

FreeNAS® Mini and Mini XL Network Upgrade Kit

June 2017 Edition



For more information about the FreeNAS Mini product line and a digital download of this guide, visit www.ixsystems.com/freenas-mini/

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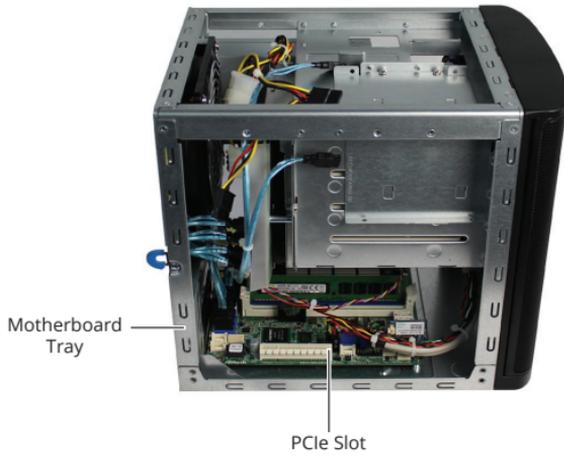
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THANK YOU FOR PURCHASING THIS UPGRADE KIT FOR YOUR FREENAS MINI OR MINI XL!

The kit includes either one Chelsio 10Gb Network Interface Card with dual SFP+ ports or one Intel® 10Gb dual port network card with RJ45 connectors.

SFP+ modules can be ordered separately or may be included with this kit. Note that the Intel network card does not support SFP+ modules.

PARTS LOCATION



FREENAS MINI



FREENAS MINI XL

PREPARATION

A Philips screwdriver is needed for external and internal screws. Shut down the FreeNAS system and unplug the power cable. Make a note of where the data cables are connected and unplug them. If a "Tamper Resistant" sticker is present, removing or cutting it to remove the case will not affect the warranty on the unit.

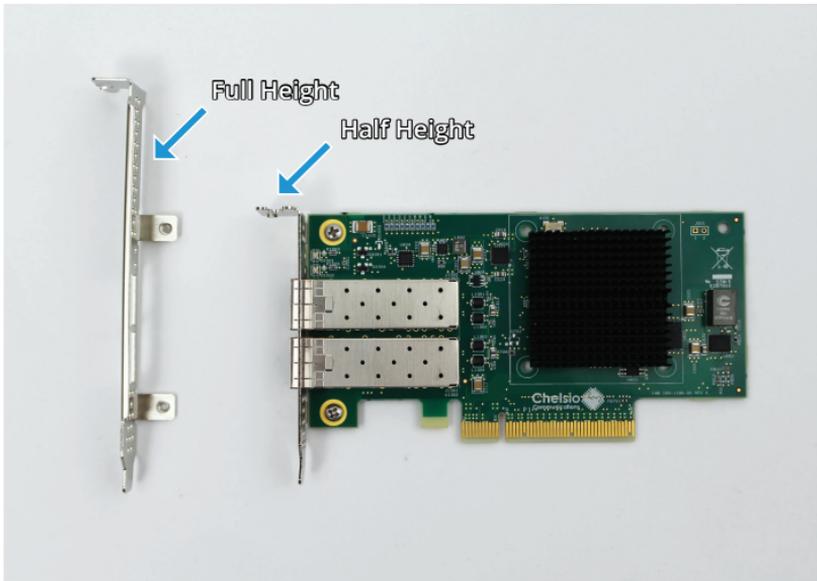
NETWORK CARD BRACKETS

The FreeNAS Mini uses a short, half height bracket and the Mini XL uses a tall, full height bracket.

If the bracket already mounted on the card is not the correct height, remove the two bracket screws from the card, replace the bracket, then replace the screws.

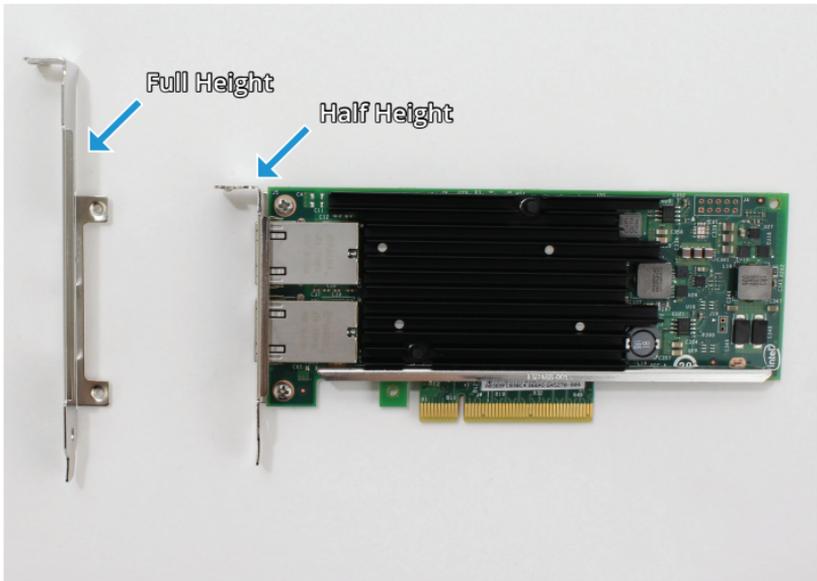
CHELSIO DUAL PORT 10GB MEMORY FREE ETHERNET ADAPTER SFP+

