LIFI STARTER KIT – SET-UP AND USER MANUAL

English

Scope of Delivery – LiFi Starter Kit

1 LiFi Access Point



1 Access Point Mounting Ring



1 LiFi Dongle



1 USB C Cable



1 Ethernet Cable



1 User Manual

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Version 1 (08/2024)

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1 Notes on the Operating Instructions

Read these instructions carefully before using your aeroLiFi devices. Keep the instructions for future reference! If you give the device to other people to use, also hand over these instructions.

Symbols used in this Manual



Caution!

This symbol indicates a hazard.



Information

This section contains important information.

2 Hazard Information



aeroLiFi GmbH accepts no liability for damage to property or personal injury caused by improper handling or failure to observe the hazard warnings. In such cases, all warranty claims are void. aeroLiFi GmbH accepts no liability for consequential damage.



Do not use the device if there is visible external damage, e.g. to the housing or connection sockets, or if it is malfunctioning. If in doubt, have the device checked by a specialist.



Do not open the device. It does not contain any user-serviceable parts. In the event of a fault, have the appliance checked by a specialist.



For safety and approval reasons (CE), unauthorized conversion and/or modification of the appliance is not permitted.



Only operate the device indoors and do not expose it to moisture, vibrations, constant exposure to sunlight or other heat, cold or mechanical loads.



The appliance is not a toy. Do not allow children to play with it. Do not leave the packaging material lying around carelessly. Plastic film/bags, polystyrene parts etc. can become dangerous toys for children.



Only use Power over Ethernet or the original power adapter supplied with the device for the power supply, if available.



The device may only be connected to an easily accessible power supply (PoE+ router or injector) or mains socket. In case of danger, the mains plug or the Ethernet cable (for PoE supply) must be disconnected.



Always lay cables in such a way that they do not pose a risk to people or pets.



Ensure that no moisture or liquids come into contact with the appliances. Moisture and liquids in the appliance can damage the appliance or cause injury.

Never operate electrical appliances during thunderstorms. Lightning can cause voltage fluctuations in the local power grid, which can damage electrical devices if they are connected to the power grid. Disconnect the appliances from the power supply during thunderstorms to prevent damage and injury.

Avoid using extension cables or distribution sockets. Never use several extension cables or distribution sockets in succession. Overloaded extension cables / distribution sockets increase the risk of electric shocks or fires.

The device is only suitable for use in residential environments.

Any use other than that described in these operating instructions is not in accordance with the intended use and will result in the exclusion of warranty and liability.

3 LiFi –Radiation-Free, highly secure wireless Communication

LiFi is a wireless communication technology that uses infrared or visible light to establish a data connection between 2 or more LiFi-compatible devices.

This type of wireless connection offers increased protection against eavesdropping and interference and works without the use of radio radiation.

4 Functions and overview of Devices

The LiFi Access Point is connected to the home network and establishes the LiFi connection to the end devices via the LiFi Dongle. It has an Ethernet interface for connection to the home network, which is also used for power supply via Power over Ethernet (PoE+). This eliminates the need for an additional power supply to the Access Point.

Up to 16 Dongles can be connected via one Access Point.

The Access Point has an optical aperture angle of approx. 70°. This results in signal coverage in the room depending on the installation height and the position of the Dongle at operational height.

