

Creality CR-Scan Raptor Pro

Creality CR-Scan Raptor Pro 3D Scanner Instruction Manual

Model: CR-Scan Raptor Pro

1. INTRODUCTION

The Creality CR-Scan Raptor Pro is a high-precision 3D scanner designed for detailed 3D modeling across various applications. It features metrology-grade accuracy, dual blue laser modes, and NIR structured light scanning capabilities. This manual provides essential information for setting up, operating, and maintaining your scanner to achieve optimal results.



Figure 1: Crealitiy CR-Scan Raptor Pro 3D Scanner in operation, capturing a detailed bust model.

2. SETUP

Follow these steps to set up your Crealitiy CR-Scan Raptor Pro 3D Scanner:

1. **Unboxing:** Carefully unpack all components from the protective case. Ensure all items listed in the packing list are present.
2. **Power Connection:** Connect the scanner to the power adapter and then to a power outlet.
3. **USB Connection:** Connect the scanner to your computer via the provided USB 3.0 cable. For desktop computers, ensure the USB cable is connected to a port on the BACK of the computer for sufficient power supply.
4. **Software Installation:** Install the Crealitiy Scan software on your computer. The software is compatible with Windows 10/11 (64-bit, i7-Gen10 and above, Nvidia graphics card 8GB video memory and above, 32GB RAM) and macOS (11.7.7 and above, Apple M1/M2/M3 series processors, 16GB RAM).

5. **Calibration:** Perform initial calibration as prompted by the CreaLity Scan software to ensure optimal accuracy.

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Video 1: CreaLity Raptor Pro 3D Scanner Unboxing and Setup Tutorial. This video demonstrates the unpacking process and initial connections required to prepare the scanner for use.

3. OPERATING MODES

The CreaLity CR-Scan Raptor Pro offers versatile scanning modes to suit different object types and detail requirements:

3.1. Blue Laser Mode (22 Cross Laser Lines)

This mode utilizes 22 cross laser lines for rapid scanning of medium to large objects. It provides comprehensive coverage, minimizing the need for multiple passes. Ideal for industrial inspection, reverse engineering, and detailed 3D modeling with metrology-grade accuracy up to $0.02\text{mm}+0.08\text{mm/m}$ and scan speeds of 660,000 points/s.

22+7 Blue Laser Lines

22 Cross Laser Lines Scan
Medium to Large Objects Quickly

2 Blue Light Modes with Seamless Switching

7 laser Lines
for Partial HD Scanning

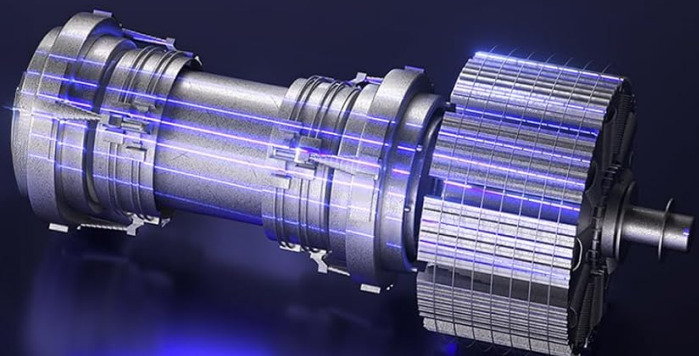


Figure 2: Illustration of the 22+7 blue laser lines used by the CreaLity CR-Scan Raptor Pro for comprehensive scanning.

3.2. Blue Laser Mode (7 Parallel Laser Lines)

For partial HD scanning, 7 laser lines are used. Each laser line is as fine as 0.1mm, enabling the capture of sharper edges and richer details on smaller or intricate areas.

3.3. NIR Structured Light Scanning

This mode utilizes speckle matching 3D imaging, allowing for markerless scanning of feature-rich workpieces. Objects can be scanned quickly and directly. The unique face & body mode captures more details, including hair, with a human body scan taking as quick as 2 minutes.

