

- when it has to be **right**



Leica Geosystems Release Notes

Product Leica BLK360 Imaging Laser Scanner
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Leica BLK360 Imaging Laser Scanner – Firmware v1.0.0



The All-New Leica BLK360

We are pleased to announce the all-new Leica BLK360, a portable imaging laser scanner that is the next generation of the original Leica BLK360 G1. Drawing on the successful innovation of the award-winning Leica BLK series, the new BLK360 captures stunning, photorealistic, accurate digital twins with a full-dome scan in just 20 seconds.

Leica BLK360 Key Features

- Ultra-fast scanning and accuracy
- Full-dome LiDAR scan with LDR imagery in under 20 seconds
- VIS (Visual Inertial System) technology to combine scans automatically in the field
- LiDAR sensor captures 680,000 points per second
- Four 5-bracket HDR cameras for quick capture of detailed photospheres
- 20% smaller than the Leica BLK360 G1
- Rapid data transfer with USB-C

These release notes contain important information about the new Leica BLK360 firmware v1.0.0. With immediate effect, the new firmware can be downloaded from myWorld @ Leica Geosystems customer portal: <https://myworld.leica-geosystems.com> and the Leica BLK360 website: <https://shop.leica-geosystems.com/leica-blk/blk360>.

KEY FUNCTIONALITIES

VIS SCAN ALIGNMENT SYSTEM

Leica Geosystems' patented Visual Inertial System (VIS) technology, is now built into the new BLK360 to automatically combine your scans.

Each captured scan in the field is combined with your previous scan. You'll spend less time aligning data and more time creating valuable deliverables.

Once the BLK360 is moved after the first scan, the LED ring will start blinking green, indicating that cameras and IMU are tracking its position. After the imaging laser scanner is placed on the ground, the LED will switch to constant, non blinking green, indicating that it is ready for capturing the next scan.

The imaging laser scanner knows its relative position to the previous scan which enables a very fast pre-registration directly on site with Leica Cyclone FIELD 360.

The pre-registration information is synched back to the BLK360, so all information is stored on the imaging laser scanner when downloading the data directly from the device to Leica Cyclone REGISTER 360 and Cyclone REGISTER 360 (BLK Edition).

HIGH-SPEED DATA TRANSFER

Enjoy real-time data synchronisation between your devices with the BLK360's onboard wireless connection, then transfer data with speed and stability via WiFi or its USB-C port.

The transfer speeds are:

- up to 450 Mbit/s over USB-C and
- up to 100 Mbit/s over WiFi

There are 2 different data transfer modes available for USB-C:

- **High power mode**

In high power mode the maximum data transfer speed of up to 450 Mbit/s is available.

To start the high power mode, the BLK360 needs to be started up before connecting to the cable.

In this mode, the BLK360 is powered by the internal battery. Data transfer will stop once the battery is empty.

- **Low power mode**

In low power mode, the data transfer speed is approximately 10% lower as in high power mode.

To start the low power mode, plug the USB-C cable in the turned off BLK360. The device will automatically be turned on.

In this mode, the BLK360 is powered by the connected computing device and at the same time, the battery gets charged.

The low power mode is not time limited by the internal battery and therefore the ideal mode to transfer a huge amount of data.

Note:

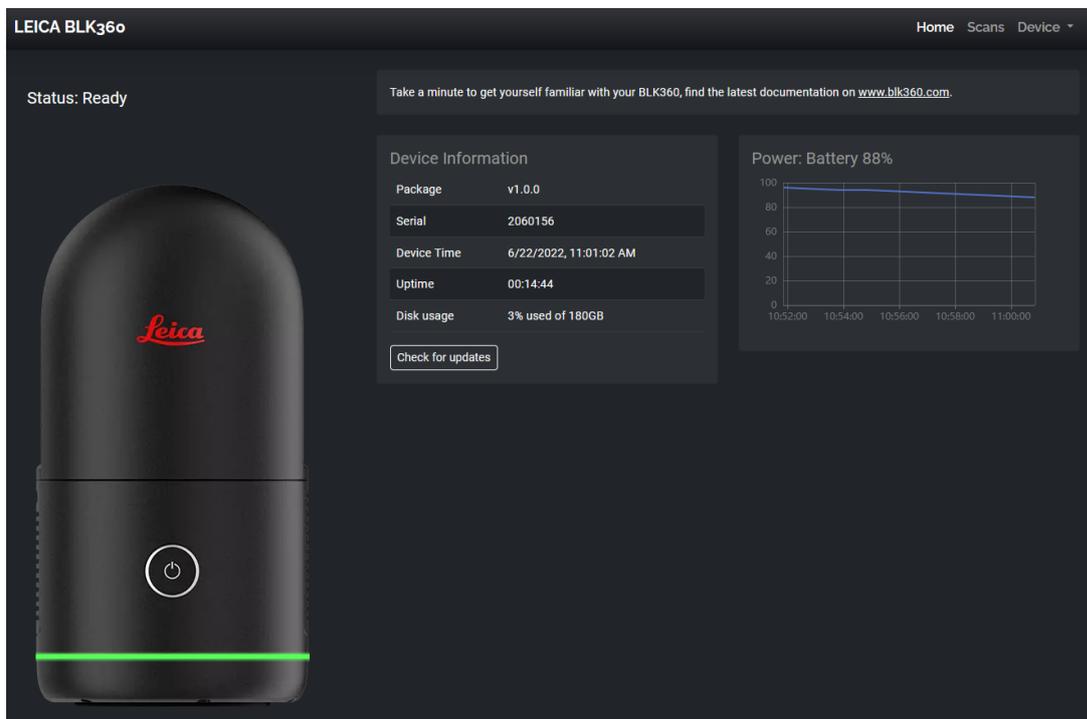
A direct USB-C cable must be used like the one included in the starter package of the BLK360. Data capture is not possible when the BLK360 is connected via USB-C.

The cable setup for BLK360 G1, which includes a USB-C to Ethernet adapter, does not work with the new BLK360.

WEBSERVER

The webservice is a useful tool to perform the following functions

- Update the firmware (Device menu)
- Download service reports (Device menu) and scan raw data (Scans menu) if required for a support case
- Check free disc space
- Indicate if the BLK360 is in low power mode and the related benefits as well as limitations



LEICA BLK360 Home Scans Device

Status: Ready Take a minute to get yourself familiar with your BLK360, find the latest documentation on www.blk360.com.



A black Leica BLK360 scanner with a red Leica logo and a power button. A green light bar is visible at the bottom.

Device Information

Package	v1.0.0
Serial	2060156
Device Time	6/22/2022, 11:49:47 AM
Uptime	00:02:04
Disk usage	3% used of 180GB

Power: USB powered

Your BLK360 is in low power mode. This means the device is powered by the connected USB-C device and not by its internal BLK360 battery. Therefore the power source is not timely limited as long as external power is provided via the USB-C cable, allowing to transfer data over a longer period (several hours).

Low power mode for the BLK360:

- BLK360 gets powered externally via USB-C.
 - in case a battery is inserted in the BLK360, it will be charged slowly
- A firmware upgrade is not supported.
 - To perform a firmware upgrade, power the device before connecting (wifi, USB-C supported)
- Battery status not shown.
 - To check the battery status, power the device before connecting (wifi, USB-C supported)
- Reduced transfer speed of data.
 - To have max transfer speed, power the device before connecting to the USB-C device
- Button on the BLK360 is de-activated.
 - To make use of the button, unplug the USB-C cable

Webserver access:

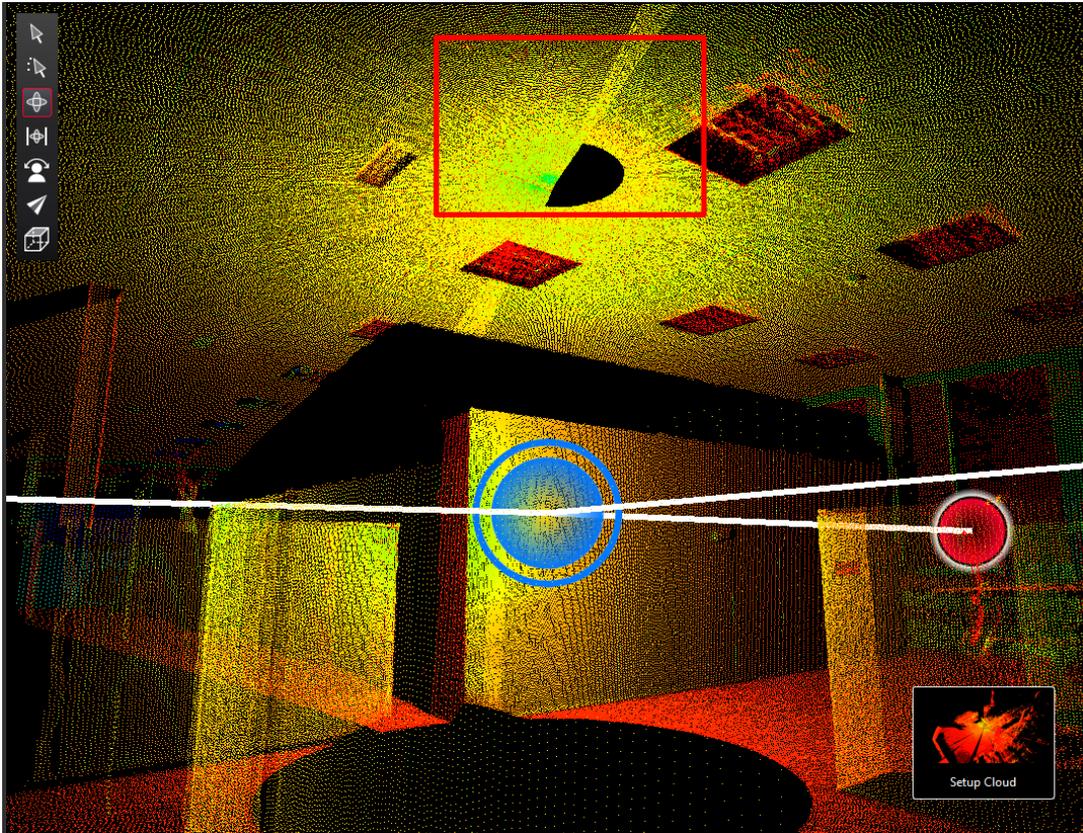
When connected via WiFi to the BLK360, enter 10.10.1.1 in the browser.

When connected via USB-C to the BLK360, enter 192.168.42.1 in the browser

MISCELLANEOUS

A small half circle in the zenith of the imaging laser scanner will be present in the captured scan data, this is related to the characteristics of the ultra fast LiDAR sensor.

