

Leica BLK360 Quick Guide



Peter Mumford
SAGE
V1.1
21/07/2023

The easiest way to control, view and manage is with the LEICA BLK LIVE app for Apple or Android.

Details for SAGE iPad Pro:

AppleID: sage@unsw.edu.au PW: Surveying#1

Start the BLK LIVE app.

The app connects to BLK via WiFi.

BLK has a USB-C connector for data transfer.

BLK WiFi ID:

BLK360-2061579

PW: LXC4-HODI-Y0MS

Max range: 45m @ 78% albedo

FOV: Horizontal 360°, vertical 270°

Range noise: 1mm @ 10m & 78% albedo

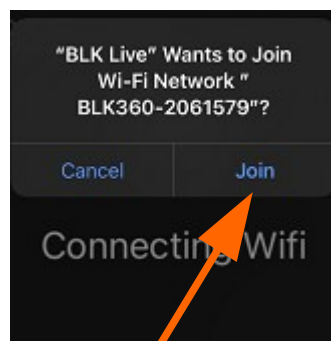
Point accuracy: 4mm @ 10m, 8mm @ 20m 1σ & 78% albedo

Full dome image 360X270°: 104Mpx from 8 images @ 4224X3136 pix

Internal Tilt compensation to +/- 5° (IMU-based)



Light ring indicates status



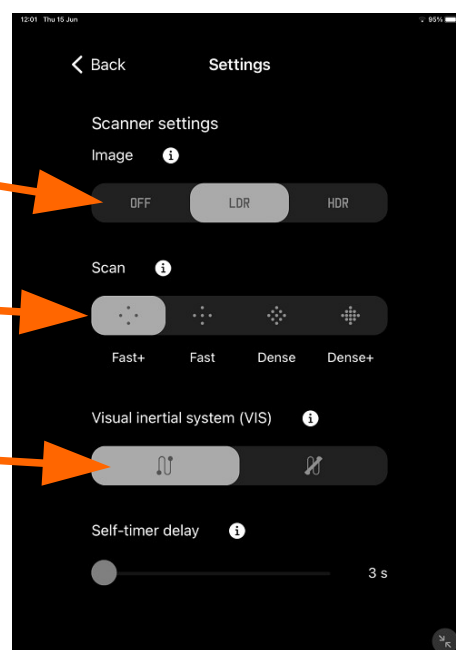
Connect to BLK via WiFi from tablet

Settings screen:

Image; Low density / High density 360X270° spheric image from 4 cameras

Point Cloud; 4 density settings

Visual inertial system: on or off; not required for a single setup on tripod. Used if moving between scans.

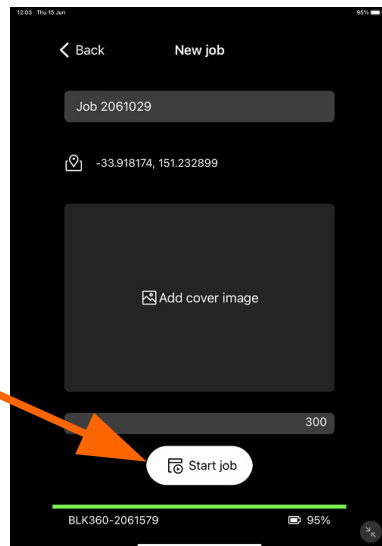


| Point density mode | Resolution [mm @ 10m] | Estimated scan duration [MM:SS] for a full dome scan |
|--------------------|-----------------------|--|
| Fast+ | 50 | 00:07 |
| Fast | 25 | 00:13 |
| Dense | 12 | 00:30 |
| Dense+ | 6 | 01:15 |

| Image capturing time: | |
|-----------------------|----------------------------------|
| Image type | Estimated image duration [MM:SS] |
| LDR | 00:08 |
| HDR | 00:20 |

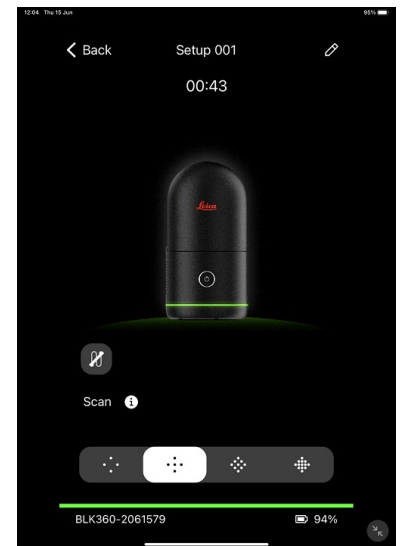
| Point density mode | Approx. scan size [mio points] |
|--------------------|--------------------------------|
| Fast+ | 0.6 |
| Fast | 2.3 |
| Dense | 9.4 |
| Dense+ | 37.5 |

