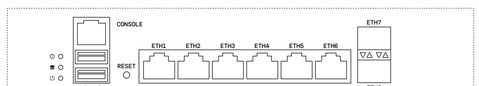
LANCOM SYSTEMS

lancom-systems.com

Quick Installation Guide

LANCOM ISG-5000

LEDs overview of the LANCOM ISG-5000



A LEDs Status / HDD / Power	
Status: green, permanently*	Device operational, resp. device paired / claimed and LANCOM Management Cloud (LMC) accessible
Status: green / red, blinking	No password set. Without a password the configuration data in the device is unprotected.
Status: red, blinking	Charge or time limit reached
Status: 1x green, inverse blinking*	Connection to the LMC active, pairing OK, device not claimed
Status: 2x green, inverse blinking*	Pairing error, resp. LMC activation code not available
Status: 3x green, inverse blinking*	LMC not accessible, resp. communication error
HDD off	No HDD read / write access
HDD green	HDD read / write access
POWER off	Device switched off
POWER green	Device ready and accessible

B LEDs ETH1 - ETH6 - TP Ethernet	
Both LEDs off	No networking device attached
Green, permanently	Connection to network device operational, no data traffic
Green, flickering	Data transmission
Orange off	1000 Mbps
Orange, permanently	100 Mbps

C LEDs ETH7 - ETH8 - SFP+	
LEDs left - Link activity	
Off	No link detected
Green, permanently	Link detected, no port activity
Green, blinking	Link detected, port activity
LEDs right - Link speed	
Off	No link detected
Green, permanently	Link speed 10 Gbps

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)**, **b)**, or **c)**

a) Configuration via the local network (recommended)
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!

b) Configuration via the serial interface of a connected computer (if available)
You need a serial configuration cable whose network connector is connected to the **CONFIG** or **COM** interface of the device. **This socket is exclusively intended for connection to a serial interface!**

c) Configuration via the USB interface of a connected computer
You need a commercially available **USB-C** connection cable, which is connected to the **CONFIG** interface of the device.

Options for initial start-up of the unconfigured device

→ **Option 1: via web browser (WEBconfig, not for serially connected devices)**

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

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.

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.

b) Configuration in a network with active DHCP server

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.

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 2: 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.

→ **Option 3: via the LANCOM Management Cloud (LMC)**

The LMC is not required for the operation of LANCOM devices, but it facilitates their commissioning and permanent management through centralized, automated management. Special requirements are necessary to configure the device via the LMC. Information on this topic can be found at www.lancom-systems.com/lmc-access.

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.

→ 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.

Channel restrictions in Wi-Fi operation for devices with Wi-Fi interfaces

When operating this radio equipment in EU countries the frequency range 5,150 – 5,350 MHz (Wi-Fi channels 36 – 64) as well as the frequency range 5,945 – 6,425 MHz (Wi-Fi channels 1 – 93) is limited to indoor use.

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)
Wi-Fi	2,400 – 2,483.5	20
	5,150 – 5,350	20
	5,470 – 5,725	30
	5,945 – 6,425	23
SRD / BLE / SRD / ESL (ePaper)	2,400 – 2,483.5	10
SRD / SubGHz-ESL	869.2 – 869.25	14 / 25 mW
LTE (Band 1)	1,920 – 1,980	23
LTE (Band 3)	1,710 – 1,785	
LTE (Band 7)	2,500 – 2,570	
LTE (Band 8)	880 – 915	
LTE (Band 20)	832 – 862	

Technology	Frequency range (MHz)	Max. output power (dBm EIRP)
LTE (Band 34)	2,010 – 2,025	24
LTE (Band 38)	2,570 – 2,620	24.8
LTE (Band 40)	2,300 – 2,400	24.8
LTE (Band 42)	3,400 – 3,600	24.8
5G NR (Band 1)	1,920 – 1,980	24
5G NR (Band 3)	1,710 – 1,785	24
5G NR (Band 28)	703 – 748	24
5G NR (Band 41)	2,496 – 2,690	24
5G NR (Band 77)	3,300 – 4,200	24.5
5G NR (Band 78)	3,300 – 3,800	24.5
UMTS (Band 2)	1,850 – 1,910	23
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, 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

LANCOM FCC Regulatory Notice Class A Devices

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions
(1) this device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.

WARNING:

This equipment has been tested and found to comply with the limits for a class A digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

The FCC declaration of conformity may be downloaded from www.lancom-systems.com/doc under the corresponding product section.

Documentation / Firmware

Basically, current versions of the LCOS firmware, drivers, tools and documentation for all LANCOM and AirLancer products are available for download free of charge from our website.

You will also find explanations of all the functions of your LANCOM device in the LCOS Reference Manual:
www.lancom-systems.de/docs/LCOS/Refmanual/EN/

All information on the interfaces and connection options of your device can be found under the following QR code in the **Hardware Quick Reference**:

Service & Support

The LANCOM Knowledge Base — with over 2,500 articles — is available to you at any time via the LANCOM website:
www.lancom-systems.com/knowledgebase

If you have any further questions, please submit your request via our Service & Support portal:
www.lancom-systems.com/service-support

Information on the lifecycle, in particular on End of Sale / End of Life and on the supply of LANCOM devices with security updates can be found at:
www.lancom-systems.com/lifecycle

All information on your device

Package contents

Accessories	1x IEC power cable 230 V; 2× 19" mounting brackets; 1 set adhesive rubber pads

LANCOM, LANCOM Systems, LCOS, LANcommunity and hyper integration are registered trademarks. All other names or descriptions used may be trademarks or registered trademarks of their owners. This document contains statements relating to future products and their features. LANCOM Systems GmbH reserves the right to change these without notice. No liability for technical errors and/or omissions.