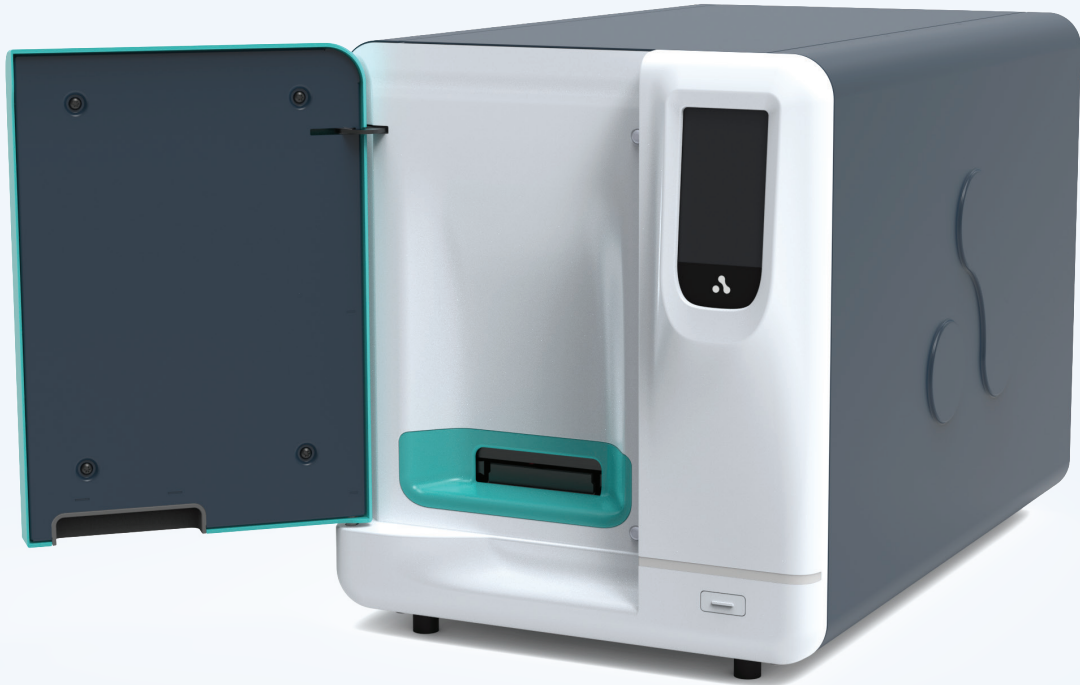




LeviCell EOS System

INSTALLATION GUIDE

TABLE OF CONTENTS

SYMBOLS USED IN THIS GUIDE AND ON LEVICELL EOS.....	3
LEGAL	4
SAFETY AND WARNINGS	5
INSTALLATION INSTRUCTIONS	7
1. Site Preparation	7
2. Unboxing the LeviCell EOS.....	9
3. Removing The Shipping Locks.....	11
4. Installing Control PC.....	16
CLEANING THE LEVICELL EOS	22
LEVICELL EOS SYSTEM SPECIFICATIONS.....	23
CONTACT INFORMATION.....	24

SYMBOLS USED IN THIS GUIDE AND ON LEVICELL EOS

	Attention symbol. The associated message contains safety-related information.		Operating temperature range
	Operating humidity range		For information, contact
	Model number		Serial number
	Date of manufacture		Manufacturer of record (LevitasBio)
	Do not reuse		Do not discard in unsorted waste

Table 1. Symbols in this guide

LEGAL

For Research Use Only. Not for use in diagnostic procedures.

© 2025 LevitasBio, Inc. All rights reserved. “LevitasBio”, and “LeviCell” are trademarks of LevitasBio, Inc. All other trademarks are the property of their respective owners. All products and services described herein are For Research Use Only and not for use in diagnostic procedures.

The LeviCell® EOS system is developed and manufactured for LevitasBio, Inc. This device and its methods of use are protected by one or more issued patents and pending applications owned or licensed by LevitasBio, Inc.

Use of this product is subject to the LevitasBio Sales Terms and Conditions, available at <https://levitasbio.com/terms-and-conditions/>. It is your responsibility to review, understand, and comply with these Terms and Conditions.

The system and its associated cartridges and reagents may not be used for any other purpose, including, without limitation, in vitro diagnostic purposes, therapeutic or clinical applications, use in humans, or the manufacture of drugs. LevitasBio products may not be transferred to third parties, resold, modified for resale, or used to manufacture commercial products without prior written approval of LevitasBio, Inc.

This manual provides information about the use of the LeviCell EOS system. LevitasBio, Inc. shall not be liable for errors contained herein, and shall not be liable for any direct, incidental, or consequential damages in connection with or arising from the furnishing, performance, or use of this document or the device, including the loss of any cell samples processed in the device.

The information contained in this document is subject to change without notice.

SAFETY AND WARNINGS



ATTENTION: Use the mains supply cords provided with the LeviCell® EOS system. Do not substitute a mains supply cord with an inadequate rating (< 10 A current).

Use the LeviCell EOS system only as directed by LevitasBio. Do not use in any manner not specified by LevitasBio, Inc. such as the removal of any cover or portion of the enclosure while the system is powered on, as it may create a safety hazard.

The LeviCell EOS module is heavy (45 kg, 100 lb) and requires a **2-person** lift.

Plug the LeviCell EOS module and Control PC into properly grounded outlets using the supplied mains power cable(s).

Ensure that the mains power cable and its inlet remain unobstructed and accessible at all times, so the system can be fully powered off during servicing.

