



## Data Sheet

# TrueNAS R60

## High Density NVMe Storage



## Features

### Extreme Performance

Utilizes NVMe flash technology, ZFS, and optional dual 400 Gb/s network ports for lightning-fast data movement.

### Advanced Data Protection

Self-healing ZFS detects and repairs in-flight data corruption, prevents bit rot, and safeguards data integrity at all times.

### Intelligent Storage Efficiency

Offers built-in compression, snapshots, clones, and thin provisioning. TrueNAS Adaptive Compression (TAC) optimizes performance while maximizing capacity without wasting system resources.

### Built-In Snapshots & Replication

Includes configurable retention, restoration, and replication without extra licensing fees, protecting data from ransomware, accidental deletion, and ensuring efficient disaster recovery.

## Benefits

### Unmatched Reliability

Enterprise-grade hardware and redundancy features minimize downtime, making it ideal for mission-critical workloads.

### Cost-Effective Scalability

Delivers enterprise-level storage optimization, including snapshots and replication, without additional licensing fees.

### Flexible Backup & Disaster Recovery

Data can be securely replicated across local, remote, or cloud environments for seamless business continuity.

The TrueNAS R60 is engineered for the AI and cyber era, delivering a high-density NVMe storage appliance ready for organizations demanding maximum performance with minimal rack space. Designed for environments where density and performance go hand-in-hand, the R60 serves up powerful, flexible storage while consuming only a single rack unit. From AI to HPC, development artifacts to massive code repositories, the R60 delivers the power and flexibility needed for modern IT environments.

With an ultra-dense 1U form factor and available multiple 400GbE interfaces, the TrueNAS R60 delivers never-before-seen levels of throughput across a variety of access protocols, while building on the familiar and intuitive web-based interface of TrueNAS. With proven reliability and award winning support, the TrueNAS R60 is an ideal solution for organizations that require extreme performance without compromising ease of use.

Both the TrueNAS R60-S and R60-P models deliver PCIe 5.0 powered storage, supporting NVMe over Fabrics (NVMe-oF) technology to minimize latency and maximize throughput. With up to 720 TB of NVMe storage in 1U, and up to 40GB/s of throughput, it doesn't matter if you're connecting demanding CI/CD pipelines, AI artifact servers, or dozens of backup sources; the TrueNAS R60 makes short work of it all, without compromise. The included Intelligent Storage Optimization further enhances efficiency with typical data reduction ratios exceeding 2.5x, letting you extract maximum value from your investment.

## R60 Platform Specs

### Available Storage Media

- Enterprise-Class NVMe Gen4/Gen5 SSDs:
  - Capacities from 7.6 TB to 122 TB
  - SED, FIPS 140-3 options
- Expandable with capacity SAS/SATA HDDs:
  - Capacities from 18 TB to 26 TB
  - SED, FIPS 140-3 options

### Power Management

- Dual redundant, hot-swappable, high-efficiency (80+ Titanium) power supplies
- AC input 100-127V~/12A, 200-240V~/8A, 47-63Hz
- IPMI Remote power on/off

### Disk Management

- Global hot spares
- Hot-swappable drives
- Corrupted block scan
- Drive activity/alert LEDs
- Local and remote (KMIP) key management
- Enclosure monitoring and alerts

### Physical Parameters

- 1U: 12x 2.5" NVMe SSD drive bays (front-loading, hot swap)
- Dimensions (l x w x h):
  - 27" x 19" x 1.75" | 710 x 438 x 43.5 mm
- Rackmount Rails: 27" - 37"
- Operating temperature: 10°C to 35°C
- Non-operating temperature: -40°C to 60°C
- Humidity: 20% to 95% non-condensing
- Compliance: RoHS, CE, FCC, UK CA, ErP Lot 9, ANSI C63.4-2014