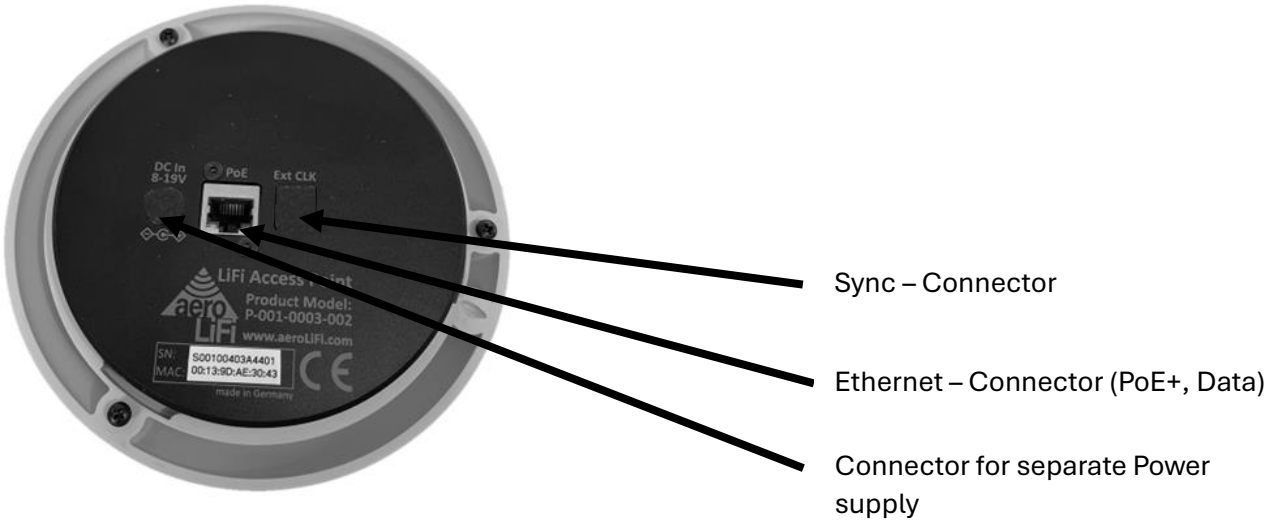


Figure 1 LiFi Access Point – Bottom view

- The “Sync” connection is used if more than one Access Point per room is used to cover a larger area with LiFi signals. It is not used in the simple setup (one Access Point).
- The Access Point is connected to the PoE+ device (switch or injector) via the Ethernet connection and is supplied with both power and data in this way.
- The connection for a separate power supply is not required in the simple setup.

The LiFi Dongle establishes the wireless connection to the Access Point and has a universal device interface (USB). Both the power supply and the data connection are realized via this interface.

The Dongle is compatible with all common operating systems. The Dongle identifies itself to the operating system as an Ethernet interface.

The Dongle has an optical aperture angle of approx. 70°. This must be taken into account when positioning it in relation to the Access Point in order to ensure optimum connection quality of the LiFi connection.

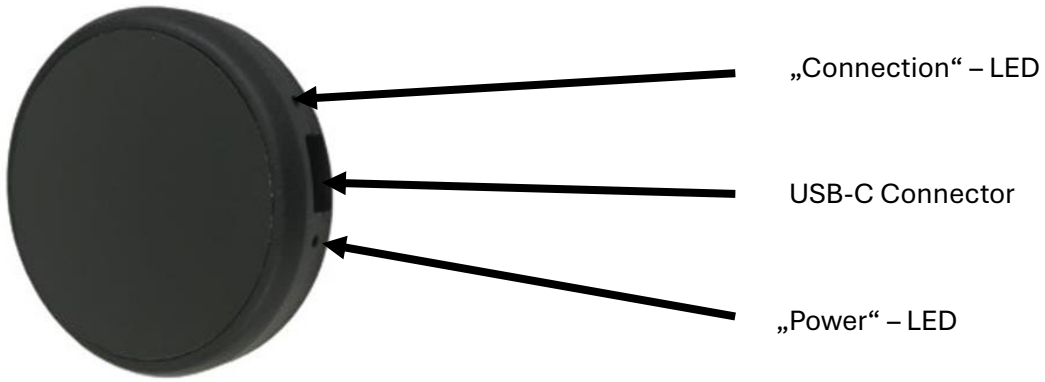


Figure 2 LiFi Dongle (Top view)

- The data connection to the mobile end device is established via the USB-C connection using a USB cable. The Dongle is also supplied with power by the end device via the same USB cable.
- The “Connection” LED indicates the status of the data connection with a red or green light. An active connection is indicated by a flashing green light. See sections “Setup” and “Troubleshooting” for more information.
- The “Power” LED indicates the status of the Dongle's power supply. An active power supply is indicated by green flashing oft he LED.

The back of the Dongle heats up during operation. Ensure that the Dongle does not come into contact with heat-sensitive materials. Avoid permanent contact with the skin.