The LeviCell EOS system contains user-accessible, removable parts. The instrument requires no maintenance beyond the cleaning described in the section **Cleaning the LeviCell EOS.**

If a fault occurs, turn the instrument off using the Main Power Switch on the rear panel and disconnect the power cable. Contact LevitasBio, Inc. Technical Support at +1-650-204-1185 or support@levitasbio.com.

Cartridges are single-use only to prevent contamination. Do not reuse cartridges. Reuse increases the risk of cross-contamination and exposure to potential biohazards and can void the instrument warranty. If a cartridge is reused or a leak is suspected, contact LevitasBio, Inc. Technical Support.

Dispose of used cartridges in accordance with your institution's approved laboratory guidelines and local regulations.

For indoor use only. The LeviCell EOS is not designed for outdoor use and is not rated for resistance to precipitation. See the [Specifications](#) section for details.

	BIOSAFETY: Biohazardous samples may be used in the LeviCell EOS system or in the laboratory housing the system. All relevant precautions for handling biohazardous samples must be followed, such as Universal Precautions. Treat any instrument in a BSL-rated laboratory as potentially contaminated to that BSL level.
	MAGNETIC FIELD: MAGNETIC FIELD: LeviCell EOS cores contain strong magnets that can be harmful or interfere with the operation of pacemakers or other magnetically sensitive devices. Users must not bring their devices within 150 mm (6 inches) of the exchangeable core during handling.

Table 2. Safety Warnings

INSTALLATION INSTRUCTIONS

1. Site Preparation

1. Loading dock and access:

- The LeviCell EOS arrives with the instrument module in a cardboard shipping crate on a pallet, with an overall dimension of: H1120 mm x W620 mm x L950 mm (44.1 in x 24.4 in x 37.4 in) and a gross weight of approximately 100 kg (220 lb). This shipment includes two containers:
 - a. Container 1:** LeviCell EOS Module, dimensions of H749 mm x W616 mm x L946 mm (29.5 in x 24.25 in x 37.25 in) and a gross weight of container is approximately 65 kg (143 lb).
 - b. Container 2:** The Control PC and its accessories, dimensions of H371 mm x W616 mm x L946 mm (14.6 in x 24.25 in x 37.25 in) and a gross weight of approximately 35 kg (77 lb).
- A hand-operated pallet truck is required. Please contact LevitasBio if alternate delivery arrangements are needed.
- The shipping crate must be moved to the lab prior to installation.
- Verify that all doors are wide enough to admit the crate on the pallet jack. The shortest width of the crate will fit through a standard width door.
- The final weight of the LeviCell EOS Module weighs 45.4 kg (100 lb) and requires a 2-person lift from container 1 to the bench. The packed crate with instrument weighs 65 kg.

2. Bench space:

- Minimum bench space required: D660 mm x W1200 mm (26 in x 48 in).
- Recommended bench space: W1520 mm (60 in), with at least H508 mm (20 in) vertical clearance above the bench.
- Minimum clearance behind the instrument: 75 mm (3 in) for venting and access to the Main Power switch.
- Minimum clearance for exchangeable core access: 457 mm (18 in) on the left side if frequent core swaps are anticipated.

3. Ventilation

- For systems with temperature control cores (TEC), the bottom-left side will exhaust warm air. Do not place temperature sensitive equipment or samples in this area.
- The air intake for the instrument is on the bottom-right side. Ensure that exhaust from other instrumentation is not aligned with this area, as warm air can degrade TEC cooling performance.

4. Power Requirements: Access to 2 standard power outlets.

- Access to 2 standard grounded power outlets is recommended.
- All standard main input voltages are accepted (100 – 240 VAC, 50 – 60 Hz).
- The instrument draws low power, so no special electrical circuits are required.
- Grounded outlets are required (3-pin or CEE 7/5 style).

5. Installation and Usage

- The system will be installed by LevitasBio personnel. The system box should not be opened prior to installation.
- It is recommended that the unit be placed such that the rear power switch (right side of the instrument when viewed from the front) is easily accessible. This controls the mains power of the instrument.
- Do not obstruct access to the mains power supply cable or its inlet. It must remain accessible so the system can be completely disconnected from power during servicing.

6. Installation and Usage

- It is recommended that the unit be placed such that the back power switch (right side of the instrument when viewed from the front) is easily accessed. This controls the main power of the instrument.
7. The LeviCell EOS Control PC is supplied with Wi-Fi; however, if desired, an ethernet port is available for a network cable (not supplied).



TIP: Good network connectivity is highly recommended for access to image data and remote technical support. Secure network access is not required for support. Your building's guest Wi-Fi is sufficient.

2. Unboxing the LeviCell EOS

1. Remove the pallet straps and slide the cardboard top off the box. The top interior box contains the control PC. The bottom interior box contains the LeviCell EOS instrument, secured to the wooden pallet.



Figure 1. LeviCell EOS inside the packaging.

2. Unscrew the four shipping latches using the provided wrench (located in the accessory box underneath the instrument), and then slide them out of the metal rails.



Figure 2. LeviCell EOS shipping latches on the wooden pallet.

