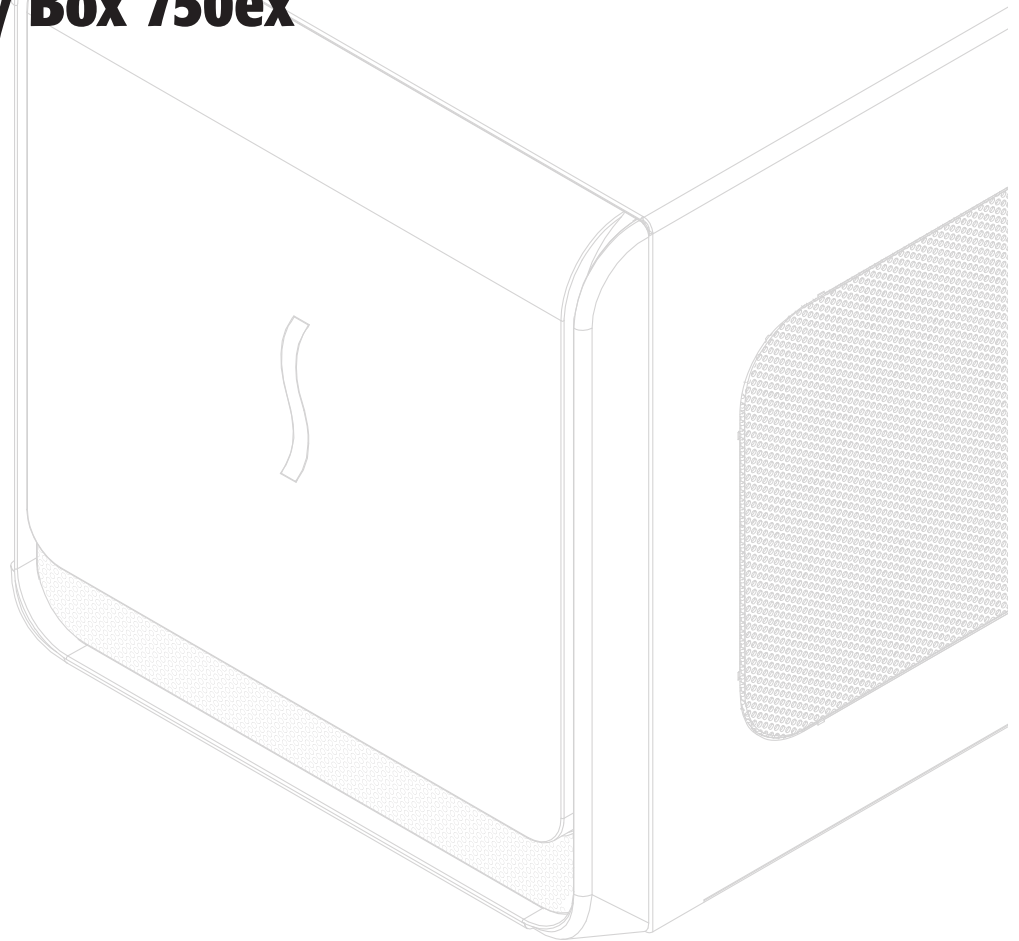


Quick Start Guide

for eGPU Breakaway™ Box 750 and
eGPU Breakaway Box 750ex

SONNET™



Support Note: This document was up to date at the time of printing. However, changes to hardware or software may have occurred since then. Please check the Sonnet website for the latest documentation.

1. Go to <https://www.sonnettech.com/support/kb/kb.php>
2. Navigate to and click the eGPU Breakaway Box 750 and 750ex link.
3. Click the Manual link.
4. Click the eGPU Breakaway Box 750 and 750ex Quick Start Guide [English] link and then check the Document Version information. If the version listed is later than this document (**revision B**), click the Download Now button for the latest version.