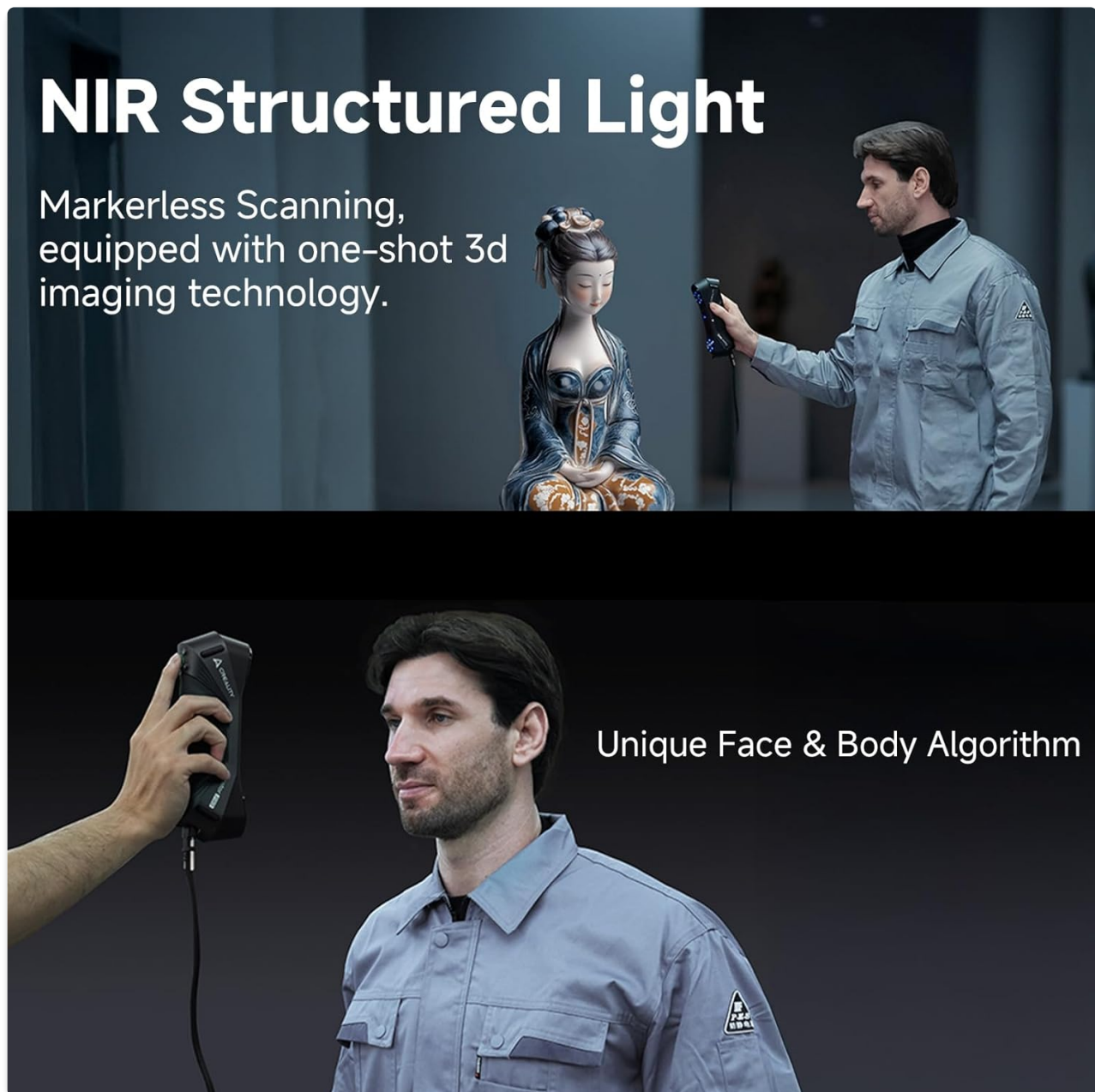


Figure 3: The scanner employing NIR structured light for markerless scanning of objects and human subjects.

