asustor

Reliable enterprise solution virtualization, scalable and massive storage solution.

LOCKERSTOR 16R PRO
AS7116RDX (3U)

- Complete iSCSI/IP-SAN and NFS support
- VMware, Citrix and Hyper-V ready
- Supports Virtualization and Docker apps
- Windows ACL combined with Windows AD infrastructure enhances management efficiency for business applications
- PCIe slots for 10, 25, 40, 50 Gigabit Ethernet cards as well as SAS cards
- Intel Xeon 9th Generation Quad-Core Processor
- Server-grade ECC memory: 8GB ECC DDR4-2666 128GB Max
- Dual M.2 NVMe SSD ports for fast caching

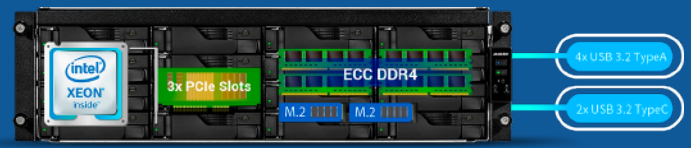| Performance King | Boundless Functionality | Intuitive UI | Incredible Value | 5-year Warranty |

Powerful Hardware

- Intel Xeon 9th Generation Quad-Core Processor
- ECC Unbuffered RAM
- PCIe support for 10, 25, 40, 50-Gigabit Ethernet cards as well as SAS cards
- Dual M.2 NVMe SSD ports for fast caching
- USB 3.2 Gen-2 Type A/Type C

| 8 GB ECC DDR4-2666 (MAX: 128 GB) | 10, 25, 40, 50 GbE/ SAS cards expansion | 2x 550W PSU | 2x M.2 NVMe SSD Cache | 4x 1 GbE Ethernet Port | USB3.2 Gen 2 (10Gb/s) TypeA x4/TypeC x2 |

Extreme Transfer Performance

The Lockerstor 16R Pro is equipped with 4 Gigabit Ethernet ports for demanding enterprise applications while also providing stable performance and enhanced productivity. All devices in the series come equipped with network card expansion slots from 10GbE to 50GbE.

1G x4 Link Aggregation (RAID 5)

451 MB/S Read

451 MB/S Write

10GbE (RAID 5)

1170 MB/S Read

**1180** MB/S Write

50GbE (RAID 5)

3229 MB/S Read

3603 MB/S Write
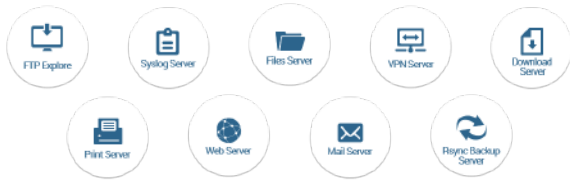
Data Protection Starts with Storage

ASUSTOR understands that your data is priceless, therefore ASUSTOR NAS provides different RAID Volume options, giving your data various levels of protection from the moment it is first stored on the NAS. We recommend you plan your storage protection based on your NAS model and number of hard disks. Data protection has never been so simple.
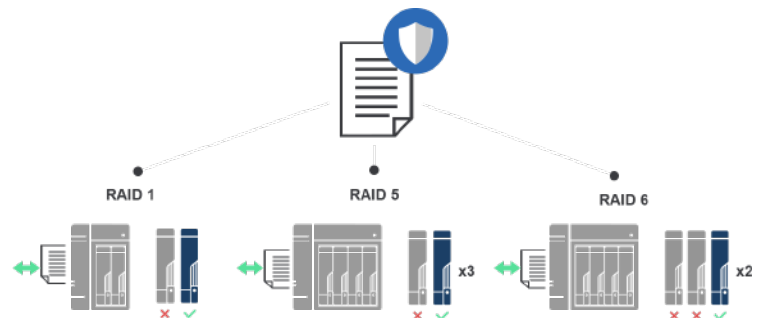
RAID 1   RAID 5   RAID 6

	Single	JBOD	RAID 0	RAID 1	RAID 5	RAID 6	RAID 10
Minimum number of disks	1	2	2	2	3	4	4
Faulty Disks Tolerated	X	X	X	1	1	2	1
Increased System performance	X	X	V	X	V	V	V
Maximum use of Storage space	V	V	V	x ½	-1	-2	x ½

Enterprise Versatility

ASUSTOR NAS offers rich variety of services for business users. Create a server that does so much more than just storage for the price of just one NAS.

