

devolo MAGiC

Manual
devolo Magic 1 LAN 1-1



devolo Magic 1 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 1 LAN 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 imminent electrical voltage which if not observed can result in serious injury or death.
	An important safety symbol that warns you of a potentially dangerous situation involving a burn hazard which can result in minor injuries or damage to property.
	An important note that should be observed which can potentially lead to material damages.
	The device may only be used indoors in dry conditions.

Icon	Description
	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.
	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 European Community WEEE Directive establishes minimum standards for handling waste electrical and electronic equipment in the EU.
	Additional information, background material and configuration tips for your device.
	Indicates a completed course of action

1.2 Intended use

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

Products

devolo products are communication devices designed for indoors.* Depending on the product, they are equipped with a **PLC-** (PowerLine Communication) and/or a Wi-Fi module. Computers, laptops, smartphones, tablets, smart TVs and other devices connected this way are integrated into a home network over the existing electrical wiring and/or Wi-Fi without any complicated wiring. devolo devices must never be used outdoors because the high temperature fluctuations and moisture can damage both the product and the power line. devolo products may not be installed at a height above **two metres** unless an additional fastening mechanism is available. The products are intended for operation in the EU, Switzerland and Norway.

* The only exceptions are devolo outdoor products, which are suited for the outdoor use thanks to their IP certification.

Software

devolo devices can be used only with the free, downloadable programs approved and available on devolo AG's website (www.devolo.com) 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 and negatively affect conformity.

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:

- Network cable: RJ45-RJ45 Cat-5e UTP

1.3 CE Conformity

CE 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, Switzerland and Norway.

A printout of the simplified CE declaration of this product is separately included and can also be found under www.devolo.com/support/ce.

1.4 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 and do not insert any objects into the electrical socket or into the ventilation openings

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



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**.

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

The power socket and all connected network devices should be easily accessible so that you can pull the power plug quickly if needed.



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).



CAUTION! Damage to housing from cleaning agents containing solvents
Clean only electroless and with dry cloth

1.5 devolo on the Internet

For detailed information on our products and devolo Magic, visit www.devolo.com.

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.com!

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

The product name concept

The devolo Magic 1 LAN 1-1 name concept has the following structure:

Product family	devolo Magic
Performance category	1
Transmission type	LAN (Ethernet)
Number of sockets	1
Integrated electrical socket	1 (= yes)

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 WiFi frequently falls short due to ceilings and walls.

I 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 The devolo Magic 1 LAN

A brief 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 **1200 Mbps** over distances of **up to 400 meters**, the devolo Magic 1 LAN 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 1 LAN 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 1 LAN lets you connect a stationary network device – such as a game con-

sole, television or media receiver – to your Internet access point over the Powerline network (e.g. Internet router).

The devolo Magic 1 LAN features

- One Gigabit network connection
- One indicator light

I The LED status display can be disabled. You can find more information about this in **Chapter 4 Configuration** or in the product manual for the devolo Cockpit software available online at www.devolo.com/cockpit.

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



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

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 1 LAN 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 app** (see Chapter **3.4 Installation of devolo software**)
 - Using the **web interface** (see Chapter **4.2.2 PLC**)
 - 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.

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

- ② Within 3 minutes, press the PLC/reset button on the devolo Magic adapter that you want to add to your existing devolo Magic network. 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.

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

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.

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

2.3.1 Reading the indicator light

The integrated indicator light (**LED**) shows the status for the devolo Magic 1 LAN 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 dis-abled
2	Red LED	Flashes at intervals of 0.5 sec. (on/off)	Status 1: The reset of the devolo Magic adapter was successful. The PLC/reset button has been pressed and held for 10 seconds. 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 .	Cannot be dis-abled

	LED	Flashing behaviour	Meaning	LED status display (web interface*)
3	Red LED	Lights up steady	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. 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.	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
5	White LED	Status 1: Flashes at intervals of 0.5 sec. Status 2: Flashes at intervals of 1 sec.	Status 1: This devolo Magic adapter is in pairing mode and the system is searching for new devolo Magic adapters. Status 2: Someone has triggered the "Identify device" function on the web interface or in the devolo app. This function identifies the devolo Magic adapter being sought.	Cannot be dis-abled

	LED	Flashing behaviour	Meaning	LED status display (web interface*)
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 dis-abled

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

** Information on improving the transmission rate can be found in Chapter **5.1 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.

i 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 1 LAN**.

