | Red LED | Flashes at intervals of 0.5 sec. (on/off) | <p>Status 1: The reset of the devolo Magic adapter was successful. The PLC/reset button has been pressed and held for 10 seconds.</p> <p>Status 2: The devolo Magic adapter (once again) has the factory default settings. Since the last reset, no pairing with another devolo Magic adapter has taken place. Connect the adapter with another devolo Magic adapter to create a full-fledged PLC network as described in Chapter 2.3 Pairing.</p> | Cannot be disabled |

| | LED | Flashing behaviour | Meaning | LED status display (web interface*) |
|---|-------------------|--|--|-------------------------------------|
| 3 | Red LED | Lights up steady | <p>Status 1: The other network nodes are in standby mode and cannot currently be accessed over the mains supply. The PLC LEDs of the other devolo Magic adapters flash white only for a short time.</p> <p>Status 2: The connection to the other network nodes has been interrupted. There may be electromagnetic or radio frequency interference on the power line. In this case, put the devolo Magic adapters closer to each other or try to shut off the source of interference.</p> | Can be disabled |
| 4 | Red and white LED | Flashes at intervals of 0.1 sec. red/2 sec. white | Data transmission rate not in optimum range ** | Can be disabled |

| | LED | Flashing behaviour | Meaning | LED status display (web interface*) |
|---|-------------------|---|--|-------------------------------------|
| 5 | White LED | <p>Status 1: Flashes at intervals of 0.5 sec. (on/off)</p> <p>Status 2: Flashes at intervals of 1 sec. (on/off)</p> | <p>Status 1: This devolo Magic adapter is in pairing mode and the system is searching for new devolo Magic adapters.</p> <p>Status 2: Someone has triggered the "Identify device" function on the web interface or in the devolo Home Network App. This function identifies the devolo Magic adapter being sought.</p> | Cannot be disabled |
| 6 | White LED | Lights up steady | The devolo Magic connection does not have any issues and the devolo Magic adapter is ready to operate. | Can be disabled |
| 7 | White LED | Flashes at intervals of 0.1 sec. on / 5 sec. off | The devolo Magic adapter is in standby mode.*** | Can be disabled |
| 8 | Red and white LED | Flashes at intervals of 0.5 sec. red / 0.5 sec. white | The devolo Magic adapter is carrying out a firmware update. | Cannot be disabled |

* Information about the web interface can be found in Chapter **4 Configuration**.

** Information on improving the transmission rate can be found in Chapter **5.2 Bandwidth optimization**.

***A devolo Magic adapter switches to standby mode after approximately 10 minutes if no active network device (e.g. computer) is connected to the network interface. In this mode, the devolo Magic adapter cannot be accessed over the electrical wiring. As soon as the network device (e.g. computer) connected to the network interface is switched on again, your devolo Magic adapter can also be accessed over the electrical wiring again.



*Check whether the adapter is connected to the mains supply correctly and whether the pairing operation has been carried out successfully. For more information about this, refer to **3.3 Connecting the devolo Magic 2 LAN**¹⁻¹.*

2.3.2 Network connection

You can use the network connection on the devolo Magic adapter to connect it to a PC or television using a standard network cable.

2.3.3 Integrated electrical socket

Always use the integrated electrical socket on the devolo Magic adapter when connecting other consumers to the mains supply. In particular, electronic devices with mains adapter can negatively affect PLC performance.

The integrated mains filter in the devolo Magic adapter filters any such external interference and reduces any impairment of PLC performance.

3 Initial use

This chapter tells you everything you need to know to set up and use your devolo Magic 2 LAN ¹⁻¹. We describe how to connect the adapter and briefly describe the devolo software.

