

- when it has to be **right**



# Leica Geosystems Release Notes

**Product** Leica BLK360 Imaging Laser Scanner  
**Date** 1st July 2021  
**From** Björn Beutelspacher

## Leica BLK360 Imaging Laser Scanner – Firmware v2.1.0



These Release Notes contain important information about the new Leica BLK360 Imaging Laser Scanner firmware v2.1.0.

With immediate effect, the new firmware can be downloaded from the myWorld @ Leica Geosystems customer portal: <https://myworld.leica-geosystems.com> and the Leica BLK360 homepage (<https://lasers.leica-geosystems.com/global/blk360-firmware>).

**It is mandatory to have firmware v2.0.0 installed before updating to firmware v2.1.0.**

It is not possible to update directly to v2.1.0 when firmware v1.2.4 or older is running on a BLK360.

Please note that it's not directly possible to downgrade to a firmware versions older than version 2.0.0. Downgrade to a previous version is only possible using the recovery mode. Please contact the BLK support in case a downgrade from v2.0.0 to one of the previous versions is necessary.

Please note that **Leica Cyclone FIELD 360** versions before v2.4 can show data download issues when used with BLK360 firmware v2.0.0. It is strongly recommended to update **Leica Cyclone FIELD 360** to the latest version v3.1.0 when being connected to BLK360 firmware v2.0.1!

## WHAT`S NEW in version 2.1.0

Features and firmware improvements directly available for the user after the firmware update.

### 1. Data transfer over cable

To have a faster and more robust data transfer of scans from the Leica BLK360 to a computing device v2.1.0 supports the data transfer over LAN cable.

WiFi usually offers a stable datatransfer, but in an environment with multiple wireless devices issues can arise. In cases like this or when a faster datatransfer is required, now the BLK360 can easily be connected to a computing device.

This is a feature that was requested by the market and we are happy to present it now for the Leica BLK360.

Two options are available.

#### 1.1 *Data transfer using a direct LAN communication to a computing device*

The direct LAN communication to a computing device requires no existing network structure and can very easily be setup, even when being out in the field.

Requirements:

- USB-C to Gigabit-Ethernet adapter (on BLK360 side)
- Ethernet LAN cable
- PC with Gigabit-Ethernet (can be via Gigabit-Ethernet adapter as well)

Regarding the requirements for the Ethernet adapter and LAN cable, please read chapter 1.3 of this document.

#### **Note:**

In case the computing device does not have an ethernet port, a 2<sup>nd</sup> USB-C to Gigabit-Ethernet adapter can be used.

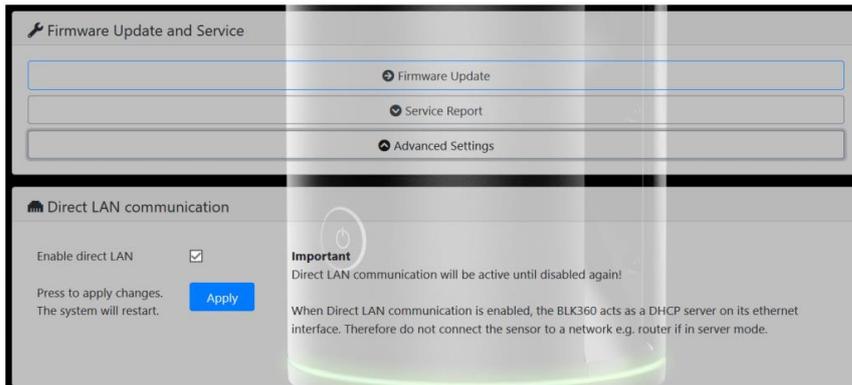


## Configuration for a direct LAN communication

The Leica BLK360 can easily be configured for the direct LAN communication using the sensors webinterface as it is already known from previous releases when doing for example a firmware upgrade. To enable the direct LAN communication, proceed with the following steps:

Connect the computing device to the network of the BLK360 and connect via WiFi to it by typing <http://192.168.10.90/> into your browser. (Google Chrome is not recommended)  
For details please read the Leica BLK360 User Manual v4.0.0. (available on Leica MyWorld)

On the BLK360 Web interface, go to the Advances Settings:



Set the tick-mark for “Enable direct LAN” and press Apply.