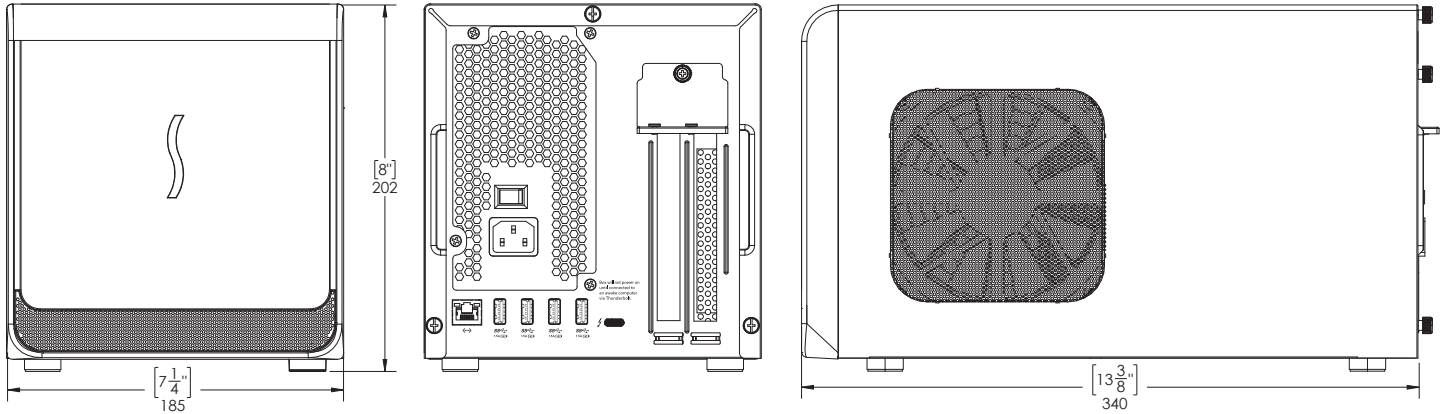
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Introduction



Introduction

Congratulations on your purchase! This quick start guide primarily covers PCIe card installation steps for the eGPU Breakaway Box 750 and the eGPU Breakaway Box 750ex. Basic eGPU use information for users with Mac® computers is also provided. Detailed eGPU information must be downloaded separately:

macOS External Graphics Guide

https://www.sonnettech.com/support/downloads/manuals/macOS_egpu_info.pdf

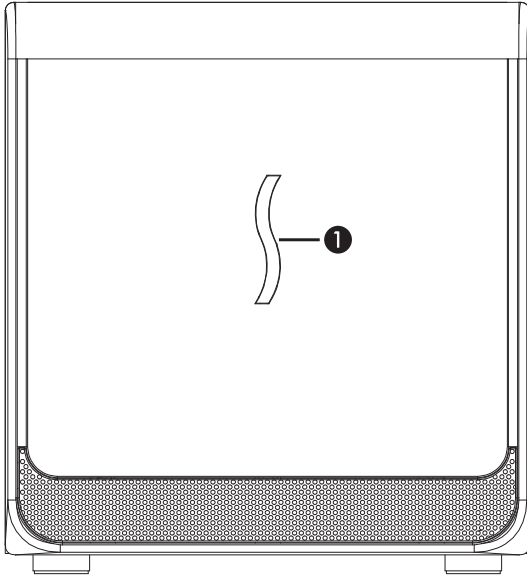
Windows External Graphics Guide

https://www.sonnettech.com/support/downloads/manuals/windows_egpu_info.pdf

Compatibility Information and System Requirements

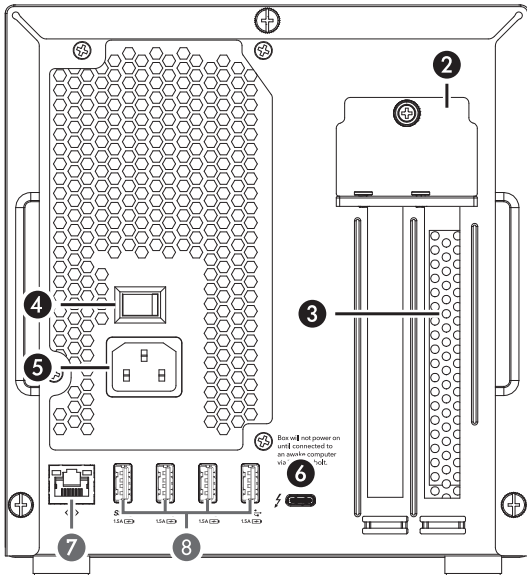
Visit the eGPU Breakaway Box product page at www.sonnettech.com for the latest information.

Description



1 – Power Indicator LED

This lights up when the eGPU Breakaway Box is connected to a power source and the power switch turned on, the Thunderbolt cable between the chassis and your computer is plugged in, and the computer powered on.



2 – PCIe Card Bracket Mounting Screws/Locking Plate

These secure the installed PCIe card in place.

3 – Port Access Cover

This covers the opening in the chassis when a single-width card is installed.

