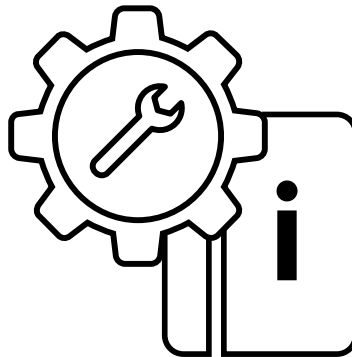


Installation Guide

LMC **device integration** **(LCOS & LCOS LX)**



Copyright

© 2023 LANCOM Systems GmbH, Wuerselen (Germany). All rights reserved. While the information in this manual has been compiled with great care, it may not be deemed an assurance of product characteristics. LANCOM Systems shall be liable only to the degree specified in the terms of sale and delivery.

The reproduction and distribution of the documentation and software supplied with this product and the use of its contents is subject to written authorization from LANCOM Systems. We reserve the right to make any alterations that arise as the result of technical development.

Windows® and Microsoft® are registered trademarks of Microsoft, Corp. 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 attributes. LANCOM Systems reserves the right to change these without notice. No liability for technical errors and / or omissions.

Products from LANCOM Systems include software developed by the "OpenSSL Project" for use in the "OpenSSL Toolkit" (www.openssl.org).

Products from LANCOM Systems include cryptographic software written by Eric Young (eyay@cryptsoft.com).

Products from LANCOM Systems include software developed by the NetBSD Foundation, Inc. and its contributors.

Products from LANCOM Systems contain the LZMA SDK developed by Igor Pavlov.

The product contains separate components which, as so-called open source software, are subject to their own licenses, in particular the General Public License (GPL). If required by the respective license, source files for the affected software components are made available on request. To do this, please send an e-mail to gpl@lancom.de.

LANCOM Systems GmbH
A Rohde & Schwarz Company
Adenauerstr. 20/B2
52146 Wuerselen | Germany
info@lancom.de | lancom-systems.com

Wuerselen, 12/2023



Configuration via the LANCOM Management Cloud

In order to configure a LANCOM device via the LANCOM Management Cloud (LMC), it must first be integrated into the LMC.



Integrating the device into the LMC requires the device to be connected to the Internet and able to reach cloud.lancom.de. If a router that is intended to provide Internet access is to be integrated into the LMC, the first step is to perform a basic configuration and to configure an Internet connection.

There are several different methods of integrating a LANCOM device into the LANCOM Management Cloud:

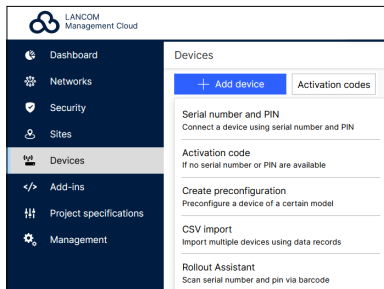
- Integration into the LANCOM Management Cloud by serial number and Cloud PIN
- Integration into the LMC by LMC Rollout Assistant
- Integration into the LANCOM Management Cloud by activation code

Integration into the LMC by serial number and Cloud PIN

You can easily add your new device to a project in the LANCOM Management Cloud (Public). You will need the serial number of the device and the associated Cloud PIN. You can find the serial number on the bottom of the device or in LANconfig or WEBconfig. The Cloud PIN can be found on the Cloud-ready flyer, supplied with the device.



In the LANCOM Management Cloud, open the **Devices** view and click **Add new device**, then select the desired method, here **Serial number and PIN**.



In the next window, enter the serial number and Cloud PIN of the device. Then confirm with the button **Add new device**.

A screenshot of the 'Add new device' form in the LANCOM Management Cloud. The form title is 'Add new device'. Below the title is a paragraph of instructions: 'Please enter here the serial number and PIN of your LANCOM device. The serial number is located on the bottom side of the device. The PIN is printed on a sheet which is enclosed with the original box. You can use the printed LAN MAC address of the device on this sheet to identify the correct device if sheet and device have been separated.' There are two input fields: 'Serial number' and 'PIN'. To the right of the 'Serial number' field is a small image of a device with a red box highlighting the serial number. To the right of the 'PIN' field is a small image of a PIN sheet with a red box highlighting the PIN and a barcode. Below the input fields is a dropdown menu for site assignment, currently showing 'No site'. At the bottom right of the form are two buttons: 'Cancel' and 'Add device'.

The next time the LANCOM device has contact with the LANCOM Management Cloud (Public), it will be paired automatically.



Integration into the LMC by LMC Rollout Assistant

The Rollout Assistant is a web application. It uses a device equipped with a camera and Internet access, such as a smartphone, tablet or notebook, to read the serial number and PIN. It offers an extremely easy way to connect the device to the LMC.