3. The metal slots on the bottom of the instrument align directly with the metal rails. Ensure alignment when repacking.

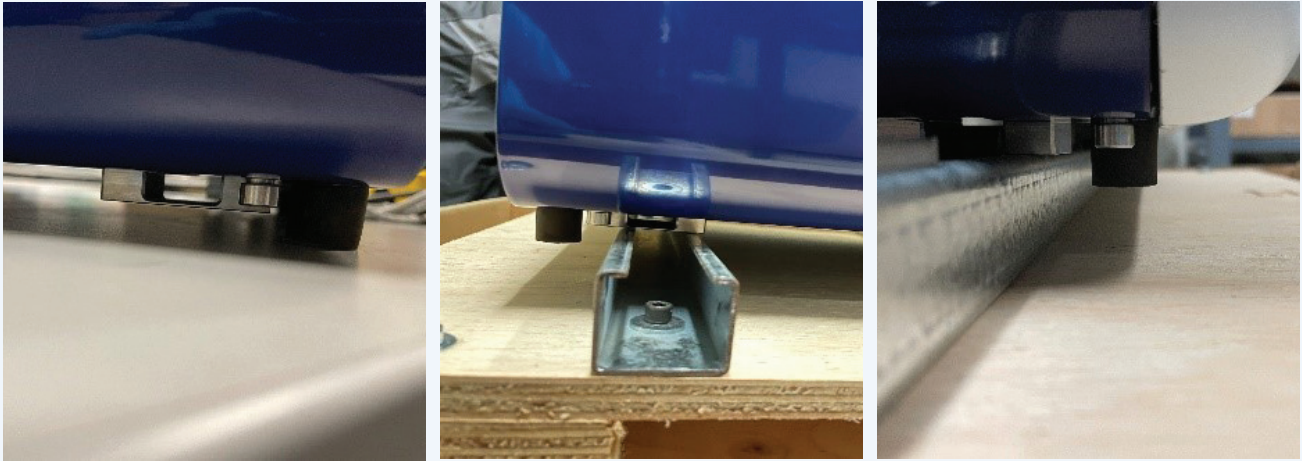


Figure 3. LeviCell EOS metal slots on the wooden pallet.

4. Lift the LeviCell EOS instrument off the rails using the **handles on the bottom side** of the instrument, with the assistance of another person. Do not lift by the front fascia or any other part.

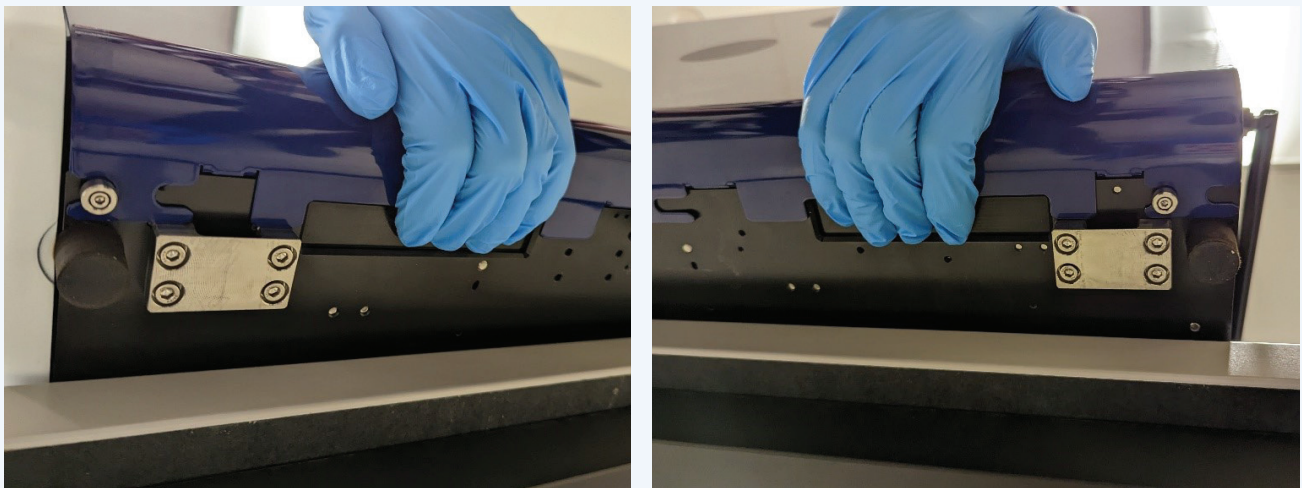


Figure 4. LeviCell EOS handles at the bottom of the instrument.

5. Store the latches and wrench in the accessory box for future use if needed. Note that the front right-hand side latch (marked “F” on the shipping crate deck) is longer than the other three.



Figure 5. LeviCell EOS empty shipping wooden pallet, and the accessory box.

3. Removing The Shipping Locks

1. Shipping locks protect sensitive equipment against potential damage during transport.
2. Two locks must be removed: one for the motion stage and one for the focus stage.
3. Remove the left side panel of the instrument to access the shipping locks.
 - a. Remove the two thumbscrews securing the side panel.



Figure 6. LeviCell EOS back panel.

- b.** Slide the panel toward the back of the instrument while holding the grip with one hand. Use your other hand to stabilize the top edge of the cover, then tilt the panel away from the instrument.

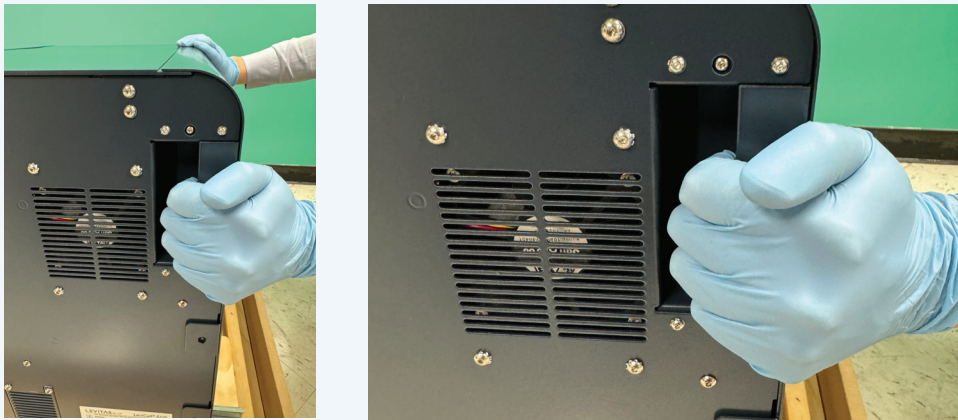


Figure 7. LeviCell EOS side panel removal.