4 – Power Switch

5 – Power Input Socket

Connect the included AC power cable here.

6 – Thunderbolt Port

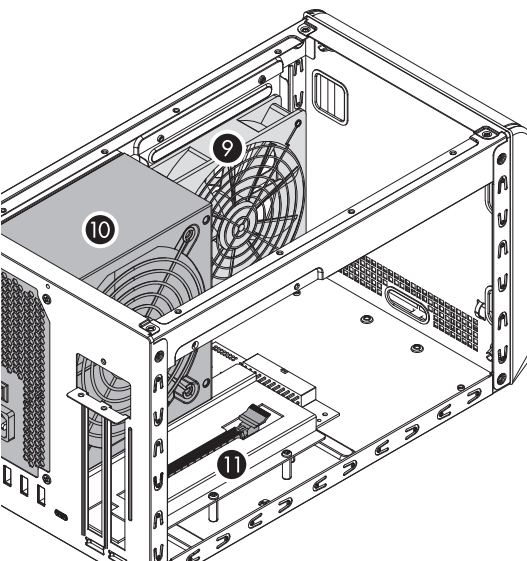
Connect the included Thunderbolt cable, or comparable Thunderbolt 3 (40Gbps) cable, between either port and your computer's Thunderbolt port.

7 – Gigabit Ethernet Port (only on 750ex model)

Plug in a Cat 5 or Cat 6 unshielded twisted pair (UTP) cable with RJ45 connectors. The left LED flashes yellow to indicate activity, while the right LED lights up orange to indicate a 1000BASE-T (Gigabit) link or green for a 100BASE-TX link, and remains off for 10BASE-T.

8 – USB-A Ports (only on 750ex model)

Connect USB devices to these ports.



9 – Main Fan

This provides cooling for the installed PCIe card and the chassis' supporting Thunderbolt circuitry. It operates at a whisper when the card is running cool, and automatically speeds up in steps as the temperature rises. Do not block the fans or the vent holes on the chassis to prevent overheating.

10 – Power Supply

The power supply has its own fan that operates independently from the main fan.

11 – PCIe Card Slot

Card Installation Steps

1. Remove the eGPU Breakaway Box from its packaging, and then set it on a flat, level surface.
2. Remove and set aside the three thumbscrews securing the top cover to the inner assembly (Figure 1).



Support Note: The product depicted in these illustrations is the eGPU Breakaway Box 750ex. The card installations steps for the eGPU Breakaway Box 750 are identical.

