Quick Installation Guide

LANCOM 1800EF-4G

lancom-systems.com

LEDs overview of the LANCOM 1800EF-4G
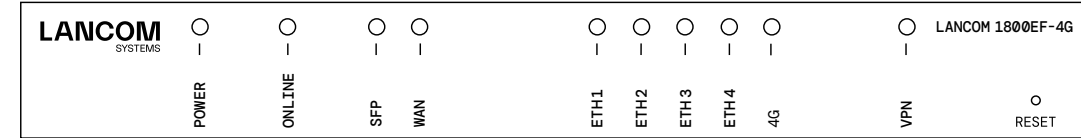
A Power

Off	Device switched off
Green, permanently*	Device operational, resp. device paired / claimed and LANCOM Management Cloud (LMC) accessible
Red/green, blinking	Configuration password not set. Without a configuration password, the configuration data in the device is unprotected.
Red, blinking	Hardware error
Red, blinking slowly	Time or charge limit reached/error message occurred
1x green inverse blinking*	Connection to the LMC active, pairing OK, device not claimed
2x green inverse blinking*	Pairing error, resp. LMC activation code not available
3x green inverse blinking*	LMC not accessible, resp. communication error

B Online

Off	WAN connection inactive
Green, blinking	WAN connection is established (e.g. PPP negotiation)
Green, permanently	WAN connection active
Red, permanently	WAN connection error

C SFP

Off	SFP deactivated in the configuration or SFP module present, no connection to network device
Red, permanently	SFP enabled in the configuration but no SFP module present
Green, permanently	SFP module present, connection to network exists, no data transmission
Green, blinking	Data transmission
Red, blinking	SFP module present, hardware error

D WAN

Off	Interface deactivated
Orange, blinking	Synchronization with the modem
Orange, permanently	Synchronization with the modem successful
Green, permanently	WAN connection established
Green, flickering	WAN data transmission
Red/orange, blinking	Hardware error, ext. modem

E ETH1 - ETH4

Off	No link
Green, permanently	Network connection ready (link)
Green, flickering	Data transmission

F 4G

Off	Cellular interface disabled
Green,permanently	Connection to cellular network active
Green, flickering	Cellular data transmission
Orange, permanently	Logon to cellular network successful
Orange, blinking	Logging on to cellular network
Red, permanently	Hardware error / module unavailable
Red / green, blinking	SIM card error (PIN)
Red / orange, blinking	Uploading module firmware

G VPN

Off	No VPN connection active
Green, permanently	VPN connection active
Green, blinking	Establishing VPN connection

H Reset

Pressed up to 5 seconds	device restart
Pressed until first flashing of all LEDs	configuration reset and device restart

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Initial start-up

Setting up the required connections for device configuration

→ Connect the power supply to a power socket using the enclosed or another suitable IEC cable or the enclosed external power supply unit. Observe the safety instructions on the right.

→ **Only for devices with integrated DSL modem:** If available and required, connect the G.FAST / VDSL / ADSL interfaces to a TAE socket of your provider using suitable cables.

→ Use suitable cables or modules to connect other required device interfaces to other components and, in the case of devices with mobile radio and/or Wi-Fi interfaces, connect any antennas supplied.

→ Depending on the device equipment, choose one of the following configuration methods **a)** or **b)**

a)   Configuration via the LANCOM Management Cloud (LMC)
The LMC automatically rolls out the configuration to your device, provided it has access to the Internet. If a router that establishes the Internet connection should be added to the LMC, it may first be necessary to configure a basic configuration and an Internet connection via the local network, as described under **b)**.

b)   Configuration via the local network
Connect one of the **ETH** or **LAN** interfaces of the device via an Ethernet cable either to a network switch or directly to the network device intended for configuration (e.g. notebook).
The CONFIG or COM interface is not suitable for configuration via the network!

Options for initial start-up of the unconfigured device

→ **Option 1: via the LANCOM Management Cloud (LMC)**

The LANCOM Management Cloud allows LANCOM partners to automate the commissioning, centralized management, and monitoring of LANCOM devices. Further information on commissioning and configuration via the LMC can be found at www.lancom-systems.com/lmc-access.

→ **Option 2: via web browser (WEBconfig)**

Configuration via web browser is an easy and fast variant, since no additional software is required on the computer used for configuration.

Note: If a certificate warning appears in your browser when trying to connect to your device, there is a button or link on the displayed browser page to connect to the device anyway (depending on the browser, usually under **Advanced**).

In the following, select the description **a)** or **b)** that applies to your setup for configuring the device.

a) Configuration in a network without active DHCP server	b) Configuration in a network with active DHCP server
For configuration via TCP/IP, the IP address of the device in the local network (LAN) is required. After power-on, an unconfigured LANCOM device first checks whether a DHCP server is active in the LAN.	In this procedure, the DNS server used in your network must be able to resolve the host name reported by the device via DHCP. When using a LANCOM device as a DHCP and DNS server, this is the default case.
The device can be accessed from any computer with the Auto DHCP function enabled using a web browser under the IP address **172.23.56.254**. The given IP address can be modified at any time.	At **https://lancom-XXYYZZ** you can access your device. Replace **XXYYZZ** with the last six digits of the **MAC address** of your device, which you can find on the enclosed document **LANCOM Management Cloud** or on the nameplate of the device. If necessary, append the domain name of your local network (e. g. **.intern**).

- When the computer is connected to an unconfigured LANCOM device, WEBconfig automatically starts the setup wizard **Basic settings**.
- After the setup wizard has been run through, the initial commissioning of the device is complete.
- If necessary, make further configurations using the setup wizards available for selection.