3.4. Scanning Objects of Various Sizes

The Raptor Pro can scan objects ranging in size from 5x5x5 mm³ to 4000x4000x4000 mm³. This versatility allows for effortless scanning of engineering parts, molds, human bodies, and automobile components.

Objects Between 0.2-157" / 5-4000mm

Combining blue laser lines with infrared structured light, Raptor Pro can scan objects ranging in size from $5*5*5\text{ mm}^3$ - $4000*4000*4000\text{ mm}^3$. Effortlessly scanning automobile components, engineering parts, molds, human bodies and more.

Laser Line Scanning

Minimum scan size: $5*5*5\text{ mm}^3$

Maximum scan size: $4000*4000*4000\text{ mm}^3$

NIR Structured Light Scanning

Scanning objects ranging from
 $150*150*150\text{ mm}^3$ - $2000*2000*2000\text{ mm}^3$



Figure 4: Visual representation of the diverse object sizes compatible with the scanner.

3.5. Full-Color Scanning

Equipped with a high-resolution RGB camera, the scanner supports 24-bit full-color texture capturing in all modes, providing realistic and detailed 3D models.

Wider Applications, Better Performance



Outdoor Scanning



Anti-shaking



Peaceful Scanning with LED Lights

24-bit Full-Color Scanning in All Modes

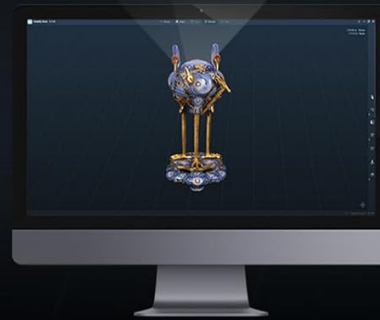


Figure 5: Demonstrates the scanner's capability for 24-bit full-color scanning across various applications.

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Video 2: Official Introduction Video for CreaLity Raptor Pro, showcasing its various scanning modes and applications.

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Video 3: Demonstrates how to create and modify car parts using the CreaLity Raptor Pro 3D scanner.

4. SOFTWARE AND CONNECTIVITY

The CreaLity Scan software provides an intuitive interface with powerful features for scanning and post-processing:

- **System Support:** Compatible with Windows 10/11 (64-bit, i7-Gen10 and above, Nvidia graphics card 8GB video memory and above, 32GB RAM) and macOS (11.7.7 and above, Apple M1/M2/M3 series processors, 16GB RAM).

- **Features:** Offers multi-project stitching, real-time preview, adjustable resolution (0.05mm–2mm), global marker scanning, point cloud editing, face and body mode, and easy calibration.
- **Connectivity:** Supports USB connection. An optional Scan Bridge (sold separately) allows for flexible switching between wired and wireless scanning modes.

New Intuitive Software with Powerful Features



System Support
 Windows 10/11(64 bit): i7-Gen10 and above
 Nvidia graphics card (8GB video memory and above)
 32GB memory and above
 Minimum: i7-Gen7,
 Nvidia graphics card (6GB video memory)
 16GB memory



macOS: 11.7.7 and above
 Apple M1/M2/M3 series processors
 RAM: 16GB and above



CrealityScan





50% Faster
Processing Time



Partial HD
Scanning



Global Marker
Scanning



Point Cloud
Editing



Face and
Body Mode



Easy Calibration

Figure 6: Overview of the Creality Scan software interface and its key functionalities.

5. APPLICATIONS

The Creality CR-Scan Raptor Pro is suitable for a wide range of professional and creative applications, including:

- Metrology-grade inspection
- Reverse engineering
- Automotive design and customization
- Medical applications

- Mold manufacturing
- Action figure and artifact scanning
- AR/VR content creation



Figure 7: Illustrates the diverse professional applications of the CreaLity CR-Scan Raptor Pro.