- c.** Place the side panel in a safe location to avoid damage.

4. Remove the motion stage locks.
 - a. Remove the two thumbscrews on the motion stage lock as shown in Figure 8.

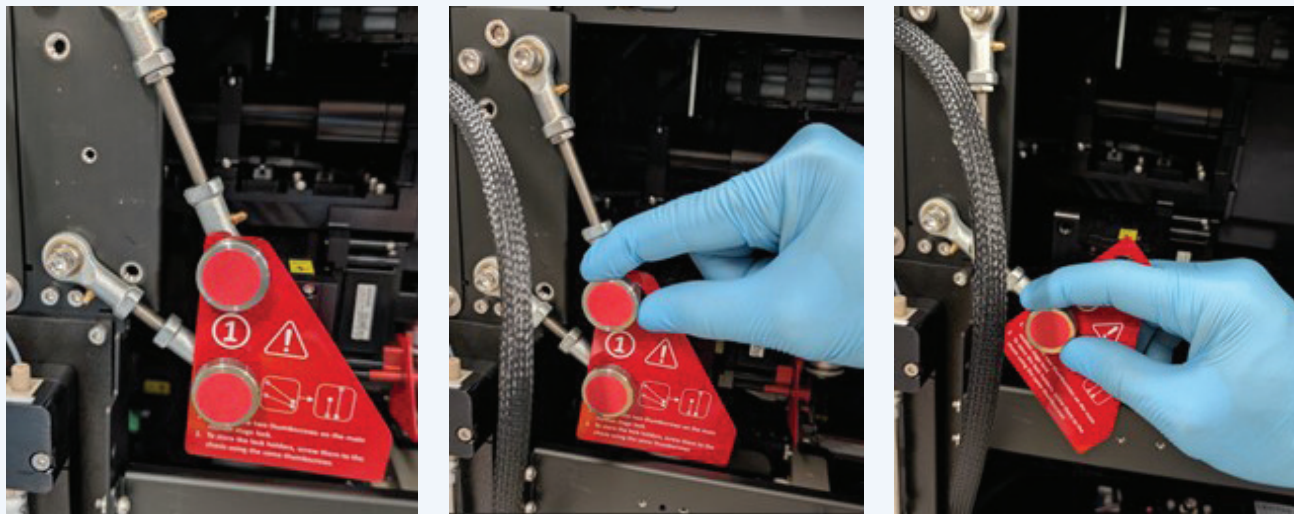


Figure 8. LeviCell EOS main motion stage safety lock.

- b. To store the motion stage lock holders, screw them to the chassis using the same thumbscrews as shown in Figure 9. Store the tag in the transport cartridge box for future use.

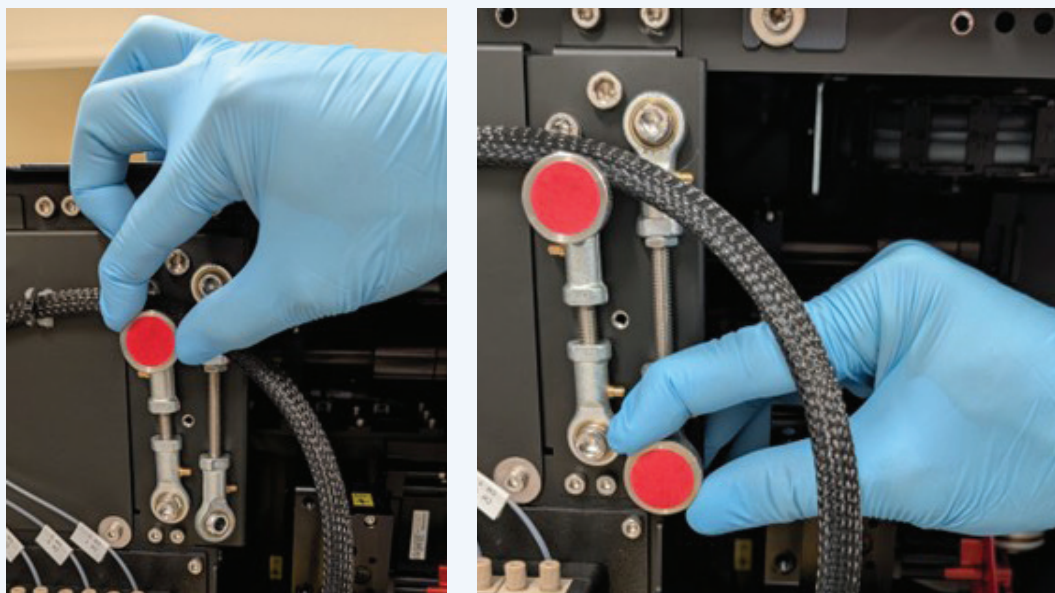


Figure 9. LeviCell EOS main motion stage safety lock holders.

5. Remove the focus stage safety lock.



ATTENTION: Hold on to the lock while removing the screw to avoid its fall.