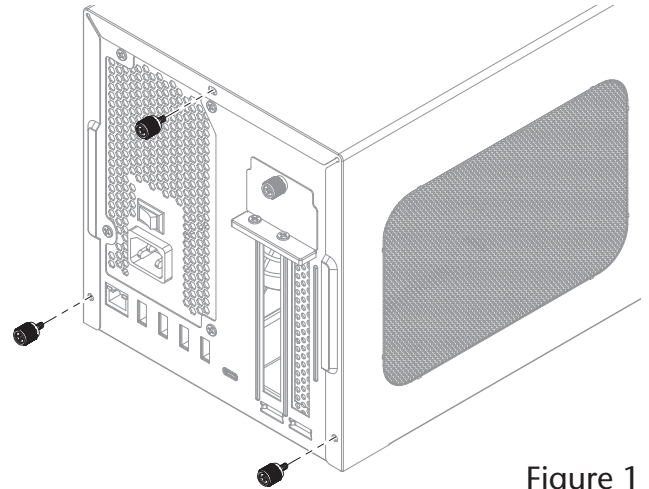


Figure 1

3. Slide the top cover toward you until it stops (Figure 2).
4. Remove and set aside the cover (Figure 2).

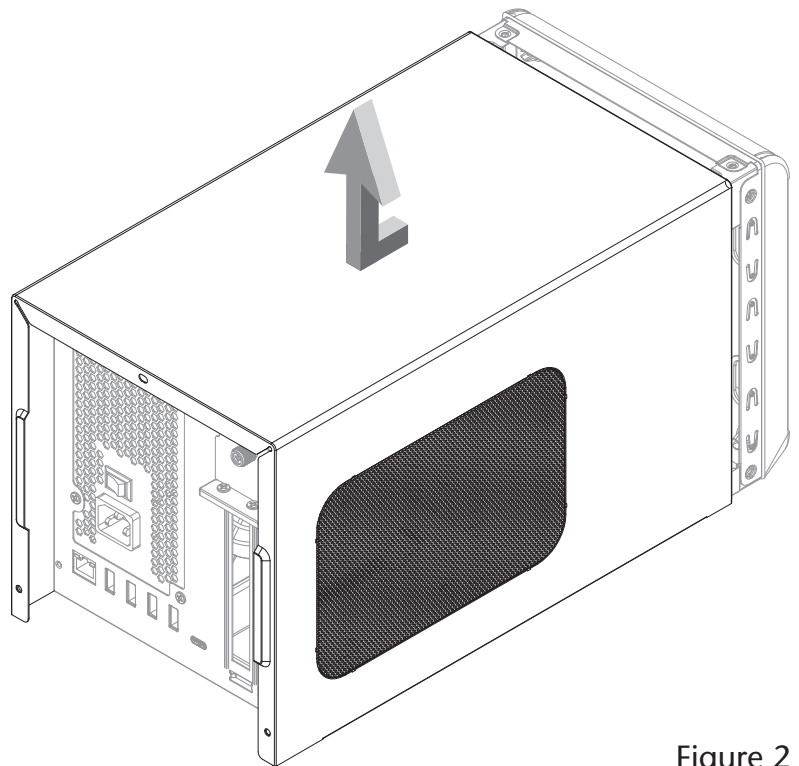


Figure 2

5. Remove and set aside the two screws securing the PCIe card bracket locking plate (Figure 3).
6. Remove and set aside the thumbscrew securing the PCIe card bracket locking plate, and then remove the plate and the port access cover (Figure 3).



Support Note: To avoid damaging components due to static electricity discharge, wear an antistatic wrist strap while working inside the eGPU Breakaway Box.

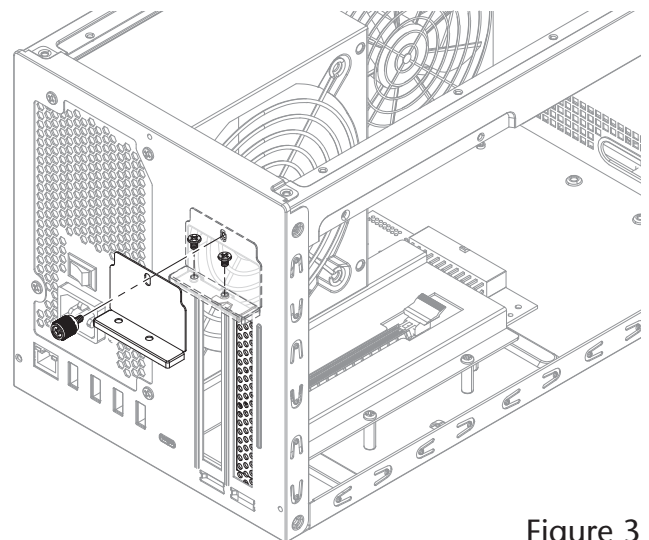


Figure 3

Card Installation Steps



WARNING: When handling computer products, take care to prevent components from being damaged by static electricity; avoid working in carpeted areas. Handle PCIe cards only by their edges and avoid touching connector traces and component pins. Also, avoid touching the chassis' circuit boards and any of its components.

7. Remove the GPU card from its packaging.
8. Insert the GPU card into the inner assembly through the top or side, depending on the size of your card (**Figure 4**). Please note that in some instances, it may be necessary to temporarily remove the main fan in order to insert the card into the inner assembly.

