

# FreeNAS® Mini, Mini Plus - Storage Appliance

A powerful solution for the Small Office/Home Office environment, the FreeNAS® Mini and FreeNAS® Mini Plus offer enterprise features in an affordable package. From full RAID options to Remote Replication to ZFS Drive Encryption, the Mini and Mini Plus offer a **complete solution for the Home or Office.**

## THE FREENAS APPLIANCE

**FreeNAS is a community-based, Open Source embedded appliance system based on FreeBSD and designed for Network Attached Storage.** As the corporate sponsor of the FreeNAS project, iXsystems is proud to offer an affordable, qualified SOHO storage solution running FreeNAS.

**FreeNAS offers a fully featured, web-based user interface for quick and easy management from any web-enabled device.** With it, you can manage user groups and accounts, shares, and permissions, back up and restore system settings, monitor system resources and events, and update your firmware. FreeNAS also offers a custom command line Interface (CLI) for users accustomed to that environment. Just enable SSH and log in to manage your system. FreeNAS works with all the different Operating Systems on your network. It supports Windows® XP, Vista, 7 and 8, Windows® server 2003/2008/2012, Apple® OSX, Linux and Unix-like operating systems as well as most popular file-based sharing protocols.

## DATA INTEGRITY WITH ZFS

**The Zettabyte File System (ZFS) is designed for maximum data integrity and solves several problems that are prevalent in other filesystems.** It does this by utilizing a tree formation among data blocks, where the parent block stores a checksum of each of its branch data blocks, making the entire data pool self-validating. Unlike other filesystems, ZFS recognizes where the error lies when the data does not match up with the checksum.

## POWERFUL, HIGHLY-EFFICIENT HARDWARE

**The FreeNAS Mini and FreeNAS Mini Plus come equipped with a highly efficient dual-core Intel® Processor, which tops out at a mere 35W and idles under 10W.** The Mini Plus boasts 16GB of DDR3 RAM, and the Mini supports 8GB. Both come in 4TB, 8TB, 12TB, and drive-less configurations – the chassis comes with four tool-less drive bays for easy drive swaps, with the OS installed on an internal mini flash drive.

**The Mini and Mini Plus come standard with 1 x 1GBe network interface, 1 eSATA port, 4 USB 3.0 ports and 4 USB 2.0 ports.** All of this runs on a 200W high-efficiency power supply, reducing your energy costs and footprint.

## RAID-Z OPTIONS

**FreeNAS offers a full range of disk management options, with updates on traditional RAID levels.** RAID-Z offers up to triple parity protection, replacing and surpassing RAID 5 and RAID 6 configurations. The main differences between these is that RAID-Z configurations use dynamic stripe width, and ZFS is a copy on write filesystem. This means that every write to RAID-Z is a full stripe write, and allows RAID-Z to avoid the RAID 5 write hole.

**This feature helps protect your data in situations that RAID 5 does not, such as in a system crash or during an unexpected power loss.** It also eliminates the need for RAID hardware and NVRAM, which are both expensive and slow workarounds. Also, due to the nature of ZFS, your system will recognize corrupt data whereas a standard RAID solution may not. This gives the ZFS user an unparalleled degree of data integrity at a lower cost.



## FULL DISK ENCRYPTION WITH THE FREENAS MINI PLUS

**Encryption adds a level of security against data theft.** It prevents valuable intellectual property, customer data and trade secrets from falling into the wrong hands and avoids the costs associated with such a breach. The FreeNAS Mini Plus comes equipped with a powerful Intel® Core™ i5 processor with AES-NI to take advantage of FreeNAS's full disk encryption feature without significant performance loss.

## WARRANTY AND SUPPORT

**The FreeNAS Mini and FreeNAS Mini Plus come with 1 year of Hardware Support standard, with options for 2 and 3 year extended terms.** Also, for a reasonable cost, you can receive a year's worth of FreeNAS Problem Resolution Support from the iXsystems Professional Services Team. Support comes in an 8x5 service model with unlimited incidents and a 4 hour first response within business hours.