→ **Option 3: via the Windows software LANconfig (www.lancom-systems.com/downloads)**

- Please wait until the booting process of the device is completed before starting LANconfig.
- Unconfigured LANCOM devices are automatically found by LANconfig in the local network (LAN) and the setup wizard **Basic settings** is then started.
- After the setup wizard has finished, the initial start-up of the device is complete.
- If necessary, make further configurations using the setup wizards available for selection.

General safety instructions

→ Under no circumstances should the device housing be opened and the device repaired without authorization. Any device with a case that has been opened is excluded from the warranty.

→ If antennas are available, they may only be installed or replaced when the device is switched off. Mounting or demounting antennas while the device is powered on may cause the destruction of the radio module.

→ Mounting, installation, and commissioning of the device may only be carried out by qualified personnel.

Safety instructions and intended use

In order to avoid harming yourself, third parties or your equipment when installing your LANCOM device, please observe the following safety instructions. Operate the device only as described in the corresponding documentation. Pay particular attention to all warnings and safety instructions. Use only those third-party devices and components that are recommended or approved by LANCOM Systems.

Before commissioning the device, be sure to study the corresponding Hardware Quick Reference which can be downloaded from the LANCOM website www.lancom-systems.com/downloads.

Any warranty and liability claims against LANCOM Systems are excluded in the event of any use other than the intended use described below!

Environment

LANCOM devices should only be operated when the following environmental requirements are met:

→ Ensure that you comply with the temperature and humidity ranges specified in the Quick Reference Guide for the LANCOM device.

→ Do not expose the device to direct sunlight.

→ Ensure that there is adequate air circulation and do not obstruct the ventilation slots.

→ Do not cover devices or stack them on top of one another

→ The device must be mounted so that it is freely accessible (for example, it should be accessible without the use of technical aids such as elevating platforms); a permanent installation (e. g. under plaster) is not permitted.

→ Only outdoor equipment intended for this purpose is to be operated outdoors.

Power supply

Before start-up, the following points must be observed, as improper use can lead to personal injury and damage to property, as well as voiding the warranty:

→ The mains plug of the device must be freely accessible.

→ Operate the device only with a professionally installed power supply at a nearby and at all times freely accessible socket.

→ Only use the enclosed power supply / IEC cable or the one listed in the hardware quick reference.

→ A high touch current is possible for devices with metal housing and grounding screw! Before connecting the power supply, connect the grounding screw to a suitable ground potential.

→ Some devices support power supply via an Ethernet cable (Power over Ethernet - PoE). Please refer to the corresponding notes in the hardware quick reference of the device.

→ Never operate damaged components.

→ Only switch on the device when the housing is closed.

→ The device must not be installed during thunderstorms and should be disconnected from the power supply during thunderstorms.

→ In case of emergency (e. g. damage, ingress of liquids or objects, for example through the ventilation slots), disconnect the power supply immediately.

Applications

→ The devices may only be used in accordance with the relevant national regulations and under consideration of the legal situation applicable there.

→ The devices must not be used for the actuation, control, and data transmission of machinery that, in case of malfunction or failure, may present a danger to life and limb, nor for the operation of critical infrastructures.

→ The devices with their respective software are not designed, intended or certified for use in: the operation of weapons, weapons systems, nuclear facilities, mass transportation, autonomous vehicles, aircraft, life support computers or equipment (including resuscitators and surgical implants), pollution control, hazardous materials management, or other hazardous applications where failure of the device or software could lead to a situation in which personal injury or death could result. The customer is aware that the use of the devices or software in such applications is entirely at the customer's risk.

Regulatory Notice

Regulatory compliance for devices with radio or Wi-Fi interfaces

This LANCOM device is subject to governmental regulation. The user is responsible for ensuring that this device operates in accordance with local regulatory guidelines, specifically for compliance with potential channel restrictions.

Maximum transmission power for devices with radio interfaces

This LANCOM device may contain one or more radio interfaces using various technologies. The maximum output power per technology and used frequency band for use in EU countries is described in the following tables:

Technology	Frequency range (MHz)	Max. output power (dBm EIRP)	Technology	Frequency range (MHz)	Max. output power (dBm EIRP)
LTE FDD (Band 1)	1,920 – 1,980	23	LTE TDD (Band 34)	2,010 – 2,025	24
LTE FDD (Band 3)	1,710 – 1,785		LTE TDD (Band 38)	2,570 – 2,620	24.8
LTE FDD (Band 5)	824 – 849		LTE TDD (Band 40)	2,300 – 2,400	24.8
LTE FDD (Band 7)	2,500 – 2,570		LTE TDD (Band 42)	3,400 – 3,600	24.8
LTE FDD (Band 8)	880 – 915		LTE: Power Class 3		
LTE FDD (Band 20)	832 – 862		UMTS (Band 2)	1,850 – 1,910	23
LTE: Power Class 3			UMTS (Band 4)	1,710 – 1,755	
			UMTS (Band 5)	824 – 849	

Declarations of Conformity

You will find all the Declarations of Conformity concerning our product portfolio under www.lancom-systems.com/doc. These documents contain all the tested standards and required guidelines in the area of EMC - SAFETY - RF, as well as the proof of the guidelines concerning RoHS & REACH.

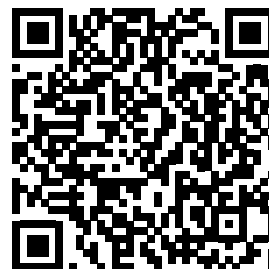### Simplified Declaration of Conformity

Hereby, LANCOM Systems GmbH | Adenauerstrasse 20/B2 | D-52146 Wuerselen, declares that this device is in compliance with Directives 2014/30/EU, 2014/35/EU, 2014/53/EU, 2011/65/EU, and Regulation (EC) No. 1907/2006. The full text of the EU Declaration of Conformity is available at the following Internet address: www.lancom-systems.com/doc