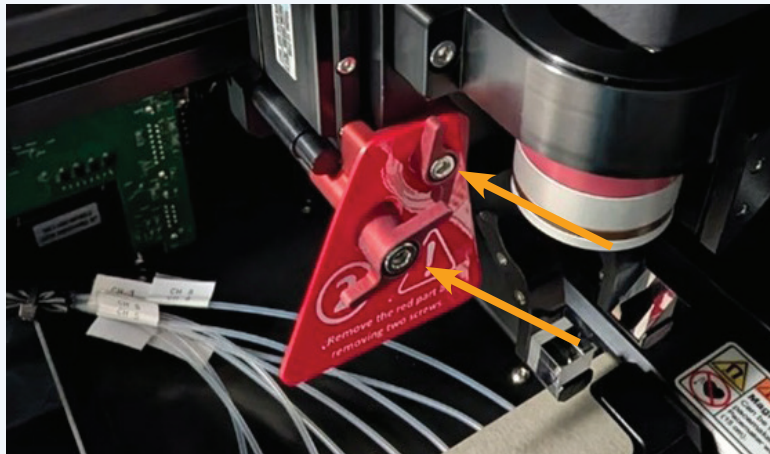


Figure 10. LeviCell EOS focus stage safety lock, with two thumbscrews indicated.

- a. Remove the large thumbscrew, as shown in Figure 11.



Figure 11. LeviCell EOS focus stage safety lock larger thumbscrew.

- b. Unscrew the second smaller thumbscrew until it is loose, as seen in Figure 12.
- c. Remove the focus stage lock at the same time to avoid dropping the lock. (Caution: do not let either lock, or any screw, drop into the core. If this occurs, contact LevitasBio Support for assistance).
- d. Store the lock, the tag and both screws for future use. Store them with the transport cartridge box.

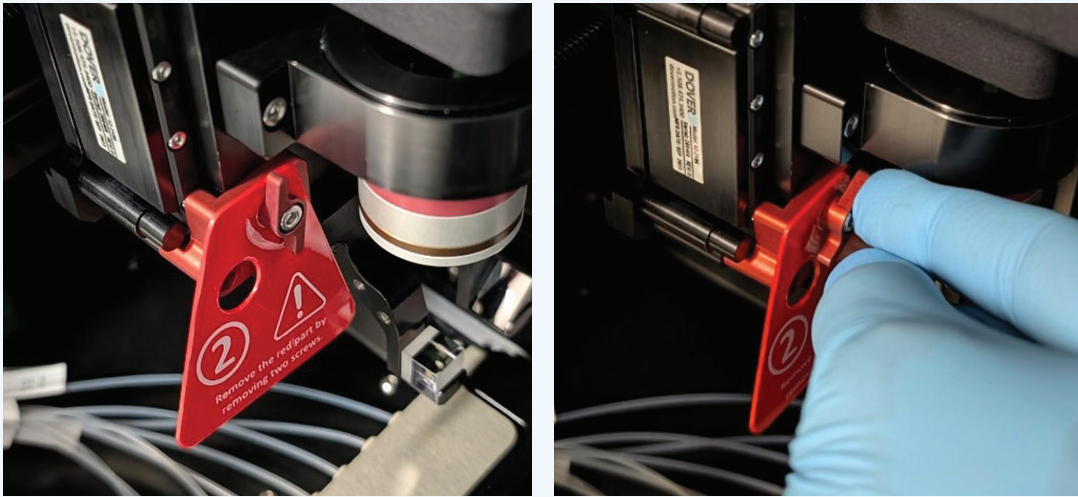


Figure 12. LeviCell EOS focus stage safety lock, smaller thumbscrew and lock.

- 6. Restore the side panel to its initial position by aligning the visible stud marks of the panel with the slots on the instrument and attach the thumbscrews securing the side panel to the rear of the instrument, as shown in Figure 13.

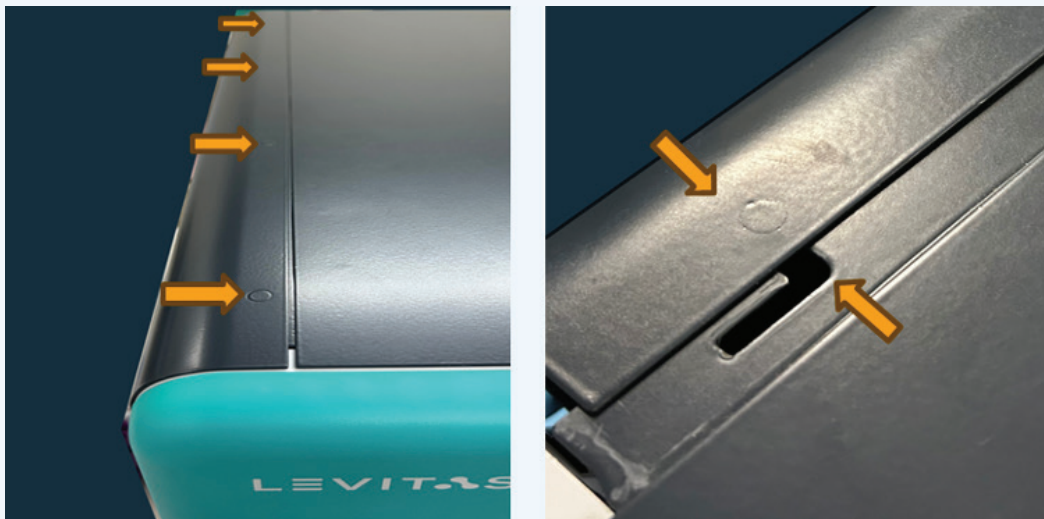


Figure 13. LeviCell EOS Side Panel Alignment.

4. Installing Control PC

1. Remove all the components from the packaging and verify contents:

- Dell XE4 PC unit
- Dell Monitor
- Dell AIO Stand
- Dell Wireless Mouse and Keyboard
- DisplayPort cable
- AC power cable
- Barcode Scanner
- EOS Ethernet cable



Figure 14. Control PC components in their package.

