



# MERCURY PRO LTO

Thunderbolt 3 LTO Archiving Solution  
Assembly Manual & User Guide



ASSEMBLY MANUAL  
& USER GUIDE

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# INTRODUCTION

## 1.1 SYSTEM REQUIREMENTS

### Hardware:

- Any Mac or PC with Thunderbolt 3, Thunderbolt 4, or USB4/Thunderbolt (USB-C)

### Operating System:

- macOS 10.14.6 or later
- Windows 10/11 or later, Server 2016 and 19 or later
- Linux with Thunderbolt System Support

### Supported Storage Media:

- LTO-7
  - LTO-7 Cartridges (Read / Write)
  - LTO-6 Cartridges (Read / Write)
  - LTO-5 Cartridges (Read)
- LTO-8
  - LTO-8 Cartridges (Read / Write)
  - LTO-M7 Cartridges (Read / Write)
  - LTO-7 Cartridges (Read / Write)
- LTO-9
  - LTO-9 Cartridges (Read / Write)
  - LTO-8 Cartridges (Read / Write)
- (1) 2.5 or 3.5-inch SATA or SAS drive

## 1.2 PACKAGE CONTENTS



OWC Mercury Pro LTO



0.7m Thunderbolt 3 Cable



Power supply and cable



1 Data Cartridge &  
1 Universal Cleaning Cartridge



ArGest Backup License  
If Purchased



Quick Start Guide

## 1.3 ABOUT THIS MANUAL

The images and descriptions may vary slightly between this manual and the unit shipped. Functions and features may change depending on the firmware version. The latest product details and warranty information can be found on the product web page. OWC's Limited Warranty is not transferable and subject to limitations.



## General Use Precautions

- To avoid damage, do not expose the device to temperatures outside: 41° – 95° F (operating) or -4° – 140° F (non-operating)
- After properly unloading any mounted cartridge, always unplug the device from the electrical outlet if there is a risk of lightning or if it will be unused for an extended period of time. Otherwise, there is an increased risk of electrical shock, short-circuiting or fire.
- Do not use the device near other electrical appliances such as televisions, radios or speakers. Doing so may cause interference which will adversely affect the operation of the other products.
- Do not place the device near sources of magnetic interference, such as computer displays, televisions or speakers. Magnetic interference can affect the operation and stability of hard drives.
- Do not place objects on top of the device.
- Protect your device from excessive exposure to dust during use or storage. Dust can build up inside the device, increasing the risk of damage or malfunction.
- Do not block any ventilation openings on the device. These help to keep the device cool during operation. Blocking the ventilation openings may cause damage to the device and cause an increased risk of short-circuiting or fire.

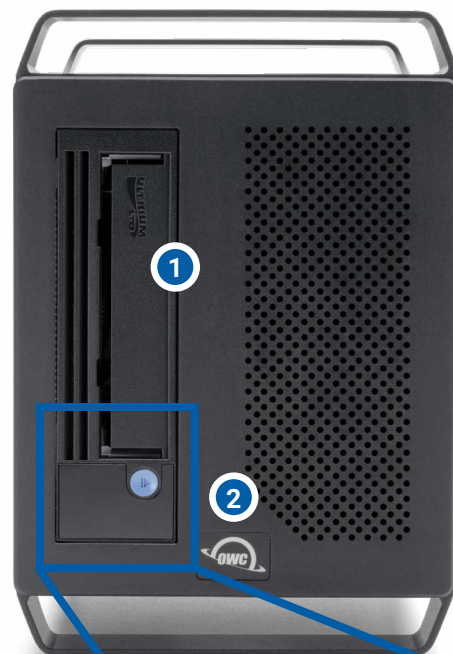


## Safety Precautions

- Read this user guide carefully and follow the recommended steps for assembly.
- Do not attempt to disassemble or modify the device. To avoid any risk of electrical shock, fire, short-circuiting or dangerous emissions, never insert any metallic object into the device. If it appears to be malfunctioning, please contact technical support.
- Never expose your device to rain or use it near water or in damp or wet conditions. Never place objects containing liquids on the drive, as they may spill into its openings. Doing so increases the risk of electrical shock, short-circuiting, fire or personal injury.