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 1 LAN. 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 1 LAN:

- **Starter Kit:**

- Two devolo Magic 1 LAN
- Two network cables
- Hard copy of installation guide
- Hard copy security flyer
- CE declaration

or

- **Extension:**

- devolo Magic 1 LAN
- Network cable
- Hard copy of installation guide
- Hard copy security flyer
- CE 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),
- Ubuntu 13.10 (32-bit/64-bit),
- Mac (OS X 10.9)

- **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 Magic network, you need at least two devolo Magic adapters.

3.3 Connecting the devolo Magic 1 LAN



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 1 LAN and integrate it into a network. We clarify the exact procedures based on potential network scenarios.

I 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.com.

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

- ① Connect one devolo Magic 1 LAN to your Internet access device's network connection (e.g. your Internet router).
- ② Connect the other devolo Magic 1 LAN 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

- ③ 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 1 LAN 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 1 LAN to the network connection of your computer or another network device using a network cable.
- ② Plug the devolo Magic 1 LAN 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.



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 PLC**)
- or
- Using **devolo Cockpit** or the **devolo 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,
- Ubuntu 13.10 (32-bit/64-bit),
- Mac (OS X 10.9)

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

Downloading the devolo App

The devolo App is devolo's **free app** also for checking and configuring WiFi, Magic 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 WiFi.

- ① Download the devolo App to your smartphone or tablet computer from the corresponding store.
- ② The devolo App is placed in your smartphone's or tablet's app list as usual. Tapping on the devolo App icon brings you to the start menu.

 *You can find more information about the devolo App online at www.devolo.com/devolo-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 1 LAN 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 1 LAN in different ways:

- Using the **devolo App** on your smartphone or tablet, you can access the web interface of the devolo Magic adapter by going to the devolo App **overview page** and tapping on the **gear/arrow**.
- *You can find more information on devolo App in Chapter 3.4 Installation of devolo software.*
- Using the **devolo Cockpit software** under **Start**, you can access the web interface of the devolo Magic adapter by clicking on the tab for the **device's configuration page** in devolo Magic 1 LAN.

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

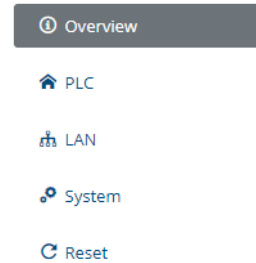


Fig. 3: Menu

Save

Confirm with **OK** to save the settings for the respective web interface area.

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.

4.2.1 Overview

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

Device ID	MAC Address	Transmit (Mbps)	Receive (Mbps)	Role
1	30:d3:2d:ee:8e:43	491	496	Domain Master
2	30:d3:2d:ee:8f:3b	514	757	End Point
3	30:d3:2d:ee:8c:db	451	345	End Point
4*	30:d3:2d:ee:8f:1f	---	---	End Point

* marks this device.

System

Name:	devolo Magic 1 LAN 1 1
MT number:	3072
Serial number:	1806154230000022
MAC address:	30:d3:2d:ee:8f:1f

Software Information

Firmware version:	magic-1-lan 7.9.0.4
System uptime:	0 days, 0h 2m 41s

LAN

LAN port 1:	unconnected
DHCP:	YES
IPv4 address:	0.0.0.0
IPv4 netmask:	0.0.0.0
IPv4 gateway:	10.10.1.1
IPv4 nameserver:	8.8.8.8
IPv6 link-local address:	fe8c:32d3:2dff:eee:8f1f:128
IPv6 SLAAC address:	:: / 0
IPv6 nameserver:	::

Fig. 4: Overview

PLC

The table lists all available and connected devolo Magic adapters in your network along with displaying some device details.

I You can find more detailed information on the displayed device details in Chapter 4.2.2 PLC.

System

Name: Device name

MT number: Device type number

Serial number: Device serial number

MAC address: MAC address of the device

Software information

FW version: Firmware version of the device

System uptime: Operating time since the last restart

LAN

LAN port 1: 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.

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

IPv4 address: IPv4 address in use

IPv4 netmask: IPv4 network mask in use

IPv4 gateway: IPv4 gateway in use

DNSv4: DNSv4 server in use

IPv6 link-local address: Link-local address in use

IPv6 SLAAC address: SLAAC address in use

DNSv6: DNSv6 server in use

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

4.2.2 PLC

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

Pairing

Instead of pressing the physical button, click this "PAIR" button to initiate the pairing. Also start the pairing on another Powerline device. The second device is integrated into the first device's network.

Start pairing:

PAIR

Unpair device:

UNPAIR

Instead of using automatic configuration above, set a custom password on all devices to create a network.