3.1 Package contents

Please ensure that the delivery is complete before beginning with the installation of your devolo Magic 2 LAN ¹⁻¹:

- **Starter Kit:**

- 2 devolo Magic 2 LAN ¹⁻¹
- 2 network cables
- Printed installation guide
- Printed security flyer
- Printed simplified CE/UKCA declaration

or

- **Extension:**

- 1 devolo Magic 2 LAN ¹⁻¹
- 1 Network cable
- Printed installation guide
- Printed security flyer
- Printed simplified CE/UKCA declaration

devolo AG reserves the right to change the package contents without prior notice.

3.2 System requirements

- **Operating systems supported by devolo Cockpit:**

- from Windows 7 (32-bit/64-bit),
- from Ubuntu 13.10 (32-bit/64-bit),
- from Mac (OS X 10.9)

- **Gigabit network connection**

- **Network connection**



Please note that your computer or other device must have a network card or network adapter with a network interface.

To set up a devolo network, you need at least two devolo adapters.

3.3 Connecting the devolo Magic 2 LAN ¹⁻¹



CAUTION! Damage to the device caused by ambient conditions
Only use device indoors in dry conditions

In the following sections we describe how to connect the devolo Magic 2 LAN ¹⁻¹ and integrate it into a network. We clarify the exact procedures based on potential network scenarios.



For the permitted voltage range for operating the device and the power consumption, refer to the type plate on the rear of the device. For additional technical information on our products, refer to the product area at www.devolo.global.

3.3.1 Starter Kit – Automatic set-up for a new devolo Magic network

- ❶ Connect one devolo Magic 2 LAN ¹⁻¹ to your Internet access device's network connection (e.g. your Internet router).
- ❷ Connect the other devolo Magic 2 LAN ¹⁻¹ to the network connection of your computer or another network device using a network cable.



CAUTION! Tripping hazard

Lay the network cable in a barrier-free manner and ensure that the electrical socket and the connected network devices are easily accessible

- ❸ Plug both devolo Magic adapters into available power sockets within 3 minutes. As soon as the LEDs on both adapters flash white at regular intervals of 0.5 sec., they are ready to operate and automatically start the process of establishing an encrypted connection to each other (see Chapter **2.3.1 Reading the indicator light**).




If the LEDs on both devolo Magic adapters light up in white, then your devolo Magic network has been set up according to your individual specifications and is protected from unauthorised access.

3.3.2 Addition – Expanding an existing network by adding another devolo Magic adapter

Before you can use the devolo Magic 2 LAN ¹⁻¹ in your devolo Magic network, first you have to connect it to your existing devolo Magic adapters as a network. This is accomplished by using a shared password.

- ① Connect the devolo Magic 2 LAN ¹⁻¹ to the network connection of your computer or another network device using a network cable.
- ② Plug the devolo Magic 2 LAN ¹⁻¹ into an available power socket. As soon as the LED flashes white at regular intervals of 0.5 seconds, the adapter is ready to operate but not yet integrated into a devolo Magic network (see Chapter 2.3.1 Reading the indicator light).
- ③ Within 3 minutes, press the PLC/reset button on a devolo Magic adapter in your existing devolo Magic network for approximately 1 sec.

 *The new devolo Magic adapter pairs automatically so no button needs to be pressed. The LED of this adapter now also flashes white.*



If the LEDs light up white on both devolo Magic adapters, the new adapter has been successfully integrated into your existing devolo Magic network.



For each pairing operation, only one additional adapter can be added at a time.

3.3.3 Changing the network password

A network password can also be changed in the following ways:

- Using the **web interface** of the devolo Magic adapter (see Chapter 4.2.2 Powerline)

or

- Using **devolo Cockpit** or the **devolo Home Network App**. For more information, refer to the following chapter.

3.4 Installation of devolo software


Installing devolo Cockpit software

devolo Cockpit finds all accessible devolo Magic adapters in your devolo Magic network, displays information about these devices and encrypts your devolo Magic network individually. You can use

the software to navigate to the integrated web interface.