6. MAINTENANCE

To ensure the longevity and optimal performance of your CreaLity CR-Scan Raptor Pro, adhere to the following maintenance guidelines:

- **Cleaning:** Regularly clean the scanner's lenses and body with a soft, lint-free cloth. Avoid abrasive materials or harsh chemicals.
- **Software Updates:** Keep the CreaLity Scan software updated to the latest version to benefit from performance improvements, new features, and bug fixes.
- **Storage:** Store the scanner in its protective case when not in use to prevent dust accumulation and physical

damage.

- **Environmental Conditions:** Operate and store the scanner within recommended temperature and humidity ranges to avoid malfunction.

7. TROUBLESHOOTING

This section addresses common issues you might encounter with your Creality CR-Scan Raptor Pro:

- **Tracking Loss:** If the scanner loses tracking during operation, ensure sufficient reflective markers are placed on the object, especially on featureless or uniform surfaces. Return the scanner to a previously scanned area to regain tracking.
- **Software Crashes/Errors:** Ensure your computer meets the minimum system requirements. Update your graphics card drivers and Creality Scan software to the latest versions. Restart the software and your computer if issues persist.
- **Poor Scan Quality:** Verify that the scanning distance is optimal (indicated by the software's real-time feedback). Ensure proper lighting conditions and consider using scanning spray for very dark, reflective, or transparent objects if not using NIR mode.
- **Connectivity Issues:** Check all USB and power cable connections. Ensure you are using a USB 3.0 port, preferably directly from the motherboard for desktops.

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Video 4: A user-submitted video demonstrating a software issue with tracking. This highlights the importance of proper setup and software stability.

8. SPECIFICATIONS

Feature	Specification
Product Dimensions	2.91"D x 1.96"W x 8.4"H; 8 Pounds
Item Model Number	CR-Scan Raptor Pro
Scanner Type	Film (Note: This is likely a miscategorization in the source data, as it's a 3D scanner)
Brand	Creality
Connectivity Technology	USB
Resolution	7200 dpi (Note: This is likely a miscategorization in the source data, as 3D scanners measure accuracy in mm)
Item Weight	8 Pounds
Minimum System Requirements	Windows/macOS

UPC






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9. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the documentation included with your product or visit the official Creality website. Keep your proof of purchase for any warranty claims.

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Related Documents - CR-Scan Raptor Pro

	Creality CR-Scan Raptor 3D Scanner Product Manual V2.0 Discover the Creality CR-Scan Raptor, a high-precision 3D scanner offering metrology-grade accuracy with hybrid blue laser and NIR technology. This manual covers its advanced features, detailed specifications, step-by-step operation, software integration, and FAQs for professional and enthusiast use.
	Creality CR-Scan Raptor 3D Scanner Product Manual Comprehensive product manual for the Creality CR-Scan Raptor 3D Scanner, detailing its features, specifications, operation, and troubleshooting. Learn about its hybrid blue laser and NIR technology for metrology-grade accuracy.
	Creality CR-Scan Otter 3D Scanner Product Manual This manual provides a comprehensive guide to the Creality CR-Scan Otter, a high-precision, handheld 3D scanner. It covers product introduction, specifications, equipment overview, button functions, LED indicator status, packing list, software installation, device connection, first scan procedures, FAQs, and troubleshooting.
	Creality Scan Bridge Quick Guide: Wireless 3D Scanning Setup A comprehensive quick guide to setting up and using the Creality Scan Bridge for wireless 3D scanning. Learn about its features, connection methods, and troubleshooting tips for Creality 3D scanners.
	Creality Raptor Pro 3D Scanner Quick Guide A quick guide for the Creality Raptor Pro 3D Scanner, detailing its product introduction, information, parameters, packing list, device connection, software operation, scanning steps, and FAQs.



[Creality CR-Scan Ferret 3D Scanner User Manual](#)

Comprehensive user manual for the Creality CR-Scan Ferret 3D Scanner, detailing its specifications, setup, scanning workflows, PC software usage, tips, and frequently asked questions. Learn how to achieve high-quality 3D scans for various applications.