2. Slide the PC core unit into the stand until fully seated.

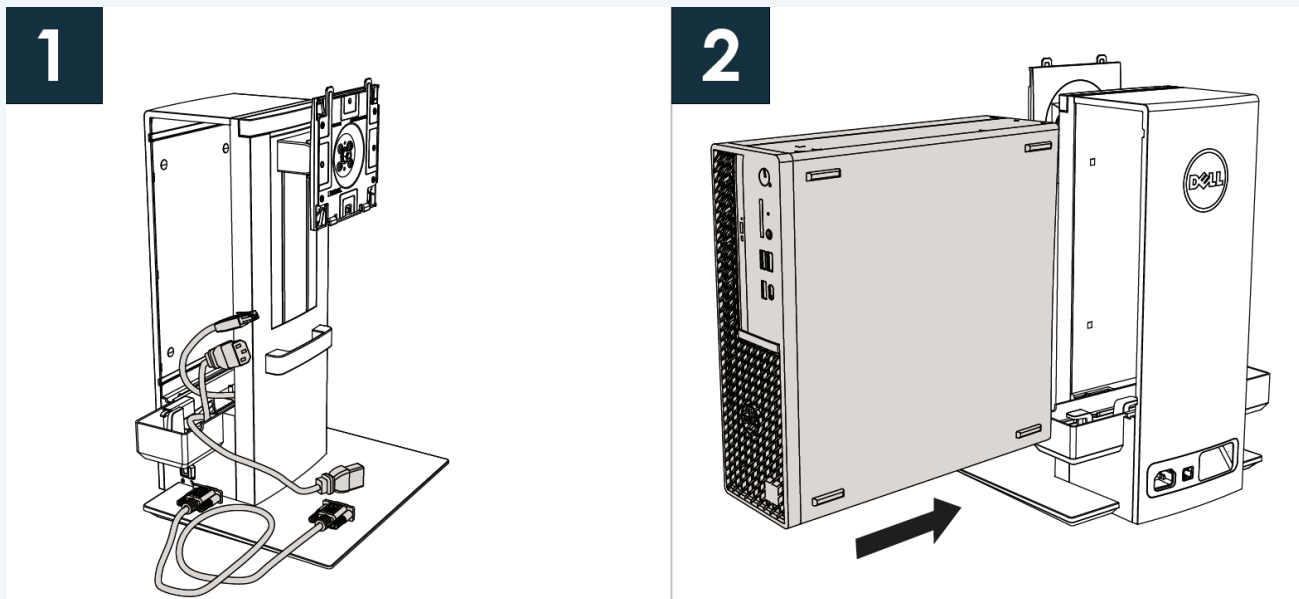


Figure 15. PC core inserted into stand.

3. Mount the monitor to the stand as indicated.

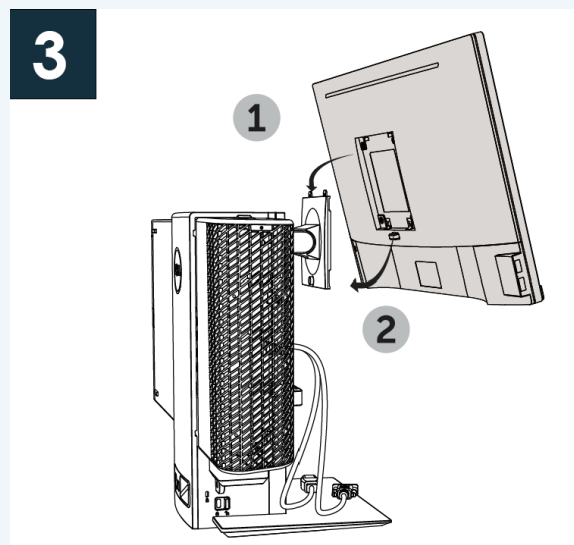


Figure 16. PC monitor mounted to stand.

4. Connect the stand to a grounded power outlet using the supplied AC power cable.
5. **Note:** If preferred, a wired internet cable can be connected to the stand (Ethernet cable not included). This port is not the EOS connection port.

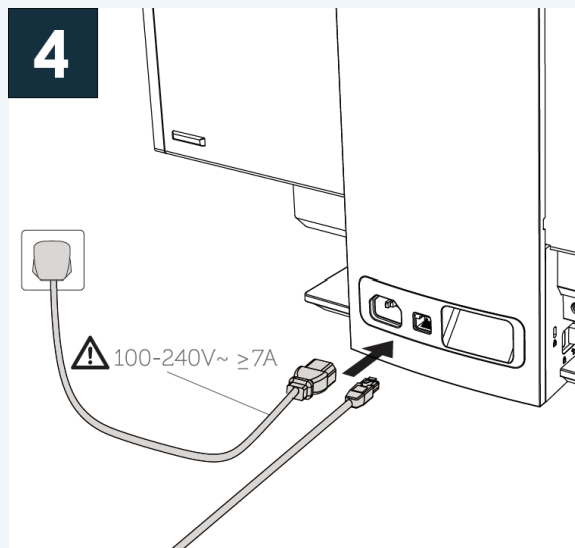


Figure 17. AC power cable connected to stand.

6. Turn on the mouse and the keyboard.
7. Insert the USB dongle (located inside the mouse) into the PC unit.
8. Refer to the provided PC manual if more help is required.