Create a new job



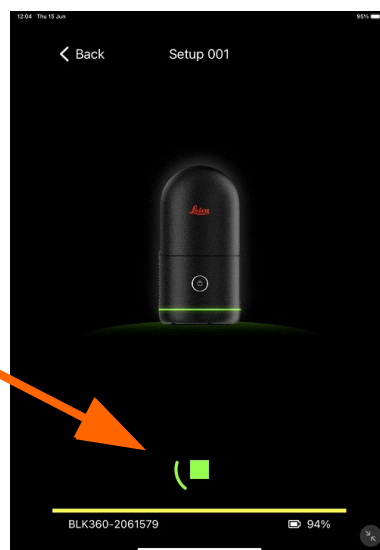
Start job
&
Go Live

Select
required
settings



Press the BIG
White scan
button....

Scanning

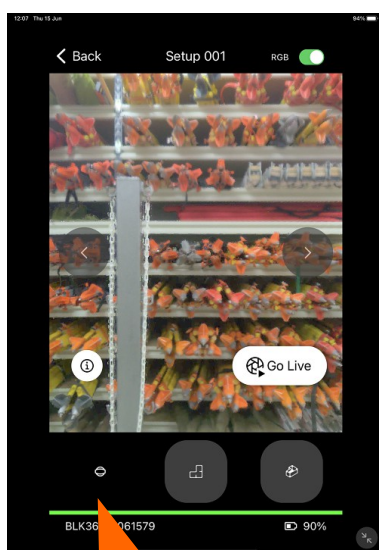
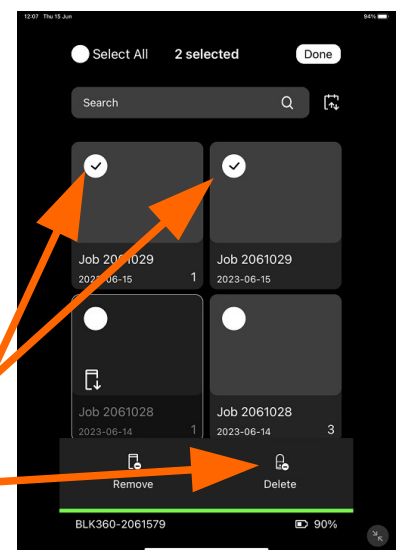


Manage Jobs

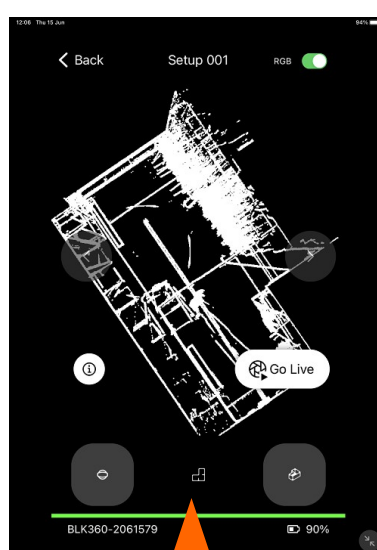
Jobs are stored
on internal
memory.
Transfer from
BLK via USB-C
to computer.

