

Creality Otter Lite

3D Scanner

No Wires, No Limits

Quick Guide V1.0

01 PRODUCT INTRODUCTION

Creality Otter Lite is a high-precision, handheld, all-in-one 3D scanner compatible with scanning small, medium and large objects, with a maximum accuracy of 0.05mm. From small screws to large human bodies and large automotive parts (20mm³~2000mm³), it can effortlessly scan objects of various size. The ability to adapt objects of various sizes is achieved by its innovative four-eye stereoscopic vision design. This includes a set of large focal length binoculars and a set of short focus length binoculars. The former is used to capture the details of small objects at close range; the latter has a larger FOV and is used to scan medium and large objects, to ensure stable tracking with minimal loss.

This scanner is equipped with a depth computing specialized chip independently developed by us, which ensures smooth scanning with a maximum frame rate of up to 30fps. Using unique single-frame 3D imaging technology, it has excellent anti-shake performance. Advanced DOE structured light projection technology enables 3D scanning even outdoors($\leq 30,000$ lux). With professional-grade texture fill light, it can smoothly complete full-color scans even in low light environments, and give objects exquisite and realistic textures.

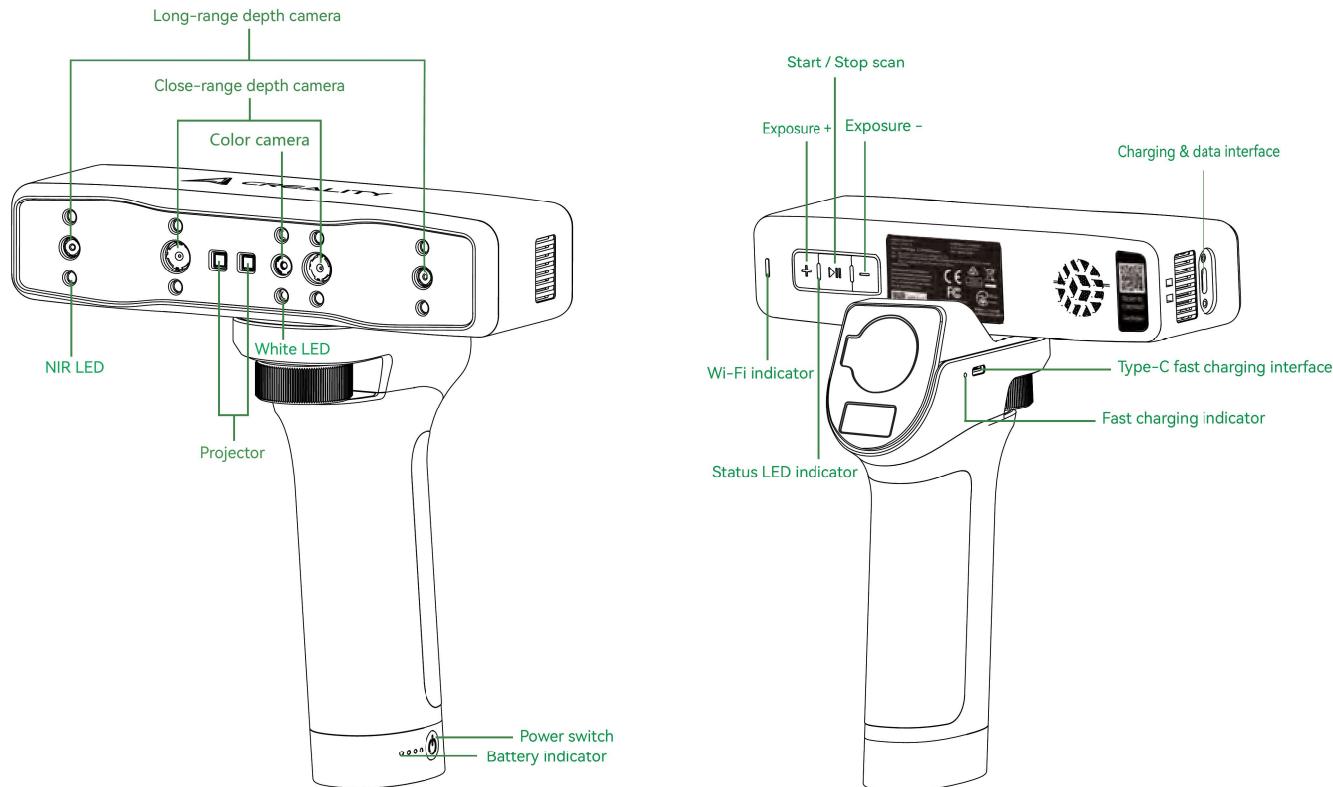
In addition, Otter Lite has a built-in wireless Wi-Fi module, and when used with the battery handle Lite Bridge, scanning can be freed from the constraints of cables. When scanning wirelessly, a mobile phone can be used as the scanner screen, making the scanning process easier and more convenient.