Operating systems supported by devolo Cockpit (Version 5.0 or later):

- from Windows 7 (32-bit/64-bit) or later,
- from Ubuntu 13.10 (32-bit/64-bit),
- from Mac (OS X 10.9)

 You can find the product manual, software and additional information on devolo Cockpit online at www.devolo.global/devolo-cockpit.

Downloading the devolo Home Network App

The devolo Home Network App is devolo's **free app** also for checking and configuring WiFi, PLC and LAN connections for the devolo Magic adapter (using a smartphone or tablet). The smartphone or tablet connects to the devolo Magic adapter at home over Wi-Fi.

- 1 Download the devolo Home Network App to your smartphone or tablet computer from the corresponding store.
- 2 The devolo Home Network App is placed in your smartphone's or tablet's app list as usual.

Tapping on the devolo Home Network App icon brings you to the start menu.

 You can find more information about the devolo Home Network App online at www.devolo.global/home-network-app.

3.5 Removing the devolo Magic adapter from a network

To remove a devolo Magic adapter from your network and successfully restore its entire configuration to the factory default settings, press the PLC/reset button longer than 10 seconds. Wait until the LED flashes white and then disconnect the adapter from the mains supply.

Keep in mind that all settings that have already been made will be lost!

To integrate the mains supply into another network, proceed as described in Chapter **3.3.2 Addition – Expanding an existing network by adding another devolo Magic adapter**.

4 Configuration

The devolo Magic 2 LAN ¹⁻¹ has a built-in web interface that can be called up using a standard web browser. Here, you can read out device information and configure some settings for operating the devolo Magic adapter.

4.1 Calling up the built-in web interface

You can access the built-in web interface for the devolo Magic 2 LAN ¹⁻¹ in different ways:

- Using the **devolo Home Network App** on your smartphone or tablet, you can access the device's web interface by tapping on the corresponding adapter symbol for the devolo Magic 2 LAN ¹⁻¹.
- Using the **devolo Cockpit software**, you can access the web interface of the devolo Magic adapter by clicking on the tab for the **device's configuration page**.

Then the program determines the current IP address and starts the configuration in the web browser.



You can find more information on devolo software in Chapter **3.4 Installation of devolo software**.

4.2 Menu description

All menu functions are described in the corresponding interface as well as in the associated chapter in the manual. The sequence of the description in the manual follows the structure of the menu.

The central web interface areas are displayed at the edge of the screen. Click a menu to switch directly to that menu.

Overview

Powerline

LAN

System

Logging in

The web interface is not password protected. Assigning a login password is mandatory when log-

ging in for the first time to prevent unauthorised access by third parties.



You can find more information on the login process in Chapter 4.2.4 System.

Enter your existing password each time you login again and confirm by pressing **Log in**.

A screenshot of a login form. At the top, it says 'Please log in with your password!'. Below this, there is a label 'Password:' followed by a text input field containing the placeholder text 'Password'. To the right of the input field is a 'Login' button.

Logging out



Log out of the web interface by clicking **Log out**.

Language selection



Select the desired language in the language selection list.

Making changes

Once you make a change, two icons are shown on the corresponding menu page:

- **Disk** icon: Your settings are being saved.

- **X** icon: The operation is being cancelled. Your settings are not being saved.

Required fields

Fields with a red border are required fields. This means entries must be made in these fields to continue with the configuration.

Help text blank fields

Fields that have not been filled in yet contain greyed out help text, which indicates the required content for the field. This help text disappears immediately once content has been entered.

Default settings

Some fields contain default settings which ensure the greatest amount of compatibility and ease of use. Default settings are identified with an * in drop-down menus.

Default settings can of course be replaced with customised information.

Recommended settings

Some fields include recommended settings.

Recommended settings can of course be replaced with customised information.

Invalid entries

Entry errors are either highlighted by a red border or error messages are shown.

Buttons

Click the **Disk** icon to save the settings for the respective web interface area.

Click the **X** icon or use the **Menu path** above the buttons to exit the respective web interface area.

