IT Preparation Guide for LightControl

Dovideq Medical Systems B.V.

How to set and check your network settings

In most network environments Dovideq's LightControl should obtain the required network settings automatically. If not, here you will find the answers on how to set and check your settings.

LightControl cloud platform connection

LightControl uses an HTTPS connection to backup the database and to download new updates. For this purpose it is necessary that in the network where LightControl is located a connection to the outside is possible. Dovideq products (LightControl, GuideControl, LeakControl) communicate to **data1p1.endoscopemanager.com** **(84.241.175.30)** through **HTTPS / port 443**

Balena makes use of the following ports:
443 TCP - This is the most fundamental requirement - it is used to connect to Cloudlink and the web terminal, and many web endpoints using **TLS (https://.)**
123 UDP - For NTP time synchronization.
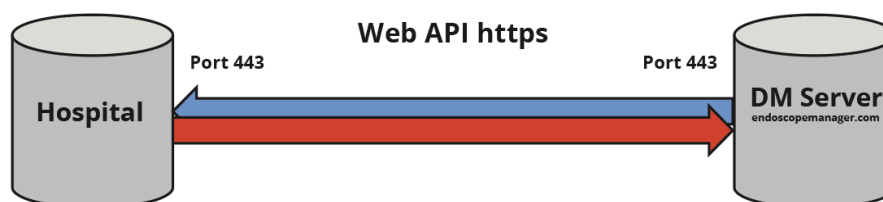**53 UDP** - For DNS name resolution.

Additionally, you should allowlist the following domains for the relevant ports above:
*.balena-cloud.com

Technical info for IT

DNS should resolve, eg
· nslookup endoscopemanager.com should return **80.65.101.132**
· nslookup data1p1.endoscopemanager.com should return **84.241.175.30**

Network Settings

By default the communication module of LightControl is configured as a so called DHCP client and should therefore obtain the required network settings automatically in most network environments.

If you need to configure the network settings manually, e.g. setting a fixed IP address for your

module, contact service@dovideqmedical.com.

Check your settings

Should you have difficulties establishing a successful connection with EndoscopeManager, please see the following checklist:

1. Plug in your LightControl using the power cable provided and a power socket. Depending on the region you are in, a cable is supplied to allow connection to your local power socket.
2. Once power is connected, the LightControl's DoviCircle (on top of the device) will turn on and turn red, white and blue.
3. Connect LightControl to the Internet by connecting it to your modem, router or local network.
4. Once the connection to the network is made, the DoviCircle will give a blue "breathe animation", indicating that it is connected to the network and it is connected to EndoscopeManager. If not, please check that all cables are plugged in correctly.
5. Check if port 443 is opened in both directions.
6. If connection is still not available, contact Dovideq for help.

DoviCircle Status Table

Device Status	DoviCircle
Switched on	Breathes Red/White/Blue
Making Connection	Breathes White
Connection Made	Breathes Blue
Error	Breathes Red

FAQ

For questions that cannot be found here, please login at our expertise center for more FAQs and how-to's.

Where can LightControl be installed?

LightControl acts both as a communication bridge between the "internet" and the internal testing system. It can be installed anywhere where you have an:
1. Internet connection to a router or switch via Ethernet cable
2. Power outlet

LightControl is designed to operate in a non-condensing environment between 15 °C and +25 °C, e.g. in a sterilisation department, medical engineering department, near the OR, laboratory, warehouse or pharmacy.

How is LightControl powered? Does LightControl contain a battery?

LightControl does not contain a battery. It is powered by an external power supply unit (Input: 100-240 VAC / 50-60 Hz; Output: 24 VDC / 2.2 A). A power cable for your region is included.

Which ports should be open?

Only port 443 in both directions; all communication goes over 443 (HTTPS).

What should an IT department do?

Look up the device MAC address and assign fixed IP to the MAC address. Before that, ensure that IP port 443 is open (in and out).

What happens to data if power is out? What happens if power comes back?

LightControl is not a "datalogger" collecting and storing values locally for a long period of time – instead the device acts as a bridge between the device and EndoscopeManager. It does show results via the HDMI output at the end of every test cycle. However, when there is no internet connection, data will not be transferred to EndoscopeManager and some or all results of testing parameters will not be available. If LightControl loses power, the test that is being done at that specific moment is lost. Make sure you start your test again when this happens.

As soon as power is available, the connection is re-established and connection to endoscopeManager is restored automatically.

If the DoviCircle is not breathing, what could be the reason?

First check if the power socket and LAN cable are connected to the device. If the network connection has been established, but the connection to EndoscopeManager could not be established, this means that there is either a problem with your internet connection or a technical problem with EndoscopeManager.

Problems with the internet connection could have various causes:
1. There is a problem with your internet provider. -> Check with other devices in the same network if you have internet connection
2. The used Ethernet cable, switch or outlet is damaged. -> Try another connection.
3. Your local network settings don't provide an IP address via DHCP
4. Your local firewall settings block access to the internet. -> contact your IT department.

If all of this looks ok, there might be an issue with EndoscopeManager or your device. Please file a support ticket by sending an email to service@dovideqmedial.com.

How is LightControl connected to the internet? What if I want to configure specific network settings?

The standard configuration of the communication is as a so called DHCP client, which means that it will request a valid IP address from the local network automatically. If you prefer or if DHCP is not available in your network, you can change this default setting and define your own fixed IP address in concurrence with Dovideq.

What happens if the network connection is lost? What happens if the network connection is re-established?

LightControl is connected to EndoscopeManager. There are various potential causes for an interruption:
- Ethernet cable is unplugged
- Local network settings have changed (causing a loss of internet connection)
- Problem with your local internet provider

Refer to the DoviCircle Status Table. As soon as the cause has been eliminated, the connection is automatically re-established. Values from the device were not and will not be delivered to EndoscopeManager. Ensure that your paused test is redone.

Does LightControl or EndoscopeManager have an OPC-UA software interface so that the data can be integrated into other company systems?

Yes. A REST-API is available at an extra cost.

How to add users and/or endoscopes to my EndoscopeManager account?

Please see our expertise center.