This will now enable a build-in DHCP Server. The direct LAN settings configures the Leica BLK360 as DHCP server, which provides an IP to the connected computing device.

### Note:

If the BLK360 is not configured for direct LAN communication but an adapter is still connected at startup to the BLK360, the LED will go into red error state, indicating that this setup is currently not supported.

When the Leica BLK360 is in red error state, it is as well not possible to connect to it using the Leica Cyclone Field360 app.

To get back to operational state, remove the adapter and shut down the Leica BLK360 with a long press on the powerbutton.

With the next start of the device the issue is resolved.

**Therefore it is recommended to enable or disable the Direct LAN mode only using the WiFi connection.**

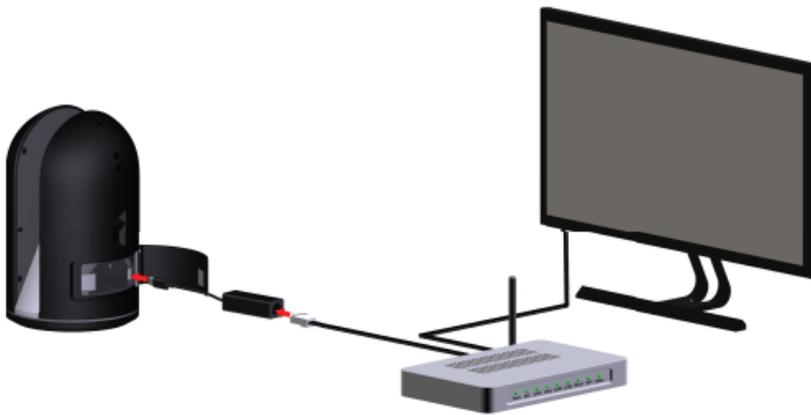
## 1.2 Data transfer using LAN infrastructure

The 2nd option is to connect the BLK360 to a network, e.g. a router. This option requires a given network structure.

Furthermore the used router with BLK360 must be in the same subnetwork as the computing device to ensure Leica Cyclone Data Manager or Leica Cyclone Register 360 can connect to the device.

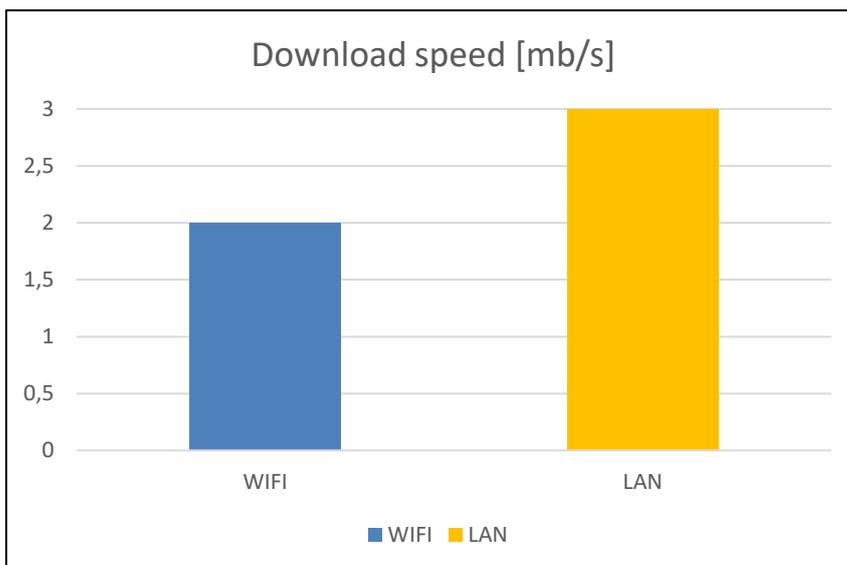
**For this option the default configuration of the Leica BLK360 can be used. The Direct LAN setting in the webinterface must be disabled!**

The direct LAN settings configures the Leica BLK360 as DHCP server, which provides an IP to the connected computing device. Since the IT network usually provides an IP to the connected devices (in this case the Leica BLK360) this could cause issues in the network.



### Improved data transfer speed using LAN communication

The download speed using a LAN communication is in general 50% faster than using WiFi. This is valid for direct data transfer to a computing device and using a LAN network structure.