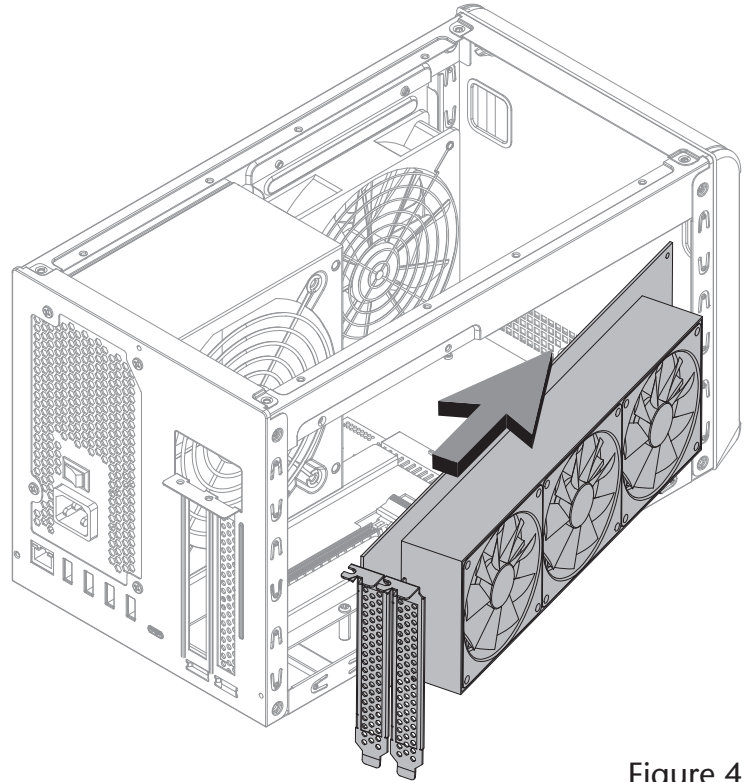


Figure 4

9. Line up the card's slot connector with the PCIe slot, and then gently but firmly press the card straight into the slot (**Figure 5**).
10. Connect the auxiliary power connectors to the card.

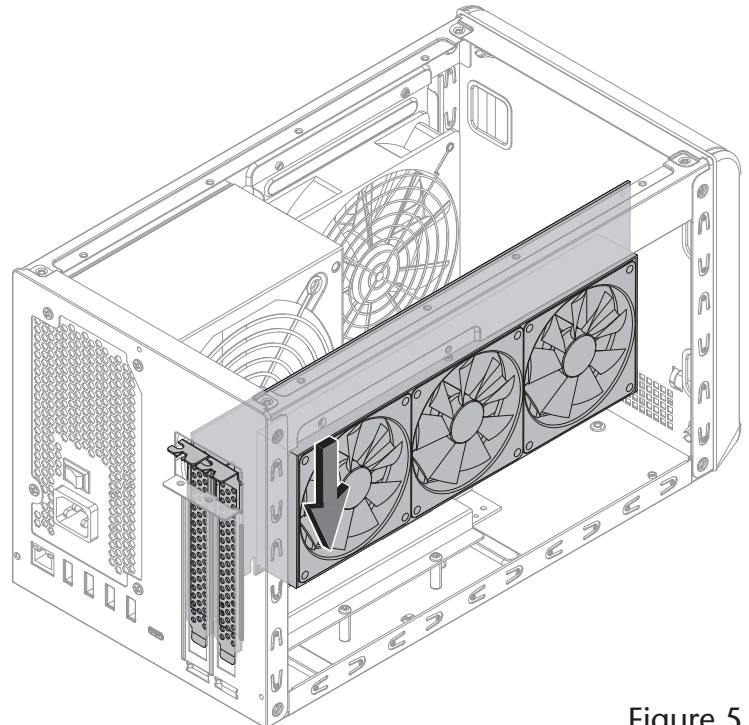


Figure 5

Card Installation Steps

11. Secure the card using the previously-removed PCIe card bracket locking plate, screws, and thumbscrew (Figure 6).

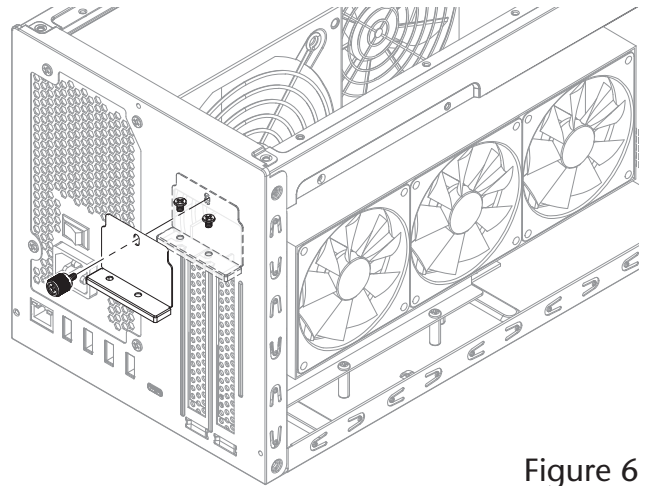


Figure 6

12. Lower the top cover over the inner assembly's top brackets as shown, and then slide the cover all the way forward until it stops (Figure 7).