Click the **Recycle bin** icon to delete an entry.

Click the **Arrow** icon to refresh a list.

4.2.1 Overview

In the **Overview** area, you will find information on hardware and software for the devolo Magic adapter and network details.

System

Information

Name:

devolo-002

MT number:

1902011230000002

Serial number:

b8:be:f4:00:00:02

MAC address:

Firmware version:

System uptime:

12 days, 03:37:16

Powerline

Local Device

Device state:

Connected

Network

Connected clients:

3

LAN

Ethernet:

LAN port 1:

Not connected

IPv4

DHCP:

enabled

Address:

172.25.201.171

Netmask:

255.255.0.0

Default gateway:

172.25.5.1

Name server:

172.25.1.12

IPv6

Link-local address:

fe80::babe:f4ff:fe00:2/128

SLAAC address:

2a00:fe0:313:25:babe:f4ff:fe00:2/64

Name server:

System

Name: Device name

MT number: Device type number

Serial number: Device serial number

MAC address: MAC address of the device

Firmware version: Firmware version of the device

System uptime: Operating time since the last restart

LAN – Ethernet

LAN port: network connection; if a connection has been detected, the speed (10/100/1000 Mbps) and the mode (half/full duplex) are specified; otherwise, the status "unconnected" is specified.

LAN – IPv4

DHCP: Display indicating whether DHCP is switched on or switched off

Address: IPv4 address in use

Netmask: IPv4 network mask in use

Default gateway: IPv4 gateway in use

Name server: DNSv4 server in use

LAN – IPv6

Link-local address: Link-local address in use

SLAAC address: SLAAC address in use

Name server: DNSv6 server in use

Powerline

Local device: Status information „connected“ or „not connected“

Network: Number of devices connected to the network

Connections

The table lists all available and connected devolo Magic adapters for your network along with displaying the following details:

Device ID: number of the respective devolo Magic adapter in the devolo Magic network

MAC address: MAC address of the respective devolo Magic adapter

Transmit (Mbps): Data transmission rate

Receive (Mbps): Data reception rate



You can find more detailed information on the displayed network details in Chapter 4.2.3 LAN.

4.2.2 Powerline

In the **Powerline** area, you will find functions and information on the topic of Powerline and adapter pairing.

Powerline Network


To form one Powerline network, all devices need to receive a common encryption password.

This happens automatically if you initiate pairing by pressing the Powerline button on two or more devices in succession. The automatically generated password of the first device will be assigned to all other devices.

Instead of pressing the physical button on the device itself, you can also activate the following button.

When you activate the following button, the current password will be deleted.

Instead of the auto-generated password, you can also assign your own password for encryption. The same password must be entered for all devices which should be part of the same Powerline network.

Powerline password: 

Powerline domain name:

In order to use a new devolo Magic 2 LAN ¹⁻¹ in your devolo Magic network, first you have to connect it to your existing devolo Magic adapters devices as a network. This is accomplished by using a shared password. This can be assigned in different ways:

- Using **devolo Cockpit** or the **devolo Home Network App** (see Chapter 3.4 **Installation of devolo software**),
- Only using the **PLC button** (see Chapter 2.3 **Pairing**)
- Using the web interface, in the **Powerline** menu; as described below:

Pairing – Using on-screen button

- 1 Click **Start pairing** to start the pairing operation. This may take some time.
- 2 As soon as the new devolo Magic adapter is integrated into your existing network, it appears in a list of available and established connections (see Chapter **Connections**).

Pairing – Using custom password

You can also assign your network a custom PLC password you pick yourself. Enter this password for each devolo Magic adapter in the **Powerline password** field and confirm your entry with **OK**.

Note that the custom password is not assigned to the whole PLC network automatically. Instead, you must assign it separately to each of your devolo Magic adapters.

Powerline domain name

The Powerline domain name determines the name of your PLC network.