## HARDWARE SPECIFICATIONS

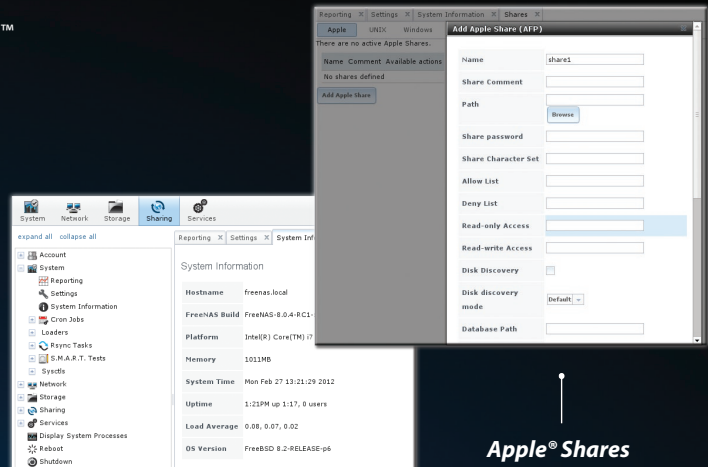
### FreeNAS® Mini

- Low-power dual-core Intel® Core™ i3 Processor
- 8GB of DDR3 memory in a 2 x 4GB layout
- Four tool-less drive bays - up to 12TB of data storage capacity
- 1 x 1GbE Network interface (Onboard) - Optional second 1GbE port available
- Single 200W High-Efficiency power supply
- 4TB, 8TB, 12TB and driveless models available
- Dimensions: 8.5"W x 12.5"D x 8.0"H

### FreeNAS Mini Plus

- Low-power dual-core Intel® Core™ i5 Processor with AES-NI
- 16GB of DDR3 memory in a 2 x 8GB layout

FreeNAS® GUI



Apple® Shares

## SOFTWARE SPECIFICATIONS

### SUPPORTED

#### OPERATING SYSTEMS

- Microsoft® Windows® XP, Vista (32/64bit)
- Microsoft® Windows® 7 (32/64bit)
- Microsoft® Windows® 8 (32/64-bit)
- Windows® Server 2003/2008 R2/2012
- Apple® OSX
- Linux
- Unix-like operating systems

#### SECURITY

- Encrypted Access: HTTPS
- FTP with SSL/TLS (Explicit)
- SSH/SFTP (Admin only)
- CIFS Host Access Control
- Instant Alert via E-mail, SMS & IM
- GELI Disk encryption for ZFS

#### NETWORKING

- Link Aggregation (Failover, Round-Robin, LACP, or Load Balance)
- Static Routes
- Virtual LAN

#### FILE & BLOCK PROTOCOLS

- NFS v3
- SMB/CIFS
- AFP
- SCP/SFTP
- iSCSI

#### DISK MANAGEMENT

- ZFS stripe, mirror, and RAID Z (1, 2, 3)
- Bad Block Scan + HDD S.M.A.R.T.
- Disk Replace Interface
- Automatic bit rot scrub

#### ACCESS MANAGEMENT

- User Accounts Management
- Groups Management
- Network Shares Management
- Quota Management
- Subdirectory Permissions Support

#### WEB ADMINISTRATION

- HTTP/HTTPS Connection
- Syslog Client
- Backup & Restore System Settings
- Restore to Factory Default
- Resource Monitor
- Log & Event Collection
- Firmware Updates

#### FREENAS PLUGINS

- PBI Push Button Installer
- Jail Sandbox for plugins
- Linux and BSD Jails
- DLNA Server
- Firefly Media Server
- Transmission
- DAAP iTunes Support

#### FILESYSTEM

- ZFS v28
- UFS

#### BACKUP & RESTORE

- Snapshots
- Remote Replication
- Rsync via SSH

#### FTP SERVER

- FTP over SSL/TLS (Explicit)
- Concurrent Connections: Max 256
- Passive FTP Port Range Control
- FTP Bandwidth Connection Control

#### POWER MANAGEMENT

- Wake on LAN
- Scheduled Power on/off