Jobs flagged for
deletion

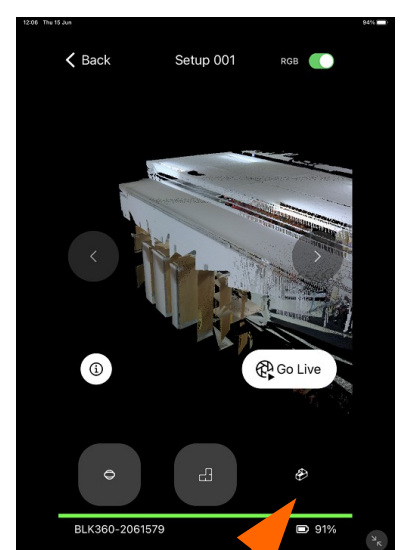
... delete



Camera view



Plan view

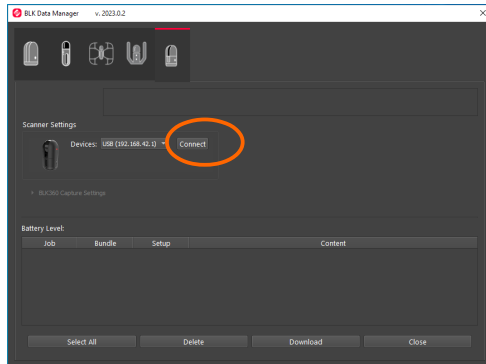


Point cloud view

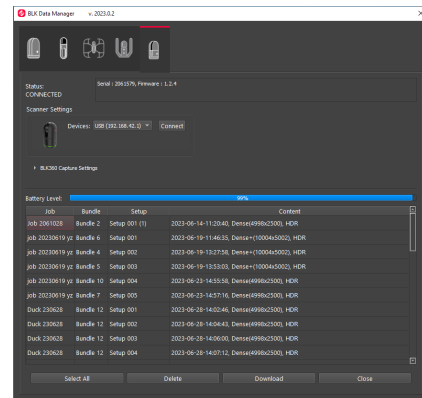
Data management and Processing

BLK Data Manager is useful for downloading and deleting jobs from the BLK360.

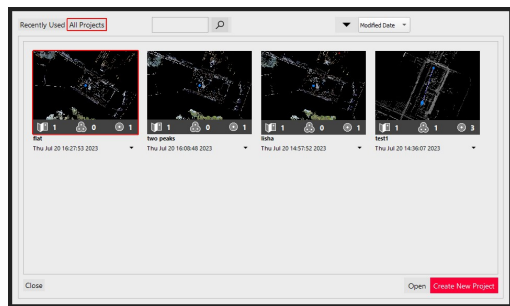
Cyclone REGISTER 360 plus is for downloading jobs, stitching together setups and exporting data to file in .LAS .E57 .PTG .PTX .RCP formats.



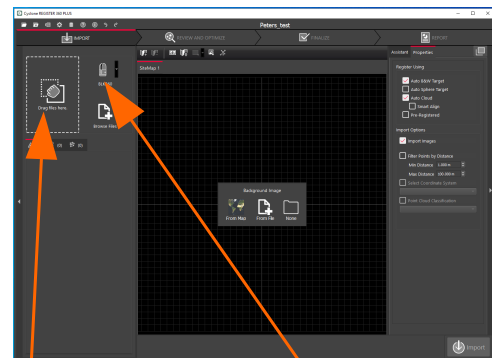
Turn on BLK360 and plug USB-C / USB-A cable to connect to computer. Click Connect.



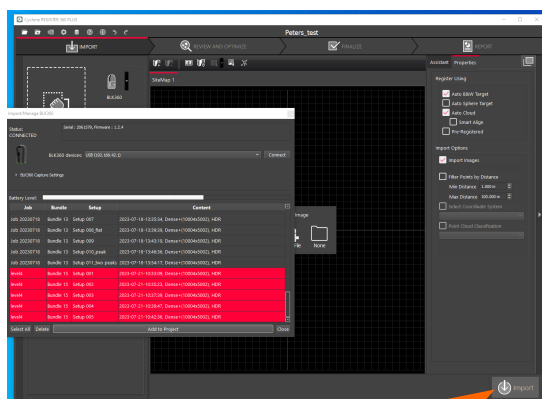
Jobs stored on BLK360 internal memory will appear in list. Download and/or delete.



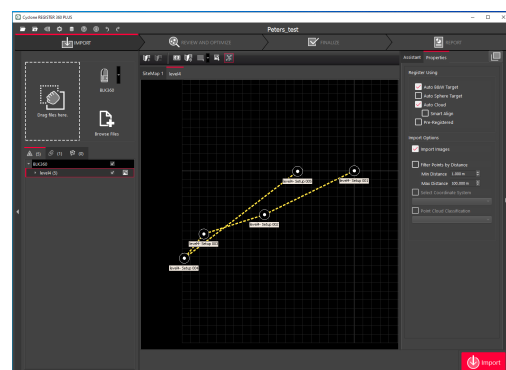
Start Cyclone REGISTER 360 and create a new job.