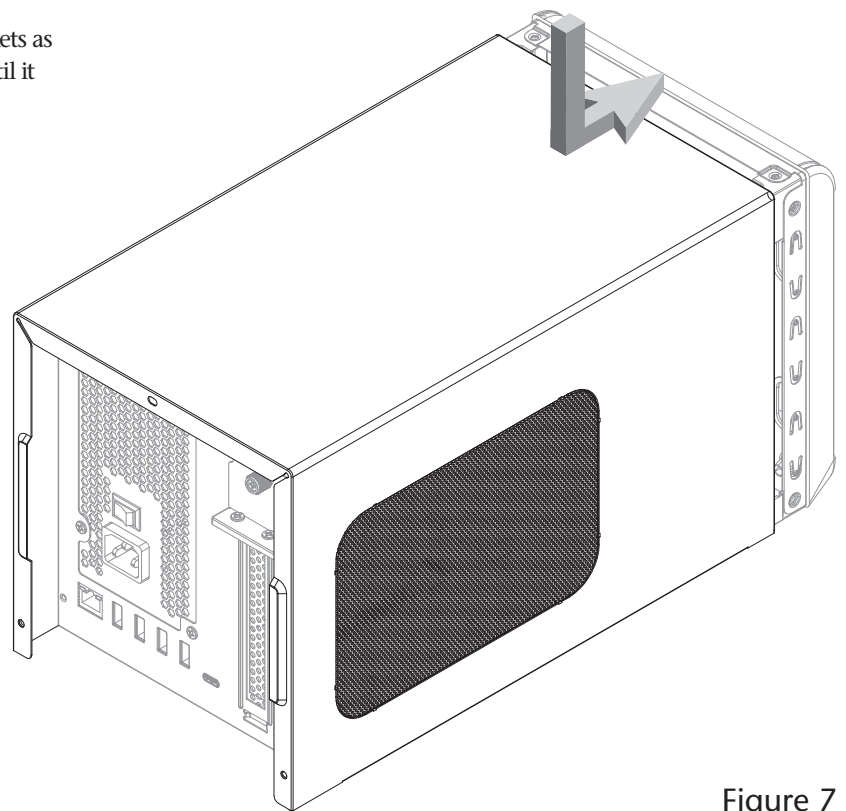


Figure 7

13. Secure the top cover to the inner assembly with the three thumbscrews you removed previously (Figure 8).
14. Connect the included Thunderbolt cable, or a comparable Thunderbolt 3 (40Gbps) cable, between the Thunderbolt 3 port on the Box and a Thunderbolt 3 port on your computer. Cables marked with the USB icon (🔌) are NOT compatible.
15. Connect the included power cord between a wall outlet or power strip and the Box's power socket. Flip the power switch to the on position. Note that the Box's power indicator will not light until the computer is turned on.

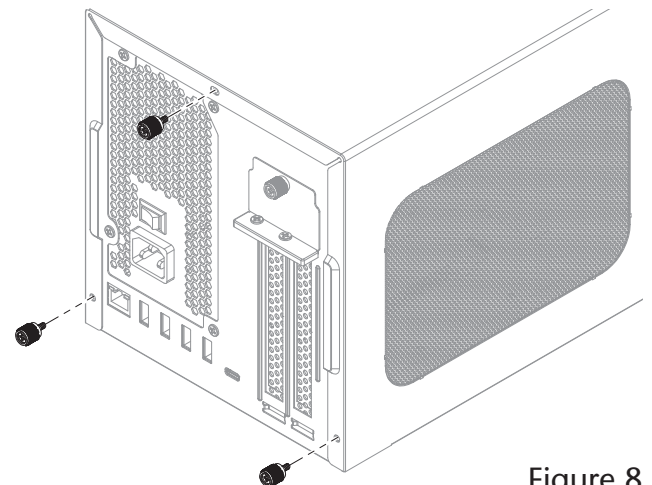



Figure 8

Basic Use Information

eGPU Support—macOS



Support Note: For more detailed information, please download Sonnet's macOS External Graphics Guide: https://www.sonnettech.com/support/downloads/manuals/macros_egpu_info.pdf

- If you're using a 13-inch MacBook Pro from 2016 or 2017, connect the eGPU Breakaway Box to one of the left-hand ports for maximum data throughput.
- The drivers that support the eGPU Breakaway Box are installed as part of macOS. As a result, the Breakaway Box is ready to use when connected to your computer.
- With the eGPU Breakaway Box connected to your Mac (and both turned on), the eGPU icon  will appear in the menu bar, indicating the Breakaway Box is recognized and ready for use.