PLC password:

PLC password

OK

Advanced Settings

PLC domain name:

devolo-2eb20bb480

Force node type:

Automatic*

* indicates default option

OK

PLC Connections

Device ID	MAC Address	Transmit (Mbps)	Receive (Mbps)	Role
1	30:c3:2d:ee:8e:43	491	496	Domain Master
2	30:c3:2d:ee:8f:3b	514	757	End Point
3	30:c3:2d:ee:8c:db	380	345	End Point
4*	30:c3:2d:ee:8f:1f	---	---	End Point

* marks this device.

Fig. 5 PLC

In order to use a new devolo Magic 1 LAN 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 **dLAN Cockpit** or the **devolo app** (see Chapter 3.4 **Installation of devolo software**),
- Only using the **PLC/reset button** (see Chapter 2.3 **Pairing** and 3.3 **Connecting the devolo Magic 1 LAN**)
- Using the web interface, in the **PLC** menu; as described below:

Pairing – Using physical button and on-screen button

- ① First, press the PLC/reset button on a devolo Magic adapter in your existing network.
- ② Then, click **PAIR** to start the pairing operation. This may take some time.

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 **PLC 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 **PLC 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.

Unpairing – Resetting or removing an adapter from a network

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

Advanced settings

You will find the following options in the advanced settings:

PLC domain name: Network name

Force node type:

- Domain master
- Automatic*: Recommended default setting
- Endpoint

PLC connections

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

Device ID: 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

Role: Role of the respective devolo Magic adapter on the network

* indicates the local devolo Magic adapter

4.2.3 LAN

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

The screenshot displays the LAN configuration page. At the top, there is a 'LAN' header with a router icon. Below it, the 'IPv4 Configuration' section is active, showing a list of settings with input fields and a toggle for DHCP. The settings include IPv4 address (172.22.29.1), IPv4 netmask (255.255.0.0), Default gateway (172.22.2.1), and Name server (172.22.1.12). Below this is the 'IPv6 Configuration' section, which is currently disabled (toggle is off). It shows fields for IPv6 address (::), IPv6 prefix (0), Default gateway (::), and Name server (::). At the bottom, there are read-only fields for IPv6 link-local address (fe80::209:2bff:fe00:72), IPv6 link-local prefix (128), IPv6 SLAAC address (2a00:fe0:113:25:200:3ff:fe00:73), and IPv6 SLAAC prefix (64). Both sections have an 'OK' button at the bottom right.

LAN

IPv4 Configuration

All changes except the name server will have effect after system reboot.

DHCP enabled: ☒

IPv4 address: 172.22.29.1

IPv4 netmask: 255.255.0.0

Default gateway: 172.22.2.1

Name server: 172.22.1.12

OK

IPv6 Configuration

All changes except the name server will have effect after system boot.

DHCPv6 enabled: ☐

IPv6 address: ::

IPv6 prefix: 0

Default gateway: ::

Name server: ::

IPv6 link-local address: fe80::209:2bff:fe00:72

IPv6 link-local prefix: 128

IPv6 SLAAC address: 2a00:fe0:113:25:200:3ff:fe00:73

IPv6 SLAAC prefix: 64

OK

Fig. 6: LAN

You can access the web interface for the devolo Magic 1 LAN 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 automatically 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 1 LAN automatically receives an address from it.

If you want to assign a static IP address, make entries accordingly for the **IPv4 address**, **IPv4 netmask**, **Default gateway** and **DNS** fields.

Confirm your settings with **OK**.

Then, restart the devolo Magic adapter (see Chapter **4.2.5 Reset**) 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 1 LAN automatically receives an address from this device.

If you want to assign a static IP address, make entries accordingly for the **IPv6 address**, **IPv6 prefix**, **Default gateway** and **DNS** fields.

IPv6 link-local address: In the case of IPv6, the devolo Magic adapter always has a fixed address which can be used to access it within the connected Ethernet or PLC network segment. This link-local address is derived from the Ethernet MAC address.

IPv6 link-local prefix: Corresponding format prefix for link-local addresses

IPv6 SLAAC address: Using the SLAAC method (**Stateless Address Autoconfiguration**), the devolo Magic 1 LAN automatically generates an IP address by itself.

IPv6 SLAAC prefix: Corresponding format prefix for SLAAC addresses

Confirm your settings with **OK**.

Then, restart the devolo Magic adapter (see Chapter **4.2.5 Reset**) 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.