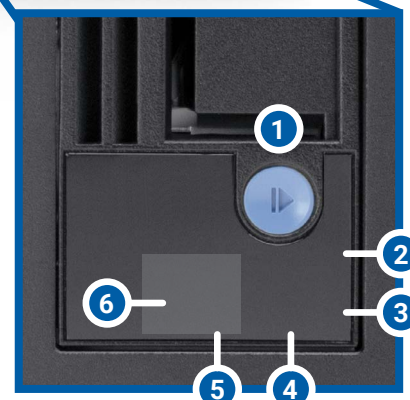
## 1.4 FRONT VIEW

1. LTO Tape Drive – see Section 1.5 for details.
  2. Power LED – LED will display as white if there is power but no data connection, and as blue if there is both power and a data connection.
- Please do not power off the Mercury Pro LTO or disconnect the Thunderbolt 3 cable from the host during use. Doing so will likely result in data loss and/or damage to the tape. If you need to disconnect from the host and/or power off the device, please use ArGest Backup or other LTO backup software to make sure all transfers are complete and then unmount the tape volume via Deck Controls.



## 1.5 LTO DRIVE FRONT PANEL

1. Unload Cartridge button – used to rewind and then eject cartridges, as well as to put the device into Maintenance mode, force a memory dump, or reset the drive.
2. Ready light (green) – used in conjunction with the other status lights, display and SCD dot to provide [drive status information](#).
3. Encryption light (white) – used in conjunction with the other status lights, SCD, and SCD dot to provide [drive status information](#).
4. Fault light (amber) – used in conjunction with the other status lights, SCD, and SCD dot to provide [drive status information](#).
5. Single Character Display (SCD) – used in conjunction with the status lights and SCD dot to provide [drive status information](#).
6. SCD dot – used in conjunction with the status lights, and SCD to provide [drive status information](#).





## 1.6 REAR VIEW

1. DisplayPort – connect to a DisplayPort-compatible screen. Compatible with DisplayPort 1.4 and earlier.
2. (2) Thunderbolt 3 ports – if using a laptop, connect to the 85W port to benefit from Power Delivery (i.e. laptop charging). If using any other host type, connect to either port and use the remaining port to connect an additional Thunderbolt 3 or USB-C device.
3. Security slot – connect a security tether here.
4. Power switch – power the device on or off here.
5. AC IN – connect the included power cable here.
6. Maintenance port – unused.
7. 12Gb HD miniSAS connector – attach additional SAS devices here.



## 1.7 USAGE NOTES

### General Notes and Recommendations

- Unlike HDDs, SSDs, and other types of formatted external media, LTO volumes will not automatically appear in the Finder or in the ArGest® Backup software. Refer to the [ArGest Backup User's Guide](#) or other LTO software for detailed information on writing and reading LTO tapes.
- LTO drives do not run as quietly as optical drives, HDDs, or SSDs. As part of the normal process of mounting and unmounting tapes, and formatting and writing to tapes, you will hear different noises, some louder than others.
- When the computer goes into Sleep mode, the LTO drive and any SATA or SAS drive that is installed, will stay powered on as long as the power switch is in the ON position. For this reason, the Mercury LTO Pro may not be totally silent during Sleep.

Drivers for macOS, Windows, and Linux are available via the following links:

- macOS: <https://download.owc.com/lto/mac>
- Windows: <https://download.owc.com/lto/windows>
- Linux: <https://download.owc.com/lto/linux>
- ArGest Backup Information and downloads are available at: <https://www.argestsoftware.com/backup/>
- The various status lights, SCD, and SCD dot on the LTO Ultrium's front panel are an important part of using this drive. These may be displayed in combination to create different status conditions, display error notifications, and more. We strongly encourage you to review and bookmark the following links before using the drive, and to review them periodically.
- IBM Product Support TOC: [More information available at IBM's Support platform](#)
- Status Light / SCD codes: [More information available at IBM's Support platform](#)
- Using the Cleaning Cartridge: [More information available at IBM's Support platform](#)