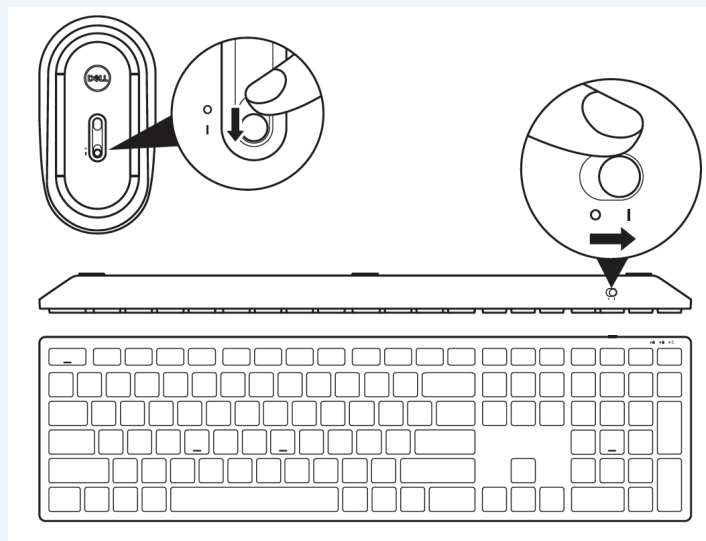


Figure 18. Mouse, keyboard, and USB dongle setup.

9. Refer to figure 19 for the PC core unit connection guide.

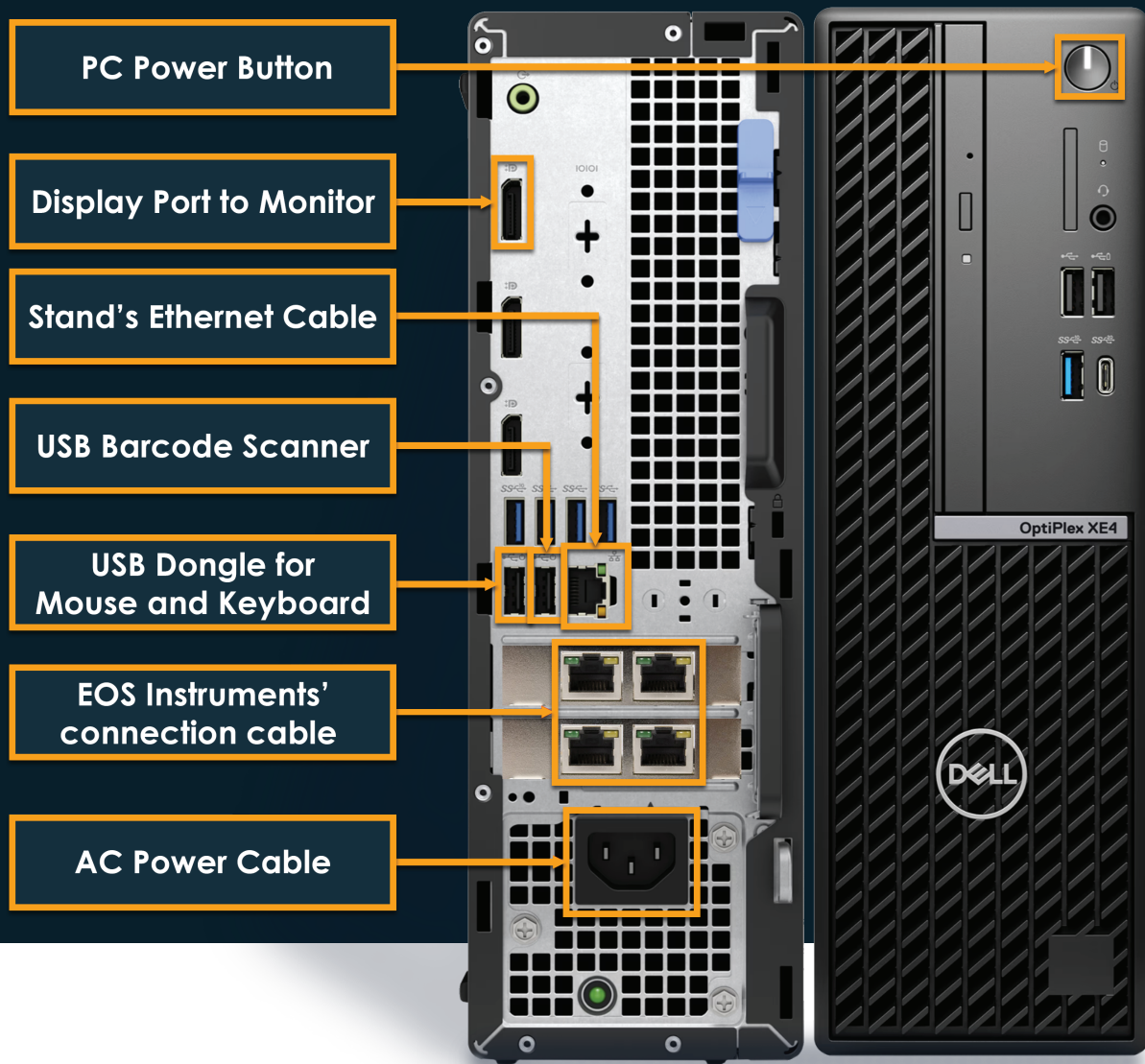


Figure 19. LeviCell EOS Control PC connection guide.

10. Connect the stand's shorter AC power cable to the PC core unit (Figure 19).
11. Connect the stand's Ethernet cable to the PC's single Ethernet port.
12. Connect the stand's longer AC power cable to the monitor.
13. Connect the PC core unit and the monitor via the Display Cable.
14. Connect the Barcode Scanner to the core PC unit's USB port.