To start the Rollout Assistant, just enter the URL cloud.lancom.de/rollout into a browser. The Rollout Assistant opens with this login screen:

The screenshot displays the LMC Rollout Assistant login interface. On the left, there is a login form with the following elements: the LANCOM Management Cloud logo, the text 'Rollout Assistant', a 'LOGIN' heading, input fields for 'E-mail' and 'Password', a 'Login' button, and footer text: '© 2014 - 2020 LANCOM Systems GmbH', 'RS version 0.1.2', and language options 'Deutsch', 'English', and 'Imprint'. On the right, the interface shows the 'LANCOM Management Cloud Rollout Assistant' header, a 'Selected project LMC-Tutorial' with a blue cloud icon, and a green 'Add new device' button with a robot icon. The bottom of the screen features the slogan 'SICHER. VERNETZT.' and the LANCOM logo.

You select the desired language and login to the LMC using your credentials. On the next page, you select the project that new devices are added to. Do this by tapping the green button and scanning the serial number. The Rollout Assistant may request access to the camera on the device to do this. You scan the serial number either on the underside of the device or alternatively from the barcode on the packaging box. Otherwise, you can enter the serial number manually.

Next, scan the cloud PIN from the information sheet enclosed with the device. Here, too, you have the option of entering the PIN manually. Now you can select one of the locations available in the project, or optionally use **No location** to leave this item open. Bear in mind that the location is an important setting for the configuration by SDN (Software-defined Networking).

In the next step, you assign various properties to the device. You give the device a name, enter an address, and take a photo of the installation. The address can be determined with the GPS information from your device. In the final step, the information is displayed once again for checking. If you find any errors, simply go back and correct the corresponding entry. Click or tap **add device** to pair the device with the LMC. You will immediately see it in your project and can make other settings if necessary. As soon as you connect the device and it connects with the LMC, it is provisioned with an initial operating configuration based on the SDN settings, and the status changes to "online".

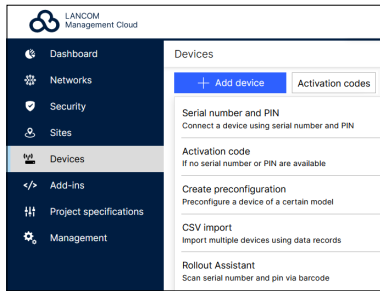


Integration into the LMC by activation code

This method uses LANconfig and just a few steps to integrate one or more LANCOM devices simultaneously into the LANCOM Management Cloud.

Create an activation code

In the LANCOM Management Cloud, open the **Devices** view and click **Add new device**, then select the desired method, here **Activation code**.



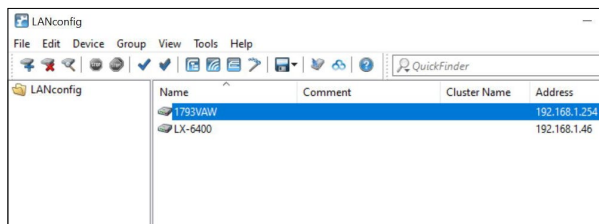
Create an activation code by following the instructions in the dialog. This activation code allows you to integrate the LANCOM device into this project at a later time.



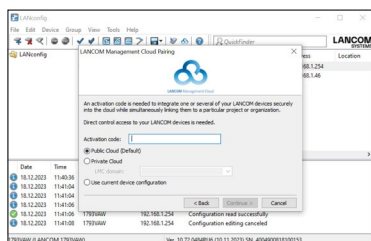
The **Activation code** button displays all of the activation codes for this project in the Devices view.

Using the activation code

Open LANconfig and select the desired device or devices and click the Cloud icon in the menu bar.



In the dialog window that opens, enter the activation code that you generated previously and click the button **OK**.



If you copied an activation code to the clipboard, it is automatically entered into the field.

Once the device is paired with the LANCOM Management Cloud, it is available in the project for further configuration.

Zero-touch & auto configuration

A LANCOM device in its factory settings will initially try to contact the LMC. If it succeeds, i.e. the device has Internet access, then the LMC can check whether the device is already assigned to a project. In this case, it rolls out the auto-configuration created by software-defined networking (SDN) to the device.

If the location has an upstream Internet router with an activated DHCP server, a gateway with a dedicated WAN Ethernet port, such as a LANCOM 1900EF, can be connected to this and automatically has access to the LMC. Another possibility here are the xDSL connections from certain providers that provide dial-in without authentication (BNG).

This eliminates the basic configuration and the router immediately receives the correct configuration. What this means is that you do not actually have to carry out any on-site configuration of the access points, switches and (if applicable) the router, i.e. "zero touch" for the administrator.

If necessary, switch off the automatic contact attempts to the LMC in LANconfig or WEBconfig under **Management > LMC**.