## Notes and Recommendations – Data Protection

- Please do not power off the Mercury Pro LTO or disconnect the Thunderbolt 3 cable from the host during use. Doing so could make an LTFS volume very difficult if not impossible to mount and recover data from.
- If you need to disconnect from the host and/or power off the device, please use the Finder “Eject Volume” option if the tape is mounted on your Desktop, or press the eject button on the front of the tape drive via any of the available methods:
  - Note that the mechanical process of ejecting the tape can take 20-30 seconds.
- **IMPORTANT:** Do not hold down the Unload Cartridge button for more than 5 seconds unless directed to by an OWC Technical Support representative. This may cause an LTO drive to perform a factory reset.
- Once you’ve filled or written everything to a given LTO cartridge, it is a good idea after you rewind and eject the media, to flip the physical write protection switch on the cartridge to prevent any damage or changes to the media when using it to restore files.

## Notes and Recommendations – Performance

- Whenever possible use a source drive that is as fast or faster than the LTO drive to feed it data; this will help avoid the potential for pauses or restarts when writing data, that can happen when (for example) a slow drive enclosure is used as a source. Note that modern LTO drives typically operate at or just above 300 MB/s.
- By using the DisplayPort feature, the overall performance of the drive may decrease somewhat, as the DisplayPort shares bandwidth with the Thunderbolt 3 ports. The same is true if you connect a display to one of the available Thunderbolt 3 ports (this can be done with either a native Thunderbolt 3 display or with a Thunderbolt 3 display adapter).
- Thunderbolt 3 is backwards compatible with Thunderbolt 2 and Thunderbolt, but speeds can be impacted depending on where in the chain a device is connected. If mixing Thunderbolt 3 with Thunderbolt 2 and/or Thunderbolt devices, use the device order shown below, if possible.  
Computer > Thunderbolt 3 devices > Thunderbolt 2 devices > Thunderbolt devices

# LTO SOFTWARE

## 2.1 LTO DRIVERS AND SOFTWARE

Before your LTO unit is recognized by your system you will need to install ATTO Express SAS HBA Drivers and optional LTFS support and diagnostic tools

For instructions on downloading and installing these tools, please download the the Software Quick Start Guide for your operating system. These guides give you instructions on how to download and install the ATTO Express SAS HBA Drivers and LTFS support software.

- Mac: [go.owc.com/archivepro/macinstructions](http://go.owc.com/archivepro/macinstructions)
- Windows: [go.owc.com/archivepro/wininstructions](http://go.owc.com/archivepro/wininstructions)

To manage your LTO drive and backups you can use OWC ArGest Backup or other LTO backup software.



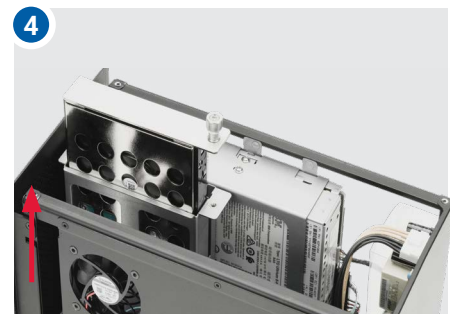


# INSTALLATION

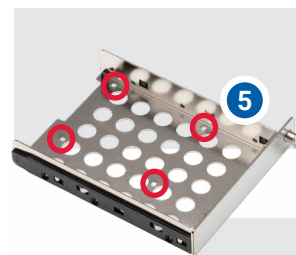
## 3.1 INSTALLING A SATA OR SAS DRIVE (OPTIONAL)

The OWC Mercury Pro LTO provides an internal storage bay for additional backup use or other purposes. The storage bay uses a standard ThunderBay drive tray, which accepts both 3.5-inch and 2.5-inch SATA or SAS drive form factors. Please follow the steps below to install a drive.

1. Turn the case over and set it on a work surface so that the bottom of the device faces up. Remove the four screws at the locations shown and set them aside.
2. Set the case upright on the work surface. Push the back of the case so the inner chassis slides out the front, as shown below, then pull the chassis the rest of the way out, setting the outer case aside.
3. Locate the drive tray (red arrow - below left) and loosen the thumbscrew (red circle) until there is no resistance.
4. Pull the drive tray up and out of its slot.