Unpairing – Resetting or removing an adapter from a network

- 1 To remove a devolo Magic adapter from your devolo Magic network, click **Leave Powerline network**.
- 2 Wait until the PLC LED flashes white and then disconnect the devolo Magic adapter from the mains supply.

Compatibility mode

Using as VDSL connection may negatively impact the performance of the bandwidth connection by crosstalk of the signal.

Compatibility Mode

In rare cases, VDSL connection problems can be caused by crosstalk with the powerline signal. If automatic compatibility mode is enabled, the device will try to detect this situation and adjust its output signal accordingly, which should provide the best balance between performance and mitigation of crosstalk.

☒ Automatic compatibility mode (recommended) *

If automatic mode is disabled, or cannot reliably detect crosstalk, a static mitigation profile will be used instead. Select the profile which matches the type of your VDSL connection, or select "Full Power" for no mitigation at all.

☒ MIMO ☐ SISO

* Changes will have effect after system reboot.

In order to mitigate any potential negative effects the device provides the following options:

Automatic compatibility mode

If the option **Automatic compatibility mode (recommended)** is enabled, the device can automatically adjust the output signal to avoid interference as much as possible. This option is configured by default.

Manual compatibility mode

If an interference has not been eliminated despite activating the automatic setting, please disable it and set the compatibility mode as well as the signal transmission profile manually:

- MIMO
 - ☐ Full power
 - ☐ VDSL 17a (default)
 - ☐ VDSL 35b
- SISO
 - ☐ Full power
 - ☐ VDSL 17a (default)
 - ☐ VDSL 35b



Get in touch with your internet provider to find out which signal transmission profile is the best option for your internet connection.

The MIMO operating mode and the VDSL 17a signal transmission profile are configured by default.

4.2.3 LAN

You make changes to the network settings in the **LAN** area.

The screenshot shows a web interface for LAN configuration. It has two main sections: 'IPv4 Configuration' and 'IPv6 Configuration'. In the IPv4 section, the 'DHCP enabled' checkbox is checked. In the IPv6 section, the 'DHCPv6 enabled' checkbox is unchecked. Below these are input fields for 'Address', 'Prefix', 'Default gateway', and 'Name server'. The 'Address' field contains '::', 'Prefix' contains '0', 'Default gateway' contains '::', and 'Name server' contains '::'. At the bottom, a note states: 'All changes except the name server will have effect after system reboot.'

You can access the web interface for the devolo Magic 2 LAN ¹⁻¹ using its current IP address. This may be an IPv4 and/or IPv6 address, which is either entered manually as a static address or automatically retrieved from a DHCP server.

IPv4 Configuration

In the factory default settings, only the **DHCP enabled** option for **IPv4** is enabled. This means that the IPv4 address is retrieved axiomatically

from a DHCP server. The currently assigned network data is visible (greyed out).

If a DHCP server is already present on the network for giving out IP addresses (e.g. your Internet router), you should enable the **DHCP enabled** option so that the devolo Magic 2 LAN ¹⁻¹ automatically receives an address from it.

If you want to assign a static IP address, make entries accordingly for the **Address**, **Subnetmask**, **Default gateway** and **Name server** fields.

Confirm your settings by clicking the **Disk** icon.

Then, restart the devolo Magic adapter to ensure that your changes take effect.

IPv6 Configuration

If you want automatic IP address assignment and there is already a DHCP server present on the network for giving out IP addresses (e.g. your Internet router), enable the **DHCPv6 enabled** option to ensure that the devolo Magic 2 LAN ¹⁻¹ automatically receives an address from this device.

If you want to assign a static IP address, make entries accordingly for the **Address**, **Prefix**, **Default gateway** and **Name server** fields.

Confirm your settings by clicking the **Disk** icon.

Then, restart the devolo Magic adapter to ensure that your changes take effect.

4.2.4 System

In the **System** area, you can configure the settings for security and other devolo Magic adapter device functions.