## TrueNAS R60 Models

	TrueNAS R60-S	TrueNAS R60-P
All-Flash Storage	Yes	Yes
Processor	16 Cores (32 Threads)	32 Cores (64 Threads)
Controller Memory	192 GB DDR5 at 6400 MT/s	384 GB DDR5 at 6400 MT/s
RAM (Max)	64 - 128 GB	256 GB
Write Cache	Distributed Write Log	
Networking	1x or 2x 400GbE 2x or 4x 200/100/25GbE	1x or 2x 400GbE 2x or 4x 200/100/25GbE
Management IO	1x IPMI Out-of-Band Management Port, 1x WebUI Port	
Max All-Flash Capacity	736 TB	3.6 PB
Max Capacity	7 PB	7 PB
Max NVMe Expansion Shelves	0	2
Max SAS Expansion Shelves	4	
Typical Power Draw (HA)	350 Watts	600 Watts

## TrueNAS Enterprise Specifications

File-Based Protocols	Block-Based Protocols	Object Protocols	Directory Services	
<ul style="list-style-type: none"> <li>• SMB v1/2/3</li> <li>• NFSv3, v4</li> <li>• AFP, FTP, WebDAV</li> </ul>	<ul style="list-style-type: none"> <li>• iSCSI</li> <li>• NVMe-oF (TCP, RDMA/RoCE)</li> </ul>	<ul style="list-style-type: none"> <li>• S3-compliant using MinIO</li> </ul>	<ul style="list-style-type: none"> <li>• Active Directory (AD)</li> <li>• FreeIPA</li> </ul>	<ul style="list-style-type: none"> <li>• Kerberos</li> <li>• LDAP, NIS</li> </ul>
Networking	Virtualization	File System	High Availability	Data Mobility
<ul style="list-style-type: none"> <li>• Port Trunking/NIC Teaming</li> <li>• IEEE 802.3ad link aggregation</li> <li>• IEEE 802.1q VLAN support</li> </ul>	<ul style="list-style-type: none"> <li>• Supports VMware and VAAI, ESXi snapshot integration, VM Warn/Stun, vCenter</li> <li>• Supports KVM, Citrix XenServer, Microsoft Hyper-V, and other common hypervisors</li> <li>• Microsoft VSS, ODX, and CSV</li> <li>• Integrated Apps</li> </ul>	<ul style="list-style-type: none"> <li>• OpenZFS Self-healing file system</li> <li>• Immutable Snapshots and clones</li> <li>• Thin and thick provisioning</li> <li>• Online capacity expansion</li> <li>• Virtual block devices</li> <li>• In-line compression and deduplication</li> <li>• ZFS Stripe, Mirror, RAID-Z1/Z2/Z3, dRAID</li> </ul>	<ul style="list-style-type: none"> <li>• Available dual controller support</li> <li>• Automated rapid failover without data loss</li> <li>• Virtual IP address migration</li> <li>• Online software updates</li> </ul>	<ul style="list-style-type: none"> <li>• Asynchronous file replication using SyncThing</li> <li>• Data ingest and export to and from any SMB/NFS server</li> </ul>
Backup	Supported Public Cloud Providers	TrueSecure Security	Remote Administration	
<ul style="list-style-type: none"> <li>• Snapshot-based OpenZFS local/remote replication</li> <li>• Rsync and cloudsync</li> <li>• Truecloud backup to Storj</li> <li>• Supports Asigra, Acronis, Veeam, Nakivo, NetBackup, and more</li> </ul>	<ul style="list-style-type: none"> <li>• iX-Storj</li> <li>• Amazon S3</li> <li>• BackBlaze B2 Cloud</li> <li>• Google Cloud</li> <li>• Microsoft Azure</li> </ul>	<ul style="list-style-type: none"> <li>• FIPS 140 for Data-at-rest and data-in-flight</li> <li>• Restricted Admins</li> <li>• Auditing of SMB &amp; Admin events (e.g. logins)</li> <li>• Encrypted Drives and Datasets, KMIP</li> <li>• NIST 800-209, GP-OS STIG</li> </ul>	<ul style="list-style-type: none"> <li>• Alert notifications via email, AWS-SNS, Hipchat, InfluxDB, Slack, Mattermost, OpsGenie, PagerDuty, and VictorOps</li> <li>• SSH, Syslog, Netdata</li> <li>• REST APIs and SNMP</li> <li>• Automated backup of system configuration and state</li> <li>• Graphical reporting, enclosure management</li> <li>• Signed updates with the ability to rollback</li> <li>• Out-of-Band Management</li> <li>• TrueCommand Management</li> </ul>	