15. Connect the Control PC to the EOS instrument using the EOS Ethernet Cable (Figure 20). **Note:** Only use ports from the group of 4 indicated for “EOS Instruments’ connection cable” in the Figure above.

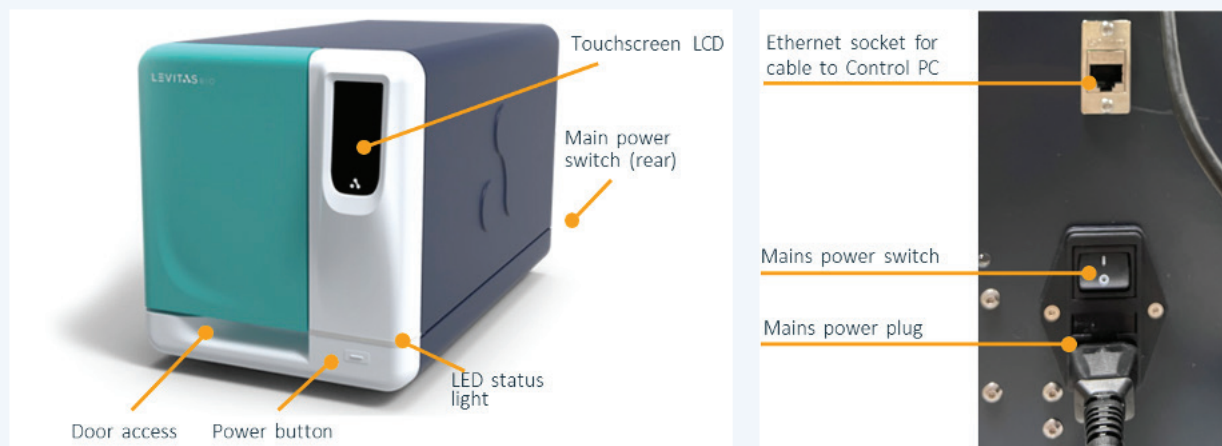


Figure 20. LeviCell EOS instrument connection guide.

16. The setup (Figure 21) is now ready to be turned on.



Figure 21. LeviCell EOS and Control PC.

- 17.** Locate the main power input at the back-right of the instrument. Remove the red “3” tag (Figure 22).



Figure 22. Main Power Input socket and Main Power Switch.

- 18.** Connect the EOS instrument to power by plugging the cord into the Main Power Inlet socket, and to a main outlet. Then, turn on the Main Power Switch.
- 19.** Turn on the EOS instrument using the soft power button on the instrument's front panel.
- 20.** Turn on the Control PC using the power button on the PC core unit.
- 21.** Enter the login credentials for the Control PC provided at the time of installation (or contact Technical Support).
- 22.** Correct the time zone on the control PC before opening the software.
- 23.** Refer to the LeviCell EOS User Guide to complete the System Installation and Calibration.

CLEANING THE LEVICELL EOS

In the event of a spill or contamination, clean the exterior and cartridge-loading area of the LeviCell EOS with a cloth or wipe pre-wetted with mild cleaning agents, including:

- Detergents in aqueous solution
- Up to 80% ethanol (aqueous solution)
- Up to 80% isopropyl alcohol (aqueous solution)
- Diluted bleach (sodium hypochlorite up to 1% w/v, aqueous)



Use standard precautions for any cleaning agents.

DO NOT USE the following cleaning agents on the LeviCell EOS instrument, as they may cause damage to the instrument's finishes:

- Aggressive organic solvents such as acetone, methanol, or aromatic compounds (e.g., toluene)
- Strong acids
- Abrasive compounds

LEVICELL EOS SYSTEM SPECIFICATIONS

Specification	Value
Number of sample inputs	4
Number of output fractions	8
Levitation magnets	Rare earth permanent magnets
Separation flow rate	300 μ L/min
Imaging modes	Brightfield (transmitted illumination) 530 nm Two fluorescence channels: Excitation 470 nm, Emission 501 – 544 nm (e.g., Calcein, FITC, Acridine Orange) Excitation 567 nm, Emission 601 – 666 nm (e.g., PI, Alexa Fluor 594)
Illumination type	LED
Imaging resolution	Approximately 2 μ M
Operational? Electrical	
Input voltage	100 – 240 VAC, universal 50 – 60 Hz (90 – 264 VAC maximum operating range) Standard wall receptacle (over-voltage category II)
Input current	4 A
Main enclosure dimensions	W440 x D630 x H460 mm (17.3 in x 24.8 in x 18.1 in)
Instrument weight	45.4 kg (100 lb)
Control PC Operating system	Windows 10 Professional, 64-bit
Ingress protection rating	Not rated (no protection claimed)
Environmental Conditions	
Operating ambient temperature	19°C – 25°C
Operating relative humidity	20% RH – 80% RH ambient, non-condensing
Pollution degree of the intended environment	Pollution Degree 2 (normal indoor laboratory environment)
Altitude	Sea level to 2,000 m (6,562 ft)
For indoor use only	Not designed for outdoor use. Not designed for use in wet locations.



CONTACT INFORMATION

Technical Support Phone Number:

+1-650-204-1185

Technical Support Email Address:

support@levitasbio.com

Company Website:

<http://levitasbio.com/>

Company Shipping Address:

LevitasBio Inc.
1505 Adams Drive, Suite D
Menlo Park, CA 94025

USA

For Research Use Only. Not for use in diagnostic procedures. © 2025 LevitasBio, Inc. All rights reserved. "LevitasBio", and "LeviCell" are trademarks of LevitasBio, Inc. All other trademarks are the property of their respective owners. **support@levitasbio.com** 90-00230B