The Chelsio 10Gb network card connects the Mini or Mini XL directly to a fiber optic network via the PCIe slot on the motherboard. This card supports SFP+ modules, which may not be included in the upgrade kit.



INTEL® DUAL PORT 10GB CONVERGED NETWORK ADAPTER WITH RJ45 CONNECTORS

The Intel 10Gb Adapter uses standard Cat 6 cabling with two RJ45 copper connectors to connect the Mini or Mini XL to the network via the PCIe slot. This card does not support SFP+ modules.



SFP+ MODULE INSTALLATION

The Chelsio network card is compatible with SFP+ modules. Align the SFP+ module with the SFP+ cage and gently push until it slides into place. Different types of SFP+ modules are available, and connecting them to the network depends on the type.

Note: The Intel network card does not support SFP+ modules.



The SFP+ module has a rubber dust cover. Keep the cover in place until ready to connect a fiber optic cable. To remove the dust cover, lift the handle until it is fully open and pull the dust cover off.



FREENAS MINI NETWORK CARD INSTALLATION

PART I: REMOVING CABLES AND COMPONENTS

Some cables and components must be disconnected or removed before the network card can be installed.

OPENING THE FREENAS MINI CASE

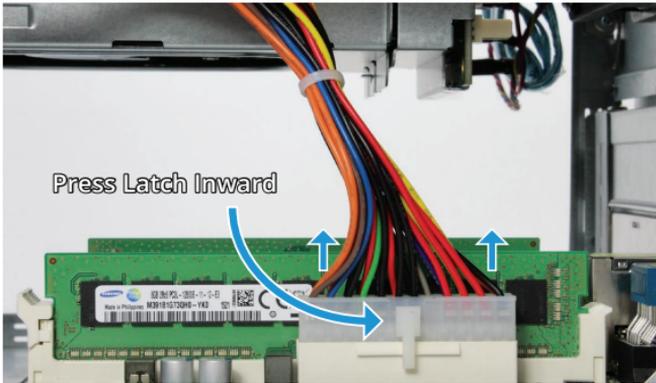
Unscrew the four thumbscrews on the rear of the Mini:



Slide the black metal cover off the back of the chassis.

POWER SUPPLY CONNECTOR REMOVAL

The power supply is connected to the motherboard with a 24-pin connector.



Press in on the upper part of the latch and pull the connector upward to disconnect the power supply cable.

Note: Force may be needed as the connector is tight. It helps to hold the motherboard tray in place while pulling upward on the connector.

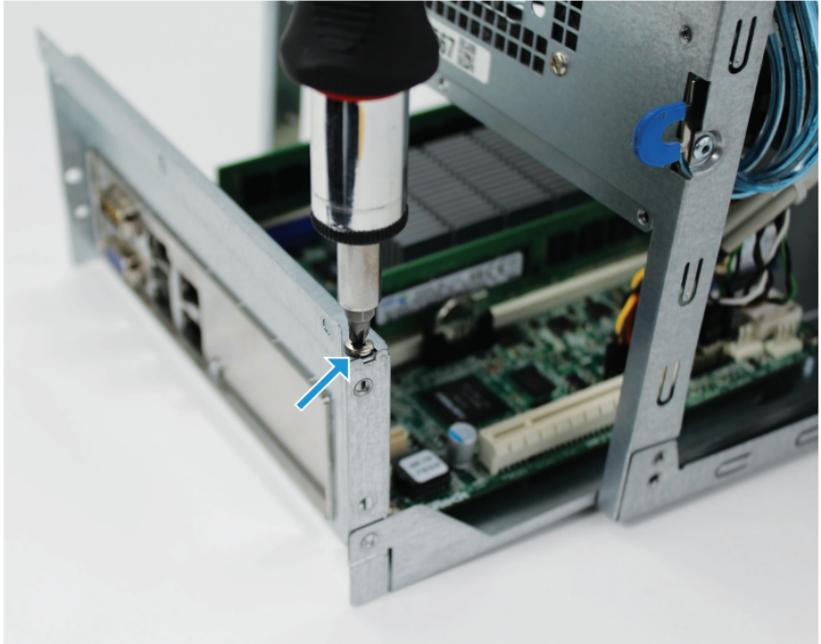
MOTHERBOARD TRAY REMOVAL

Remove the three motherboard tray back panel screws and the two inside edge screws.