5. Set the drive tray on the work surface as shown. Note: the highlighted screw holes are for 2.5-inch drives. The holes for 3.5-inch drives are highlighted in green (Step 7)



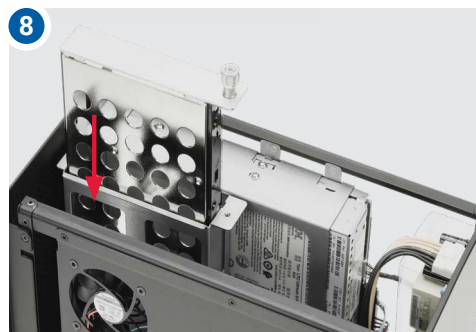
6. Place the drive inside the drive tray (a 3.5-inch SATA drive is shown here). The label should face up and the SATA connectors should match up with the cut-out on the back of the tray.



7. Fasten the drive into the drive tray using six of the included screws (three per side).



8. Align the drive tray with its slot and carefully lower the drive until its connector is fully seated. Minimal force is required. If you feel resistance remove the tray, re-align it and try again.

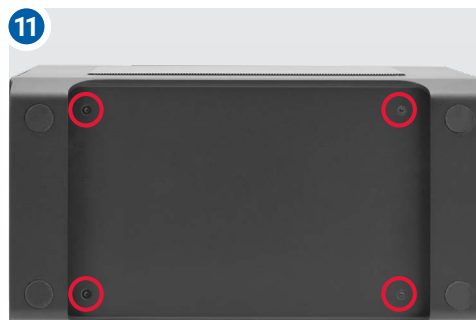


9. Press down on the thumbscrew you loosened in Step 3 and turn clock-wise it until you feel some resistance. Do not over-tighten the screw.

10. Pick up the inner-chassis, re-align it with the outer case, then carefully slide it back into place.



11. Turn over the enclosure and carefully set it on the work surface so that the case screw holes face up, then re-affix the four screws that you removed in Step 1.



**This concludes the SATA / SAS drive installation process.**

# SUPPORT RESOURCES

## 4.1 IBM SUPPORT RESOURCES FOR LTO DRIVE

The full range of device support information including items relating to general usage, status and error codes, managing LTO media, use of cleaning cartridges, and many others can be found here. If you're having trouble and are seeing multiple LED indicators on the front panel, please check these resources first before contacting support; in many cases the answer you need may be found there.

[More information available at IBM's Support platform](#)

## 4.2 TROUBLESHOOTING

If you're having trouble connecting your Mercury Pro LTO to the computer, first check that the power cable is connected to the back of the device and a working power source, and that the device will power on (does not need to be connected to the host – please switch the device on and check the Power LED on the front of the device to verify).

If the power is working but you're still having trouble, verify that the included Thunderbolt 3 cable is fully seated in the device and host ports. If that does not result in the device being recognized, you may want to try a different Thunderbolt 3 cable and/or connecting to a different computer with Thunderbolt 3 ports.

**IMPORTANT:** Remember that by design LTO volumes on a given tape will not automatically mount or appear in the Finder the way other external media do in macOS. LTO volumes have to be mounted and unmounted from the LTFS Controls in OWC ArGest Backup software or via steps provided by your Backup software.

If you're still having trouble making a basic connection between the host and device, please contact our customer support team for assistance.

## 4.3 CONTACTING TECHNICAL SUPPORT



Phone: M–F, 8am–6pm CT  
1.866.692.7100 (N. America) | +1.815.338.4751 (Int'l)



Chat: M–F, 8am–6pm, Sat 9am–5pm CT  
[www.owc.com/support](http://www.owc.com/support)



Email: Answered within 48 hours  
[www.owc.com/support](http://www.owc.com/support)



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## FCC STATEMENT:

Warning! Modifications not authorized by the manufacturer may void the user's authority to operate this device. NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference with radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.

## WARRANTY:

The Mercury Pro LTO has a [3 Year OWC Limited Warranty](#) if it was bundled with drives. Mercury Pro LTO enclosures that do not ship with drives have a [1 Year OWC Limited Warranty](#). For up-to-date product and warranty information, please visit the [product web page](#).

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