Support Note: eGPU support in macOS High Sierra 10.13.6 and later is designed to accelerate Metal, OpenGL, and OpenCL applications that benefit from a powerful eGPU. *Not all apps support eGPU acceleration; check with the application's developer to learn more.*


- Starting with macOS Mojave (10.14), you can accelerate applications on a built-in display. We recommend using the latest macOS operating system for the best eGPU experience.
- Under macOS you can configure applications to use the Breakaway Box with one of the following methods:

Use the Prefer External GPU Option

Starting with macOS Mojave 10.14, you can turn on Prefer External GPU in specific applications' Get Info panels in the Finder. This option enables the Breakaway Box to accelerate apps on your computer's internal display (if equipped) or any display connected to the Mac. Note that you won't see this option when the Breakaway Box isn't connected or if the application self-manages its GPU selection. Some applications will ignore the Prefer External GPU checkbox and directly select which graphics processors are used.

Set a Breakaway Box-connected Display as the Primary Display

If you have an external display connected to your eGPU Breakaway Box, you can choose it as the primary display for all apps. Since applications default to the GPU associated with the primary display, this option works with a variety of applications. If you disconnect the Breakaway Box, your Mac defaults back to the internal graphics processor that drives the built-in display. When the Breakaway Box is reconnected, the external display will automatically be set as the primary display.

- Before unplugging the Breakaway Box from your computer, click the eGPU icon  in the menu bar, and then select Disconnect.

eGPU Support—macOS Users (continued)

- If you have a Mac mini with FileVault turned on, make sure to connect your primary display directly to Mac mini during startup. After you log in and see the macOS Desktop, you can unplug the display from Mac mini and connect it to your eGPU.

eGPU Support—Windows

- For the latest information and detailed instructions on setting up your Windows computer to support the eGPU Breakaway Box, please download Sonnet's Windows External Graphics Guide: https://www.sonnettech.com/support/downloads/manuals/windows_egpu_info.pdf

Gigabit Ethernet Port Configuration Information—750ex Only, All Users

With the eGPU Breakaway Box 750ex connected to your computer and network infrastructure, configure the eGPU's network settings.

Mac Users: Use System Preferences' Network preferences panel. The eGPU's Ethernet port will be identified as Thunderbolt Ethernet Slot *x*.

Windows Users: Use Windows Device Manager, Network Adapters category. The eGPU's Ethernet port will be identified as Intel i210AT Gigabit Network Connection.

General Information and Known Issues

Keeping the Installed Card Cool

With its optimized airflow design and temperature-controlled main fan providing cooling at all times, the eGPU Breakaway Box provides adequate cooling for the installed card. *Do not block any of the vents!* Otherwise, the card and Breakaway Box's components may overheat.

Power Indicator LED Operation

The Breakaway Box power indicator LED only turns on when the computer to which the Box is connected is on, and turns off when the computer is sleeping or powered off.

Not All Supported Graphics Cards Work Under Every OS

In general, macOS supports only AMD-based GPUs, while Windows supports both AMD- and NVIDIA-based GPUs. Please note that some compatible graphics cards may require a later operating system version than the one installed on your computer.

Not All Computers' Thunderbolt 3 Performance is Equal

While the eGPU Breakaway box features a 40Gbps Thunderbolt 3 interface, some computers equipped with Thunderbolt 3 use an x2 PCIe (2-lane) implementation of Thunderbolt 3 technology in some or all of their ports that limits PCIe performance to 20Gbps. For more information, check your computer's user's guide or computer manufacturer's web site.

GPU Card Power Requirements

Visit the eGPU Breakaway Box 750 or 750ex product page on the Sonnet site at sonnettech.com for a list of supported GPU cards and their power requirements.

Replacing a Card After Initial Installation

If you decide to swap the card after the initial setup, shut down the computer, and then disconnect the power cord and Thunderbolt cable from the Breakaway Box before replacing the card.

PCIe CARDS ARE NOT HOT-PLUGGABLE!

Never install a PCIe card into Breakaway Box while it is connected to a computer or power outlet! If you do, you risk injury, and damage to the card, chassis, and computer.

eGPU Breakaway Boxes Provide Upstream Power

eGPU Breakaway Box 750 and 750ex are designed to provide upstream power (power delivery), useful for charging compatible notebook and laptop computers. Check the Sonnet website for details on the power delivery rating.