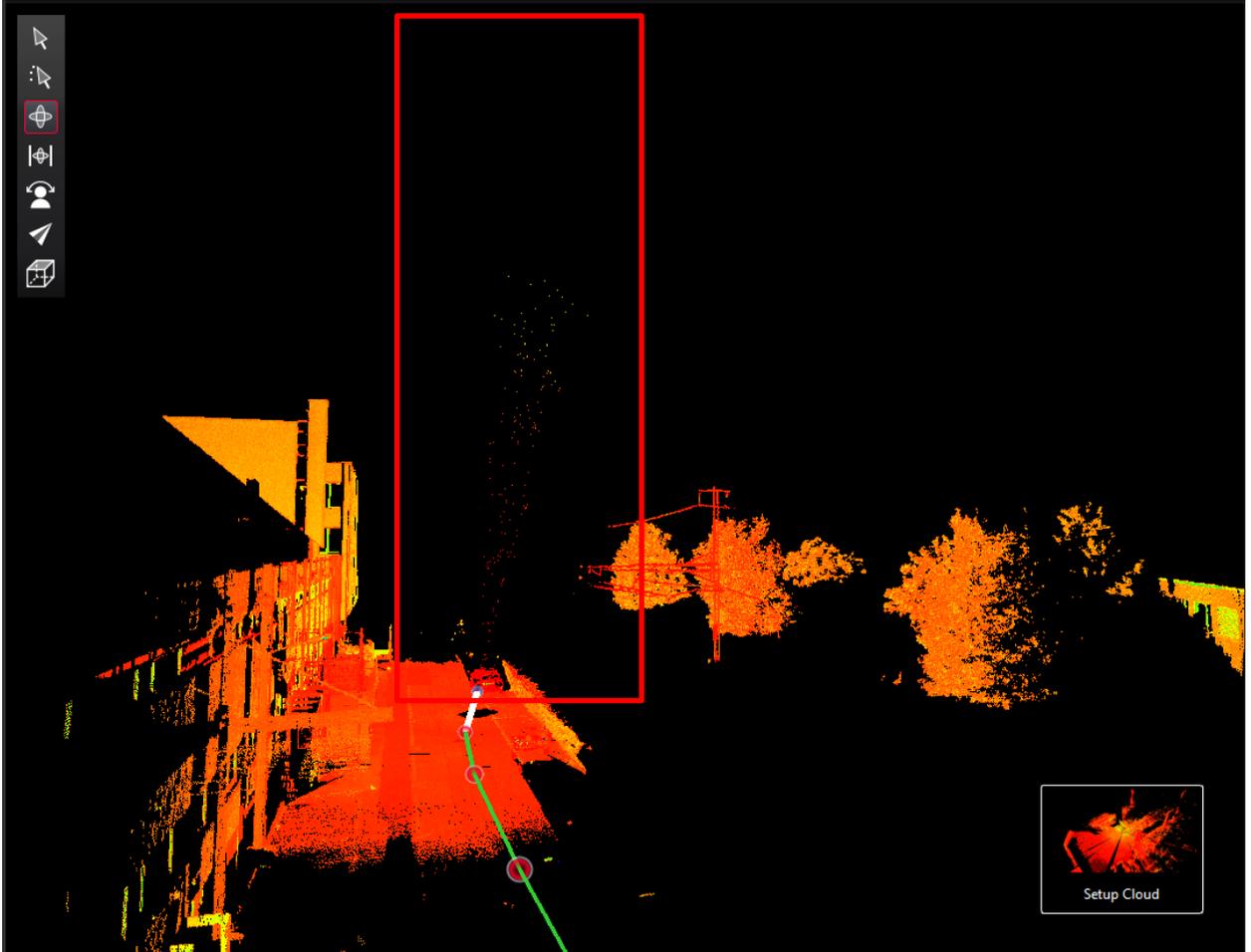
If required, this gap can fast and easily be closed by another scan nearby that covers that area.



KNOWN ISSUE

Occasionally in sunny outdoor conditions, the point cloud of the BLK360 might contain ghost points which are directed towards the sun.

If required, these ghost points can easily be deleted by using the “delete” function in Cyclone REGISTER 360.



This known issue is adressed and expected to be solved soon in an upcoming release.

FIRMWARE COMPATIBILITY

- Compatibility with mobile device apps:
 - Leica Cyclone FIELD 360 version 4.0 or higher is required.
Version 4.0 will be available only after the release on the 28th June.

Download android version here

<https://play.google.com/store/apps/details?id=com.leicageosystems.cyclone.field360>

Download iOS version here

<https://apps.apple.com/us/app/leica-cyclone-field-360/id1376463007>

- Leica BLK Live version 1.0 or higher is required

Download android version here

<https://play.google.com/store/apps/details?id=com.leicageosystems.cyclone.blknow>

Download iOS version here

<https://apps.apple.com/app/blk-live/id1608854881>

- Compatibility with Cyclone REGISTER 360 and Cyclone REGISTER 360 (BLK Edition):
 - v2022.1.0 or higher is required
 - BLK Data Manager v2022.1.0 or higher is required

For more general information on the all-new BLK360 please refer as well to User Manual which is available on myWorld @ Leica Geosystems customer portal: <https://myworld.leica-geosystems.com> and the Leica BLK360 website: <https://shop.leica-geosystems.com/leica-blk/blk360>.