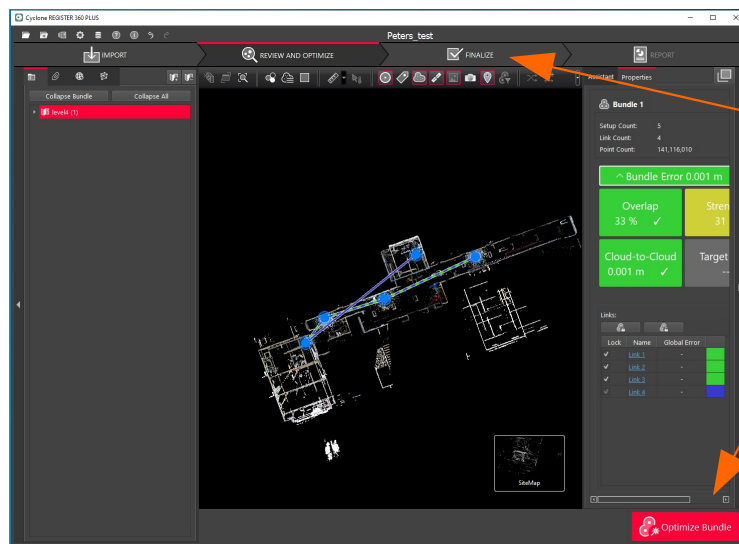
Drop existing data or connect to BLK360 to download data from internal memory.



Select data and click import.



Here is some data with 5 setups.



Optimise and Finalize.

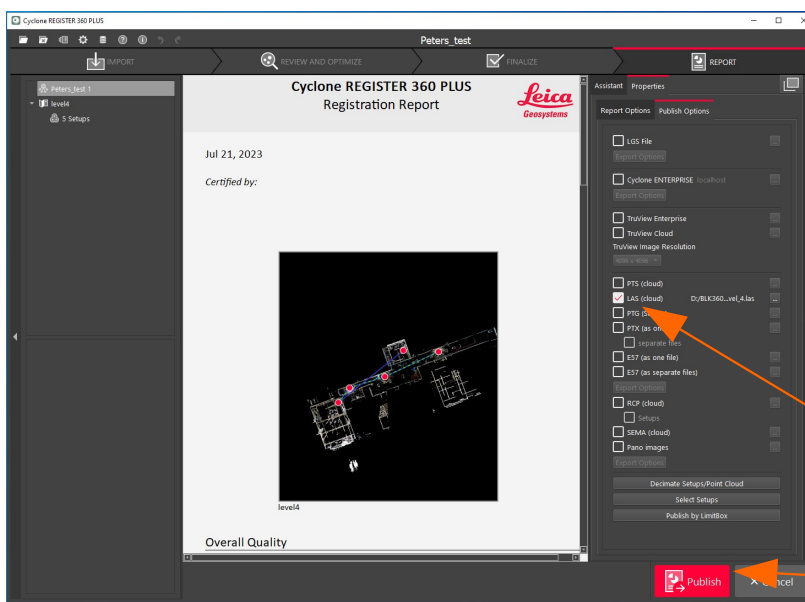
Note on point cloud formats:

E57 → vendor neutral file format. ASTM E2807 Standard. More flexible than LAS. Files vary across different platforms.

LAS → widely used vendor neutral file format.

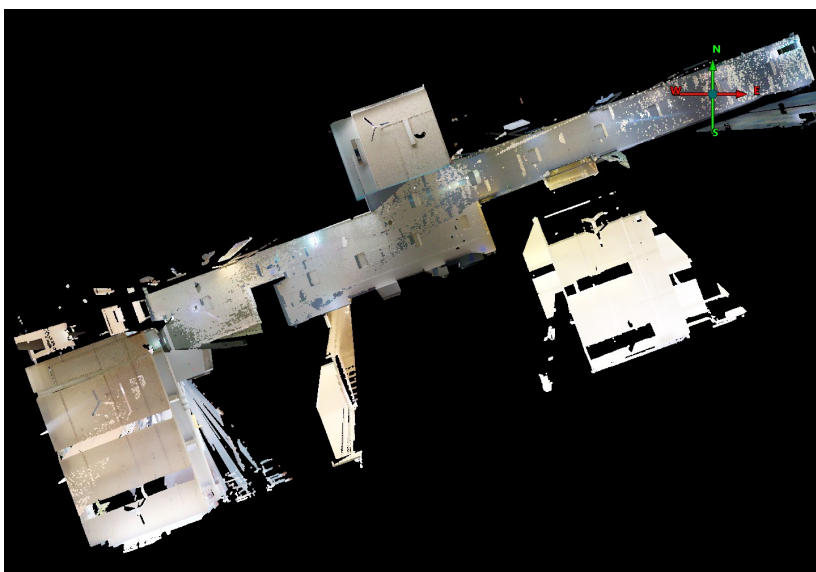
PTX / PTG → Plain text formats

RCP → Autodesk CAD



Select output file formats and choose directory.

Click Publish to export data.



Colourised point cloud in LAS format. Viewed with Quick Terrain Modeler.