SLOT COVER REMOVAL

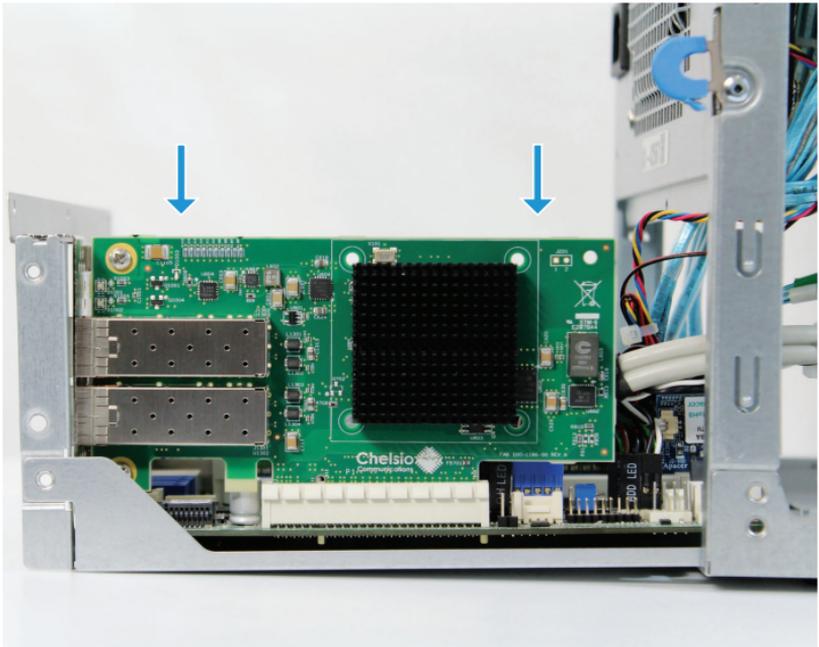
Gently lift and slide the motherboard tray out of the chassis. Remove the slot cover screw and slot cover from the back panel. Save the screw.



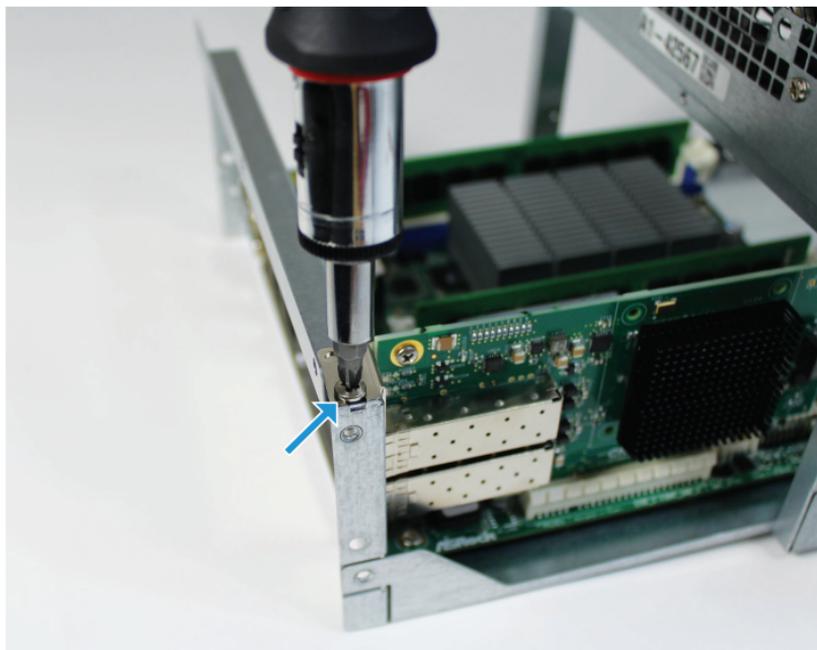
PART 2: INSTALLATION OF CABLES AND COMPONENTS

NETWORK CARD INSTALLATION

Slide the motherboard tray out of the chassis until there is enough room for the network card to fit into the PCIe slot. Align the network card with the PCIe slot and press down on the center of the card firmly until it is fully seated.