Using the eGPU Breakaway Box to Charge Your Notebook or Laptop Computer

MacBook Air and MacBook Pro computers with Thunderbolt 3 ports, and many Windows laptops with Thunderbolt 3 may be charged via the eGPU Breakaway Box's Thunderbolt 3 port, but some PC laptops will not accept charging from a Thunderbolt peripheral; check with your computer's manufacturer for more information.

How to Identify Thunderbolt 3 (40Gbps) Cables

Look for the Thunderbolt icon (⚡) AND the number 3 on the connector housings to identify these cables. Except for 0.8-meter Apple Thunderbolt 3 cables, cables with USB-C connectors that only have the Thunderbolt icon without the number 3 support 20Gbps speeds, and are not recommended for GPU or other PCIe cards with high bandwidth requirements.

Not All Thunderbolt 3 Cables Deliver Full Performance or Power Delivery Capabilities

Full performance and power delivery capabilities from the eGPU Breakaway Box require the use of the included Thunderbolt 3 (40Gbps) cable (which also supports up to 100W power delivery), or a comparable Thunderbolt 3 (40Gbps) cable. When shopping for a Thunderbolt 3 cable, please be aware that some cables support only lower data transfer speeds (20Gbps) and/or power delivery capabilities (60W).

Operating System (OS) Updates May Break Compatibility

Specific device drivers that work under one OS version may not work under a later version. Before updating your computer to the latest OS, we recommend that you contact Sonnet or your PCIe card's manufacturer to verify that the existing drivers work. Note that other software updates for the computer may also break compatibility.

Boot Camp Support Under macOS

Neither Apple, nor Sonnet, nor NVIDIA, nor AMD currently supports eGPUs with Boot Camp.

macOS eGPU Usage Limitations

eGPUs are not supported under macOS when your Mac is in macOS Recovery, or when installing system updates.

Need More Information?

Please visit www.sonnettech.com/support/kb/kb.php, navigate to and then click on the eGPU Breakaway Box link for important information, useful tips, and answers to frequently asked questions.

Additional Information

SAFETY PRECAUTIONS

Please read this section carefully before proceeding. These precautions explain the correct and safe use of this device, thereby helping to prevent injury to you or others, and also help you to minimize the risk of damaging the device.

Warnings

Always follow the basic warnings listed here to avoid the risk of serious injury or death from electrical shock, short-circuiting, fire, and other hazards. These warnings include, but are not limited to:

- Should you need to ship the eGPU Breakaway Box, Sonnet recommends that you remove the installed card and ship it separately. Because GPU card lengths vary, the Breakaway Box could not offer support for the back end of cards. Some cards have stiffeners, but many do not, and are at risk when shipped inside the Box.
- Do not attempt to modify the enclosure. If this device appears to be malfunctioning, contact your reseller or local distributor.
- Do not drop the chassis; dropping or mishandling chassis may result in a malfunction leaving the product inoperable.
- Do not insert your fingers or foreign objects inside the slot(s).
- Do not expose the device to rain, use it near water or containers that contain liquids which might spill into any openings, or in damp or wet conditions.
- If unusual smells, sounds, or smoke come from the device, or if liquids enter it, unplug it from the electrical outlet immediately.
- Follow the instructions in this manual carefully; contact your reseller or local distributor for additional advice not covered in this User's Guide.

FCC Compliance

eGPU Breakaway Box 750 and eGPU Breakaway Box 750ex comply with Part 15 of the FCC Rules. Operation is subject to the following two conditions: This device may not cause harmful interference, AND this device must accept any interference received, including interference that may cause undesired operation.

Contacting Customer Service

The Sonnet Web site located at <https://www.sonnettech.com/> has the most current support information and technical updates. Before you call Customer Service, please check our Web site for the latest updates and online support files, and check this User's Guide for helpful information.

Email support requests generally receive the fastest responses, and are usually processed within a 24-hour period during normal business hours, excluding holidays. When you contact Customer Service, have the following information available so the customer service staff can better assist you:

- Product name
- Computer model
- GPU or other PCIe card model
- Operating system version you're using
- Software/firmware versions
- A System Report (macOS) or a Microsoft System Information MSINFO32 (Windows) report (Windows), along with a description of the issue(s) you are encountering with your device

If further assistance is needed, please contact **Sonnet Customer Service** at:

E-mail: support@sonnettech.com

Tel: 1-949-472-2772

(Monday–Friday, 9 a.m.–5 p.m. Pacific Time, excluding holidays)

Japan Customers

Contact Sonnet Customer Service Japan at:

E-mail: jp.support@sonnettech.com



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