The speed of the data transfer not only depends on the used method (WiFi or LAN) but changes as well with the used computing device. For the setup using a LAN infrastructure (router) other factors will affect the speed as well. For example the general traffic within the network.

#### Advantages of a direct download vs. downloading over LAN network structure

- Can be used even out in the field ✓
- Data transfer speed is not relying on other factors like LAN network load ✓
- No knowledge about network setup required (subnetwork) ✓

### 1.3 Requirements for direct LAN communication

All BLK360 sensor 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 are not covered by warranty.

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

With this release, the Leica BLK360 supports the cable connection via Ethernet-LAN using a USB-C adapter.

Other communication for BLK360 to PC, for example via a USB-C to USB-C cable, is not supported. Also charging the Leica BLK360 battery inside the device via the USB-C plug is not supported and can damage the Leica BLK360.

For a LAN cable connection a

- USB-C to Gigabit-Ethernet adapter and a
- Ethernet cable

are required.

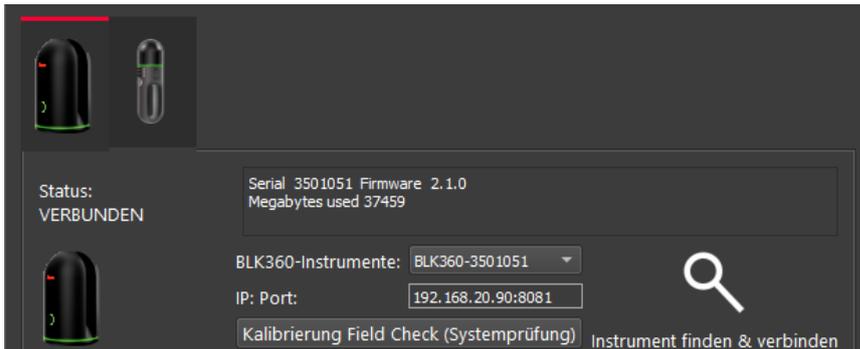
Recommended USB-C to Gigabit-Ethernet adapter for BLK360:

Brand	Model
HP	RTL8153-03
Belkin	F2CU040btBLK
Lenovo	4X90S91831

The Ethernet cable must be standard twisted, not crossed.

The maximum length of the Ethernet cable including the USB-C connector(s) must not exceed 3 meters.

To connect to the Leica BLK360 using a LAN connection, install the latest available apps of Cyclone Data Manager respectively Leica Cyclone Register 360/ Cyclone Register 360 BLK Edition. Older version do not support the LAN cable feature.



#### 1.4 LAN upgrade kit for Leica BLK360

Leica BLK360 devices with a serial number lower than 3507273 can be upgraded to support the LAN feature.

Service news will be available with details on the upgrade process.

## 2. Issue fixed in v2.1.0

### 2.1 Memory

The version 2.0.1 fixes an issue, where the user was not informed when the internal memory was full. This led in some cases to a situation where a scan could not be started.

Only a generic error message was shown in Leica Cyclone Field360 that wasn't telling the root cause of the problem – a full internal memory of the Leica BLK360.

If the push button was used to start a scan with a full internal memory the LED stayed green, but the scan didn't start.

This issue is fixed with this release.

## 3. Important

Whenever the Leica BLK360 is not shut down properly, this could be due to

- Taking out the battery before shutting down the device using the power button, or
- In rare cases **the sensor shuts down unexpectedly**

this will be indicated by a warning state (orange LED ring) at the next start of the device.

A press on the power button will reset the warning state and the Leica BLK360 will again be fully operational.

**Note: It is recommended to perform a re-scan of the last job to ensure the data are complete! A restart of the device is not required!**

Cyclone Field 360 will show an error message when trying to start a scan although the Leica BLK360 is in warning state. A restart of the sensor as stated in the error message is not required.

As written above, a simple press on the power button solves the issue and the scan can be started.

Please note that to make use of the new functionalities of v2.1.0 a new version of the according iOS/Android app respectively a new version of Cyclone, Cyclone Register 360 or BLK360 Data Manager is required.

#### **FIRMWARE INSTALLATION**

- **For details on how to update the firmware on a Leica BLK360 please read “BLK360 How to Update the Firmware” manual which is available on Leica MyWorld in the Manuals section.**