System Information

System information lets you enter an user-defined name in the **Device name (hostname)** field. This information is particularly helpful if multiple devolo Magic adapters are to be used and identified in the network.

System Information

Device name (hostname):

devolo-002

Password

Set a new password to protect this webinterface.

Enter new password:

Password

Confirm new password:

Confirm password

Identify Device

Activate this button to identify this device. The LED will flash fast in white for two minutes.

Identify

Password.

You can set a login password for accessing the web interface.

By default, the built-in web interface of the devolo Magic 2 LAN ¹⁻¹ is not protected by a password. We recommend assigning a password when the installation of the devolo Magic 2 LAN ¹⁻¹ is complete to protect it against tampering by third parties.

To do so, enter the desired new password twice. Now the web interface is protected against unauthorised access with your custom password!

Identify Device

The devolo Magic adapter can be located using the **Identify device** function. Click **Identify** to make the white PLC LED for the corresponding adapter flash for 2 minutes to make it easier to identify by sight.

LED

Enable the **LED disabled** option if the LEDs on the devolo Magic adapter are intended to be switched off for normal operation. An error status is indica-

ted by corresponding flashing behaviour regardless of this setting.

LED

You can disable the LED. This applies to normal operation, e.g. when the device is connected to a Powerline network or has entered standby mode. The LED still indicates ongoing pairing or connection problems.

☐ LED disabled

Powersaving

Allow device to enter powersaving mode if reduced ethernet traffic is detected. Warning: Latency might increase when very slow traffic is detected.

☐ Powersaving enabled


Standby

Allow device to enter standby mode if no ethernet link is detected. Warning: This device becomes unreachable via PLC network when ethernet link is off.

☒ Standby enabled

Powersaving

If **Powersave** mode has been enabled, the devolo Magic 2 LAN ¹⁻¹ switches to Powersave mode automatically whenever reduced data transmission over ethernet is detected.

 *The latency (time for transmitting a data packet) may be negatively affected.*


Powersave mode is disabled in the devolo Magic 2 LAN ¹⁻¹ factory default settings.

Standby


If **Standby** mode is enabled, the devolo Magic 2 LAN ¹⁻¹ automatically switches to Standby mode if no ethernet connection has been enabled, i.e. if no network device (e.g. computer) is switched on and connected to the network interface and if Wi-Fi is disabled.

In this mode, the devolo Magic 2 LAN ¹⁻¹ is not accessible over the Powerline network. As soon as the network device (e.g. computer) connected to the network interface is switched on again, your adapter can also be accessed over the electrical wiring again.

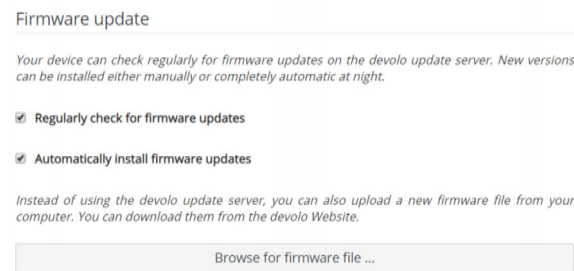
Standby mode is enabled in the devolo Magic 2 LAN ¹⁻¹ factory default condition.

 *For information on the LED behaviour of the devolo Magic adapter in standby mode, refer to Chapter 2.3.1 **Reading the indicator light**.*

Firmware update

 *The currently installed firmware of the devolo Magic adapter is displayed on the overview page (see **4.2.1 Overview**).*

The firmware of the devolo Magic 2 LAN ¹⁻¹ includes the software for operating the device. If necessary, devolo offers new versions on the Internet as a file download. **The firmware update can be initiated automatically or manually.**



Regularly check for firmware updates

The devolo Magic 2 LAN can look for up-to-date firmware automatically. To do this, enable the option **Regularly check for firmware updates**.

The devolo Magic 2 LAN lets you know when a new firmware version becomes available and asks if firmware should be updated.