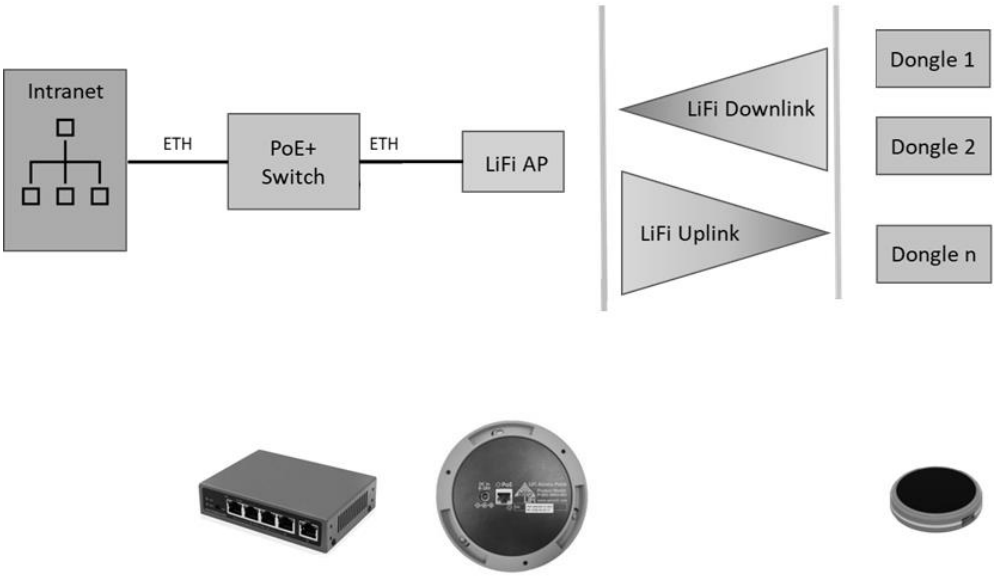


Figure 3 LiFi System Overview, schematic

5 Set Up

5.1 Compatibility with End Devices

The LiFi Dongle is compatible with all common mobile devices (smartphones and tablets) as well as laptops and PCs. The following operating systems are supported:

- Windows (Windows 10 upwards)
- Mac OS (macOS 14 upwards)
- Linux (Kernel 4.x upwards)
- Android (Android 13 upwards)
- iOS (iOS 16 upwards)

If you are using operating systems or versions other than those listed above, please contact product support.

It may be necessary to install device drivers for correct recognition of the Dongle before commissioning. See section: Driver installation!

5.2 Installation / Mounting

The LiFi Access Point is intended to be mounted fix on ceilings or walls. To do this, first attach the mounting ring as shown in Figure 4, using appropriate screws and, if necessary, wall plugs (1).

Before installation, make sure that the surface is suitable for mounting the mounting ring and Access Point and, above all, that it has sufficient load-bearing capacity and strength.

In case of doubt, contact a specialist company to ensure proper installation.

Only use tools for their intended purpose and always observe the safety instructions for the tool to avoid injury.

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Before switching on the power supply, make sure that the connections between all devices have been properly established to prevent damage to the devices.

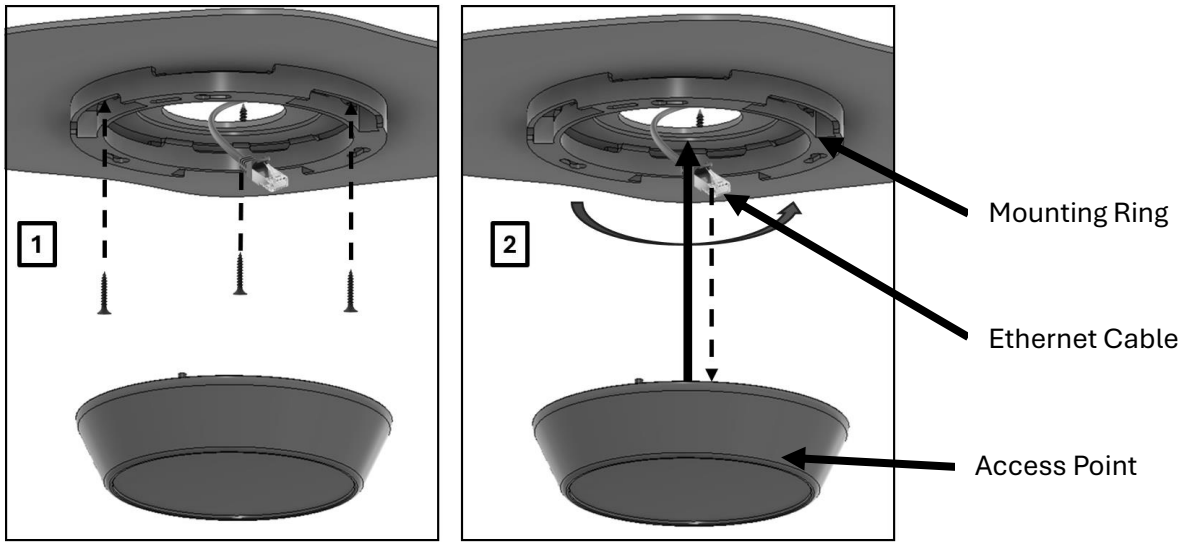


Figure 4: Installation of mounting ring and Access Point

During operation, ensure that there is a direct line of sight between the Access Point and the Dongle, otherwise the connection may deteriorate or be lost.

A minimum distance of 1.5 meters must be maintained between the LiFi Access Point and the Dongle for optimum connection quality. The maximum signal range is approximately 4 meters.

The signal quality and range may depend on external factors such as room lighting, furnishings, structural conditions, etc.

After installing the mounting ring, connect the Ethernet cable to the Access Point and mount the Access Point on the mounting ring. Turn the Access Point clockwise to fix it to the mounting ring and it is now ready for operation (2).