Since the 3D scanner is a high-precision device, please handle it with care and store it properly. Avoid collisions or drops to prevent a decrease in accuracy or damage.

02 PRODUCT INFORMATION

2.1 3D Scanner Overview



2.2 3D Scanner Button Description

Button	Scanner Feedback
▶	Press once to start scanning; press again to pause scanning; long press for > 2 seconds to end scanning.
+	IR camera exposure time increased by 10%
-	IR camera exposure time reduced by 10%

2.3 Lite Bridge Button Description

Button	Scanner Feedback
power	Press once to turn on the power; press for more than 2 seconds to turn off the power.
USB-C	The Type-C charging port can be used to charge the Lite Bridge and supports up to 20W fast charging.

Battery Indicator	Indicator Light Feedback
	All four lights are on, indicating that the current power level is between 75% and 100%.
	3 lights on means the current power level is between 50% and 74%
	Two lights on means the current power level is between 25% and 49%.
	One light on means the current power level is 5% - 24%
	When the first light flashes, it means the current power is less than 5%. It is recommended to charge the scanner as soon as possible.
Fast Charging Indicator Light	Indicator Light Feedback
	The blue light will be on only when the Lite Bridge enters the fast charging state. It will be off if it does not enter the fast charging state.

2.4 Indicator Strip

Button Indicator Light	Status or Meaning	Reference Color
Green	The device is operating normally, the scanning distance is appropriate, or the device firmware upgrade is successful.	
Red and flashing	The device is in an abnormal state	
Yellow and flashing	The device is in upgrade state	
Orange Red	Scanning distance is too close	
Orange color	Scanning distance is short	
Light Blue	Longer scanning distance	
Dark Blue	Scanning distance is too far	

*Note: When the distance indicator starts flashing during scanning, it means that the scanning tracking is lost and the scanner needs to return to the scanned area to restore the scanning stitching relationship.

Wi-Fi Indicator	Status or Meaning	Reference Color
Blue	When the device is starting up normally, the blue light will stay on; when the device is finished starting up, the blue light will flash.	
Green	When the WiFi connection is successful and communication with the software is achieved, the green light will be on.	
Red	When Wi-Fi is abnormal or the upgrade is abnormal, the red light will be on.	
Yellow	When the OTA upgrade is in progress, the yellow light is on.	

*Note: When the device is in standby mode, the indicator light will enter a breathing state to save power.

03 PRODUCT SPECIFICATIONS

3.1 3D Scanner Product Parameters

Product name	Creality Otter Lite
Model	CRS10COL
Scanning mode	NIR(infrared binocular structured light)
Accuracy	0.05mm@100mm ^[1]
Resolution	0.1-2mm
Scanning frame rate	Up to 30fps
Min.scan volume	20mm x 20mm x 20mm
Single capture range	Close range mode 100mm*62mm@120mm 160mm*130mm@250mm Long range mode 352mm*254mm@300mm 788mm*509mm@600mm 1460mm*1017mm@1200mm
Working distance	120mm-1200mm
Color mapping	Yes
Alignment mode	Marker/geometry/texture
Output format	OBJ/STL/PLY
IMU	Yes
Marker recognition enhancement	8 Infrared LEDs
Color supplemental light	2 White LEDs
Laser safety	Class I (eye safe)
Weight	301g
Size	173mm*39mm*56mm
Calibration board	High precision calibration board
Wireless scanning	Yes
Protocols	Wi-Fi 6, downward compatibility
Wi-Fi bands	5GHz/5180-5240MHz/5190-5230MHz/5210MHz/5260-5320MHz /5725-5850MHz 5270-5310MHz/5290MHz/5500-5700MHz/5510-5670MHz/5530-5610MHz