Automatically install firmware updates

With the option **Automatically install firmware updates** enabled, the devolo Magic 2 LAN automatically installs the firmware it has found.

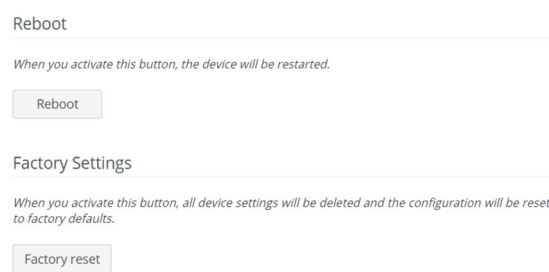
Manually initiate a firmware update

- 1 In order to manually update the firmware, visit the devolo website.
- 1 Download the appropriate file for the devolo Magic 2 LAN to your computer.
- 2 Next, click on **Browse for firmware file...** and select the downloaded firmware file.
- 3 Confirm your settings by clicking the **diskette** icon. After a successful update, the devolo Magic 2 LAN ¹⁻¹ restarts automatically.

Ensure that the update procedure is not interrupted.

Reboot

To restart a devolo Magic adapter, click **Reboot**.



Factory Settings

- ❶ To remove a devolo Magic adapter from your devolo Magic network and successfully restore its entire configuration to the factory default settings, click **Factory reset**.
- ❷ Wait until the PLC LED flashes white and then disconnect the devolo Magic adapter from the mains supply.



Keep in mind that all settings that have already been made will be lost!

5 Appendix

5.1 Technical specifications

| | |
|-------------------------------------|---|
| Security | 128 Bit AES |
| Device port | 1x RJ45 (Gigabit Ethernet port) |
| Power consumption | Maximum: 4.8 W Typical: 2.8 W Stand-by: 0.7 W |
| Power supply | internal 196-250 V AC 50 Hz |
| Temperature (Storage/Operating) | -25°C to 70 °C / 0°C to 40°C |
| Dimensions (in mm, without plug) | 133x66x42 (HxWxD) |
| Ambient conditions | 10-90% Humidity, non-condensing |
| Certifications | CE, UKCA |

5.2 Bandwidth optimization

To significantly improve the transmission capacity of the network, we recommend that you comply with the following "connection rules":

- Plug the devolo Magic 2 LAN ¹⁻¹ directly into a wall socket. Avoid using power strips. This may impair the transmission of the PLC signals.
- If there are several sockets in the wall directly next to each other, they behave like a power strip. Individual sockets are optimal.

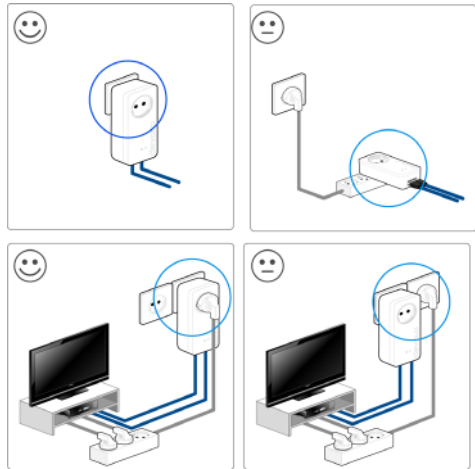


Fig. 3: Bandwith optimization

5.3 Disposal of old devices

To be used in the countries of the European Union and other countries with a separate collecting system:



The icon with crossed-out wastebasket on the device means that this product is an electrical or electronic device that falls within the scope of application of the WEEE Directive. These types of devices may no longer be disposed of with household waste. Rather they can be given to a municipal collection point free of charge. Contact your municipal government to find out the address and hours of the nearest collection point.

5.4 Warranty conditions

If your devolo device is found to be defective during initial installation or within the warranty period, please contact the vendor who sold you the product. The vendor will take care of the repair or warranty claim for you. The complete warranty conditions can be found at www.devolo.global/support.

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