5.3 Connection to the Network / Internet

After installing the Access Point, establish the connection to the network as follows:

- Install the supplied PoE+ switch or PoE+ injector according to the manufacturer's instructions. Observe the safety instructions for the respective device.
- Connect the data input of the PoE+ device to the network (router, server, etc.) via Ethernet cable
- Connect the output of the PoE+ device to the Ethernet port of the LiFi Access Point

To operate the LiFi Access Point, at least a CAT 5 ethernet cable is required.

- Now connect the power connection of the PoE+ device to the mains supply.

Figure 3 shows a schematic representation of the connected system components.

5.4 Installation of Device Drivers

The LiFi Dongle is usually compatible with the end device without prior installation of device drivers.

It may be necessary to update or reinstall the device drivers.

Suitable drivers for Windows and Linux operating systems are included on the supplied USB stick.

Please follow the system-specific instructions for installing the driver for your operating system. For detailed instructions, please contact the manufacturer of your operating system.

Alternatively, drivers for all operating systems can be downloaded directly from the following links:

https://aerolifi.com/support/

https://www.asix.com.tw/en/product/USBEthernet/Super-Speed_USB_Ethernet/AX88179A

6 Troubleshooting

The following section provides an overview of possible errors during operation or commissioning. Despite extensive testing of the system, it cannot be ruled out that errors may occur that are not listed in the following overview. In this case, please contact product support.

6.1 Possible Errors and Couter-Measures

Error description	Meaning	Solutions
Dongle “Power” LED does not blink green	The Dongle receives no power.	• Make sure that the connection to the end device is established via the USB-C cable • Make sure that the USB port used on the end device is working properly • Make sure that the USB-C cable used is undamaged • Restart the Dongle by disconnecting and reconnecting it
Dongle “Connection” LED does not light up	Dongle cannot establish a connection to the Access Point	• Ensure that the Access Point has an active PoE+ connection to the PoE+ switch or PoE+ injector • Make sure that the Dongle is within the coverage area of the LiFi signal and has a direct line of sight to the Access Point • Make sure that the distance between the Dongle and the Access Point is between 1.5 and 4 meters • Restart the Dongle by disconnecting and reconnecting it to the end device
Dongle “Connection” LED flashes red or lights up red continuously	Poor LiFi connection between Access Point and Dongle	• Make sure that the Dongle is within the coverage area of the LiFi signal and has a

		direct line of sight to the Access Point • Make sure that the distance between the Dongle and the Access Point is between 1.5 and 4 meters • Restart the Dongle by disconnecting and reconnecting it to the end device
No Internet connection on the end device	Problem with the network or the network settings of the end device	• Make sure that the Dongle is correctly connected to the end device (see “Dongle” error description) • Ensure that the Access Point is correctly connected to the network and the PoE+ device • Make sure that the PoE+ device is working properly • Test the connection to the Internet with your end device in another way to rule out a malfunction with your Internet provider • Make sure that the end device allows a DHCP connection (contact the manufacturer of your operating system if necessary)

Table 1 Troubleshooting

7 Maintenance and Care

The devices are maintenance-free for you. If maintenance or repairs are required, please contact product support!

Clean the appliance with a soft, clean, dry and lint-free cloth. To remove heavier soiling, the cloth can be slightly moistened with lukewarm water. Do not use cleaning agents containing solvents, as these can damage the plastic housing and the labeling.

8 Technical Data

Device brief description - Access Point	aeroLiFi Access Point, PN S101-010
Device brief description - Dongle	aeroLiFi Dongle, PN S202-040
Supply voltage - Access Point	PoE+ (42,5 - 57 VDC)
Supply voltage - Dongle	USB (5VDC)
Power consumption - Access Point (idle mode)	< 8 W
Power consumption - Access Point (Max)	< 8 W
Power consumption - Dongle (max)	< 3 W
Protection class - Access Point	IP 20
Protection class - Dongle	IP 20
Ambient temperature during operation (Access Point / Dongle)	5 to 35 °C
Dimensions (W x H x D) - Access Point	152 x 42 x 152 mm
Dimensions (W x H x D) - Dongle	68 x 16 x 68 mm
Weight - Access Point	400 g
Weight - Dongle	110 g
Typical Data Rate (LiFi Connection)	100 Mbps

Table 2 Technical Data

9 Other Notes and Information

In order to save energy, always switch off all appliances or disconnect them from the mains when you are not using them!

Disposal note

Do not dispose of devices in household waste! Electronic devices must be disposed of in accordance with the directive on waste electrical and electronic equipment via the local collection points for waste electronic equipment.

The CE mark is an over-the-counter mark intended exclusively for the authorities. It does not constitute a guarantee of properties.

Contact information, manufacturer:

aeroLiFi GmbH, Argelsrieder Feld 22, 82234 Wessling

For questions about the product or technical assistance, please contact us by email at:

support@aerolifi.com

Further information on the manufacturer, product and LiFi technology can be found at:

www.aerolifi.com