Maximum Transmit Power	16.65dBm
Data transfer rate	Up to 30fps
System support	Windows/macOS
Data interface	Type-C/USB3.0/USB2.0
Input power	USB3.0 5V 3A WiFi 12V 2A
Operating temperature	-10°C to 40°C
Operating humidity	10-90%RH

[1] Accuracy is evaluated in a laboratory environment and actual results may be affected by the operating environment, such as temperature, vibration, and other factors.

3.2 Lite Bridge Parameters

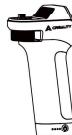
Product name	Lite Bridge
Model	CRP15LB
Battery type	Lithium battery
Battery energy (rated)	24.82Wh
Battery capacity (rated)	3400mAh (2 cells)
Fast charge power	20W MAX ^[1]
Fast charge protocol	PD3.0/QC3.0/UFCS/SCP/AFC
Charger port	Type-C
Smart phone holder	Magnetic
Power switch	Mechanical
size	168mm*93mm*46mm
weight	286g
Operating temperature	-10°C to 40°C
Operating humidity	10-90%RH

[1] The actual charging power is affected by the controller battery level, the environment and controller battery temperature, as well as the external charging cable and charging head.

04 PACKING LIST



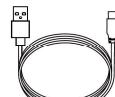
Creality Otter Lite 3Dscanner *1



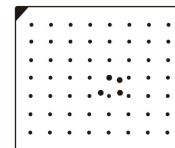
Lite Bridge *1



USB3.0 data cable (USB-C / USB-A 2m) *1



USB2.0 power cable & Lite Bridge charging cable
(USB-C/USB-A 1.5m) *1



High-precision calibration board *1



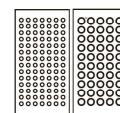
Turntable *1



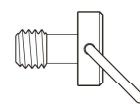
Scanning test object (OWL) *1



USB-C adaptor *2



Reflective markers (Diameter: 6mm*10,
Diameter: 3mm*10)



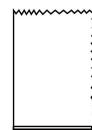
Screw *1



Magnetic phone holder * 1



Quick guide & Certification & Warranty card * 1



Cleaning cloth * 1



Lanyard *1

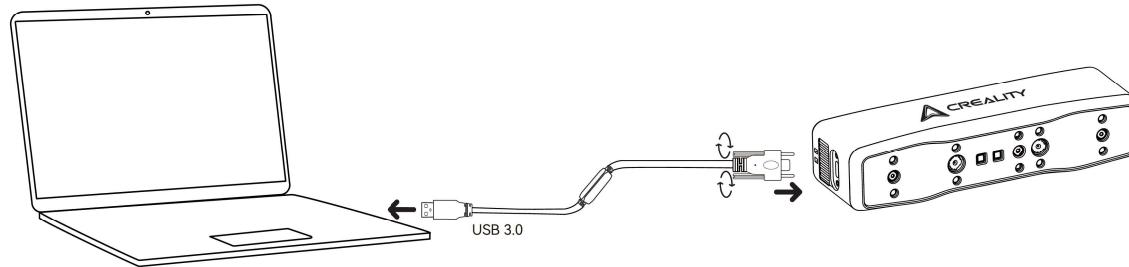


Portable case *1

05 DEVICE CONNECTION

5.1 Wired connection

Method 1: Connect to the computer's USB 3.0 port using the USB 3.0 data cable.



Method 2: If the computer only has USB2.0 port or insufficient power supply from the USB3.0 port, use the USB2.0 power cable for auxiliary power.

Connect the USB2.0 cable to the middle port to the USB3.0(as shown in the figure), and the other side of the port can be simultaneously connected to another port on the computer or used with a 5V charger to provide auxiliary power to the scanner .