The screenshot displays the configuration web interface for the devolo Magic 1 LAN. It is organized into several sections, each with a title and a description:

- Identify Device:** A section with a note "If activated the white LED will blink fast for two minutes on this device." and a button labeled "Identify device: IDENTIFY".
- LEDs:** A section with a note "In reduced mode, the LED is turned off during normal operation, e.g. when the device is connected within a PLC network or is idle in standby mode. The LED still indicates an ongoing pairing or malfunction." and a toggle switch labeled "LEDs reduced:" which is currently turned on. Below the toggle is an "Ok" button.
- Powersaving:** A section with a note "Allow device to enter powersaving mode if reduced ethernet traffic is detected. Warning: Latency might suffer when very slow traffic is detected." and a toggle switch labeled "Powersaving enabled:" which is currently turned on. Below the toggle is an "Ok" button.
- Standby:** A section with a note "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." and a toggle switch labeled "Standby enabled:" which is currently turned on. Below the toggle is an "Ok" button.
- Password:** A section with a note "Set a new password to protect this webinterface." and two input fields: "New password:" and "Confirm password:". Below the fields is an "Ok" button.
- Firmware upgrade:** A section with a note "Upload a new firmware file from your computer." and a button labeled "Upgrade file: Choose a file...". Below the button is an "Ok" button.

Fig. 7: System

Identify device

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

LEDs

Enable the **LEDs reduced** option if the LEDs on the devolo Magic adapter are intended to be switched off for normal operation. An error status is indicated by corresponding flashing behaviour regardless of this setting (see Chapter **2.3.1 Reading the indicator light**).

Power saving

If this option is enabled, the devolo Magic 1 LAN automatically switches to PowerSave mode and cuts energy consumption during low data traffic.

PowerSave mode is enabled in the devolo Magic adapter's factory default settings.

Standby

If this option is enabled, the devolo Magic 1 LAN switches to standby mode automatically after approximately 10 minutes if no Ethernet connection is active, meaning that there is no active network device (e.g. computer) connected to the network interface.

In this mode, the devolo Magic adapter is not accessible over the Powerline network. As soon as the network device (e.g. comput-

er) connected to the network interface is switched on again, your devolo Magic adapter can also be accessed over the electrical wiring again.

Standby mode is enabled in the devolo Magic adapter's factory default settings.

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

Password

You can set a login password for access to the web interface.

By default, the built-in web interface of the devolo Magic 1 LAN is not protected by a password. We recommend assigning a password when the installation of the devolo Magic 1 LAN 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!

Firmware upgrade

The firmware of the devolo Magic 1 LAN includes the software for operating the device. If necessary, devolo offers new versions on the Internet as a file download, for example to modify existing functions.

- ① To bring the firmware up to the latest version, first go to the devolo website, www.devolo.com, and download the appropriate file for the devolo Magic 1 LAN to your computer.
- ② Then, navigate to the **System** ➤ **Firmware upgrade** area. Click **Choose...** and select the downloaded file.
- ③ Confirm the update procedure with **OK**. After a successful update, the devolo Magic 1 LAN restarts automatically.



Ensure that the update procedure is not interrupted.

4.2.5 Reset

Here, restart the devolo Magic adapter and/or restore it to the factory default settings.

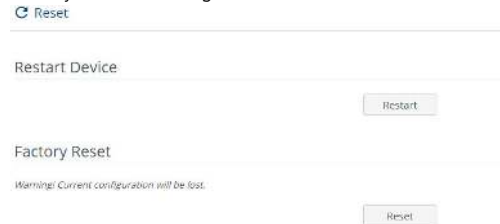


Fig. 8: Restart and reset

Restart device

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

Factory reset

- ① To remove a devolo Magic adapter from your devolo Magic network and successfully restore its entire configuration to the factory default settings, click **Reset**.
 - ② Wait until the LED flashes white and then disconnect the devolo Magic adapter from the mains supply.
- i** *Keep in mind that all settings that have already been made will be lost!*

5 Appendix

Technical specifications

Security	128 Bit AES
Device port	1x RJ45 (Gigabit Ethernet port)
Power consumption	Maximum: 3.2 W Typical: 2.8 W Stand-by: 0.5 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

5.1 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 1 LAN 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.

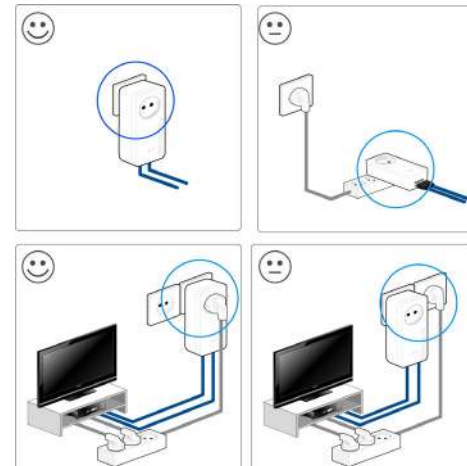


Fig. 9: Bandwidth optimization

5.2 Disposal of old devices

To be used in the countries of the European Union and other European 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 European Community 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.

5.3 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.com/warranty.

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