

BLK360 G1 - USB-C Data Transfer Cable / Technical Details

General Article

Summary

Technical details on how to set up USB-C connection between BLK360 G1 and computer. Details from BLK360 UserManual v4.0.0

Information



FW/SW:

BLK360 G1 FW 2.1.0

BLK DataManager v. 2021.1.2

Cyclone Register360/Cyclone Register(BLK Edition) v. 2021.1.2

Cyclone CORE v. 2021.1.2

FAQ:

1. [Do all BLK360 support the LAN cable feature or is an upgrade required?](#)
2. [Can any adapter or ethernet cable be used for the USB-C connection?](#)
3. [How to establish a connection with the computer for data download?](#)
4. [Which software can be used to download the scan data?](#)

Answer:

1. **All BLK360 sensors with a serial number of 3507273 or higher do support the LAN cable feature.**

All BLK360 devices supporting the LAN communication will be delivered without the USB-C plug cover.

Older devices with a serial number lower than 3507273 do not support that feature and could get seriously damaged if used anyway in this setup. The repair of these damages is not covered by warranty.

The BLK360 G1 USB-C plug cover must only be removed by Leica service.


Note:

Leica BLK360 G1 devices with a serial number lower than 3507273 can be upgraded to support the LAN feature by Leica Service in Switzerland.

2. **The following adapters are recommended**

Recommended USB-C to Gigabit-Ethernet adapter

Brand	Model
HP	RTL8153-03
Belkin	F2CU040btBLK
Lenovo	4X90591831

 An USB-C to Gigabit-Ethernet adapter is not provided by Leica Geosystems and must be purchased by the customer.

In general, a USB-C to Gigabit-Ethernet adapter must contain one of the following chipsets to be supported:

- LAN88XX PHY
- EL1210A
- KLSI KL5KUSB101B
- LAN78XX
- SMSC LAN75XX
- SMSC LAN95XX
- PL-2301/2302/25A1
- PL-2301/2302
- PL-2301/2302
- MosChip 7830
- CX82310
- CH9200
- Pegasus or Pegasus-II based adapters
- RTL8150 based usb-ethernet adapters
- RTL8152 based usb-ethernet adapters

Requirements of the Ethernet Cable

- standard twisted, not crossed
- maximum length of the Ethernet cable including the USB-C connector(s) must not exceed 3 meters

1. **Workflow**

The BLK360 G1 must be in the same subnet of the network as the computer. Otherwise, it cannot be found e.g. by the BLK360 Data Manager.

Cable Data Transfer Options

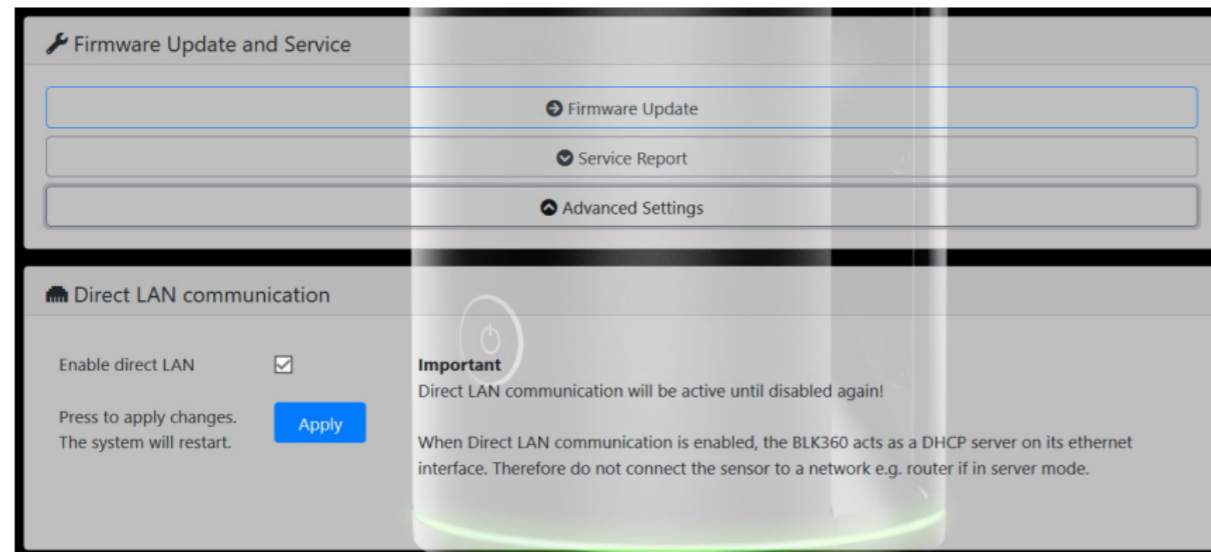
Ethernet port on a computing device



USB-C port on a computing device



Configuration of the BLK360 for direct LAN communication



Connecting to a computing device using direct LAN-Communication

- on the computing device connect Wi-Fi to the BLK360-35xxxxx network
- start the web interface by typing <http://192.168.10.90> into your browser (Google Chrome is not recommended!)
- Expand Advanced Settings and check that "Enable direct LAN" is active.
- Click Apply. The BLK360 G1 restarts automatically
- After the restart, the direct LAN communication to the computing device is available
- Connect a LAN network cable to the USB-C Gigabit-Ethernet adapter
- Connect the USB-C connector to the BLK360. The USB-C port is on the right side of the battery compartment



- Connect the Ethernet cable to the Ethernet port of the computing device:
- Start the Leica BLK Data Manager and connect with the instrument. Data can now be downloaded by cable.

Please consider the following

- If the device has no Ethernet port but a USB-C port, a second USB-C to Gigabit-Ethernet adapter can be used



- If the computing device uses a docking station to connect to the Internet, this Internet connection will be cut to connect to the BLK360G1 . In most cases, a computing device only supports one LAN connection. If the computing device is connected to the Internet over WLAN, this connection will remain.
- If the instrument is in WIFI mode (LAN not enabled) but anyway connected to the computing device over LAN, the BLK360 will start up and show an error (LED=red) for approx. 60 sec to indicate that the current setup is not supported. Then the LED turns green and the BLK360 is useable over WIFI
- Once a direct LAN communication mode has been enabled, the BLK360 should not be connected to a router anymore, since it is acting as a DHCP-server. This could lead to problems because normal routers are acting as DHCP-server too.

1. **Software supporting direct LAN communication**

- BLK DataManager version 2021.1.2 or higher
- Cyclone Register360 version 2021.1.2 or higher
- Cyclone Register360 (BLK Edition) version 2021.1.2 or higher
- Cyclone CORE version 2021.1.2 or higher

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