Use the slot cover screw removed earlier to attach the new network card to the back panel.



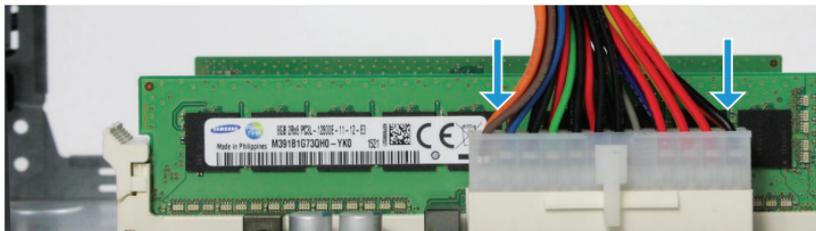
MOTHERBOARD TRAY INSTALLATION

Slide the motherboard tray gently back into place. Replace the three motherboard tray back panel screws and the two inside edge screws.



POWER SUPPLY CONNECTION

Reconnect the motherboard power supply connector. Press down firmly with both hands until fully seated and latch is closed.



CLOSING THE FREENAS MINI CASE

Replacing the case is the opposite of removal. Slide the case back on, being careful not to pinch any cables. Replace the four thumbscrews in the back.

FREENAS MINI XL NETWORK CARD INSTALLATION

PART I: REMOVING COMPONENTS

OPENING THE FREENAS MINI XL CASE

The right side panel must be removed. Unscrew the two thumbscrews on the back of the right panel, then slide the panel back and remove it.



MOTHERBOARD TRAY REMOVAL

Remove the three motherboard tray back panel screws and the two inside edge screws.



SLOT COVER REMOVAL

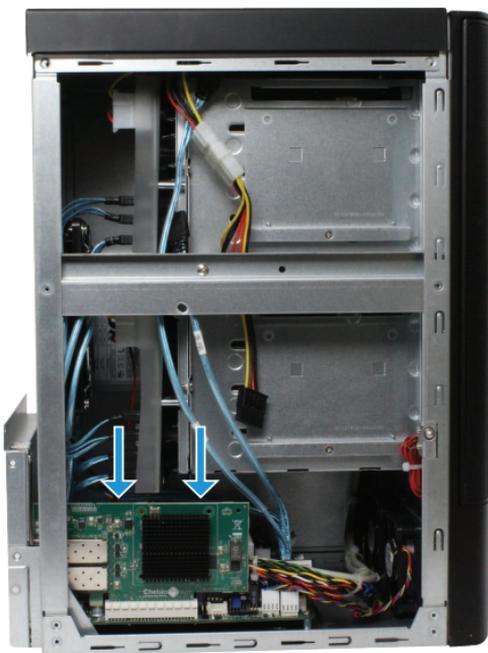
Slide motherboard tray out an inch to remove the slot cover screw and slot cover. Save the screw.



PART II: INSTALLING COMPONENTS

NETWORK INTERFACE CARD INSTALLATION

Place the network card into the Mini XL from the side. Position the bracket over the back panel and the card over the PCIe slot. Press down on the ends of the card firmly until it is fully seated.



Use the slot cover screw removed earlier to attach the new network card to the back panel.



MOTHERBOARD TRAY INSTALLATION

Slide the motherboard tray gently back into place. Replace the three motherboard tray back panel screws and the two inside edge screws.



CLOSING THE FREENAS MINI XL CASE

The removed side panel has metal tabs on the inside that hook onto the chassis. Align the metal tabs with the chassis and guide the panel towards the front of the system until it slides into place.

Placing the Mini XL on its side with a towel underneath makes it easier to engage the metal tabs on the sides. Do not force the panel into place as this may bend the metal tabs. If the cover does not slide on easily, remove it and try again.

Replace the two thumbscrews to hold the panel in place.

CONCLUSION

Reconnect the external cables and power on the FreeNAS system. The network card upgrade is now complete.

ADDITIONAL RESOURCES

The FreeNAS Mini and Mini XL support many features and configurations not mentioned in this Network Card Upgrade Guide.

For help upgrading hardware, refer to the FreeNAS Mini and Mini XL Hardware Upgrade Guide: https://www.ixsystems.com/FreeNAS_Mini_HW_Upgrade.pdf.

For help replacing the Mini and Mini XL Motherboard, refer to the FreeNAS Mini Motherboard Replacement Guide: http://ixsystems.com/FreeNAS_Mini_Motherboard_Replacement.pdf.

For complete documentation: <http://doc.freenas.org>.

The FreeNAS Forums provide an opportunity to interact with other FreeNAS users and to discuss their configurations. Visit the forums: <http://forums.freenas.org>.



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