AD + ACL

Windows

ADM features built-in Windows AD support. Once an ASUSTOR NAS has been successfully added to a Windows AD domain, AD users will then be able to use their own AD accounts to log in to and access the NAS.
Windows AD support combined with ACL allows IT professionals to use the familiar Windows user experience to quickly configure shared folder access rights for users and groups on an ASUSTOR NAS. Furthermore these settings can be applied to Samba, File Explorer, AFP, NFS, or WebDAV allowing businesses to maintain flexibility and security with regards to data access.

Batch Creation of ADM Accounts

Via ADM's batch creation function, you can quickly create multiple regular sequential user accounts (e.g., student numbers). With regards to irregular non-sequential account creation, you can enter account data into a text file (*.txt, *.csv) and then import it into ADM to create accounts.

Supporting LDAP Clients
Centralized control now more convenient than ever

LDAP, also known as Lightweight Directory Access Protocol is mainly used for unified management of accounts and passwords. Using LDAP technology can more efficiently manage user authentications or computer resource permissions across the enterprise. ASUSTOR NAS originally only supported Microsoft's Windows Active Directory service. Users can easily add an ASUSTOR NAS to their existing LDAP server providing easier ways to manage helps improve productivity.

Multi-Layered Protection from the Outside in

ASUSTOR NAS ensures data security by creating an in-depth data protection plan that protects your data from the outside in. Utilization of a multi-layered deployment scheme allows for the achievement of active network, system and data protection.

Network Attack Protection
· Firewall
· ADM Defender

Secured Data Transmission
· VPN connection
· SSL certificate connection
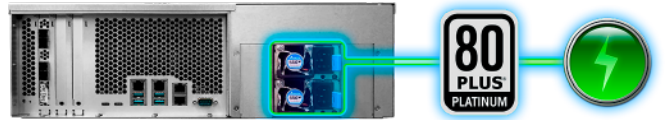· Automatic logout

Access Control
· File/Folder/App Isolated
· 2-Step Verification
· Wake-on-LAN (WOL)

Internal Data
· MyArchive Offline Backup
· AES-256 folder encryption
· Anti-virus software

High efficient and energy saving

The Lockerstor 16R Pro is equipped with server–grade redundant 80 PLUS Platinum PSUs. The efficient power supplies installed ensure stability when running your NAS for various apps like virtualization. The included power supplies also increase energy efficiency as they are up to 94% efficient in 50% load and remain efficient at almost any load. This enables enterprise customers to save power and money while also being green. With internal hard drive hibernation, the Lockerstor 16R Pro consumes only 7.55 W of power while normal operation only consumes 121.7 W of power.

ASUSTOR Find and Service Lights for Server Rooms

In enterprise environments, rackmount servers are commonly placed together in a server room. In order to allow administrators to quickly find a NAS from among many servers the Lockerstor 16R Pro provides a dedicated button on the front panel. When this button is pressed, the LED service light on the rear of the NAS will light up. ASUSTOR also offers AiMaster for Android and iOS which has the Find Me button. When Find Me is activated, the system status light on the front of the NAS will flash and the system buzzer will sound, making the NAS easy to find.

Inspection LED
Service LED

360° Backup and Virtualization Solution

- MyArchive cold storage backups
- Snapshot Center, Cloud Backup Center, DataSync Center
- Complete iSCSI/IP-SAN and NFS support
- VMware, Citrix and Hyper-V ready
- Supports Virtualization and Docker apps

Snapshot Center

Snapshot Center is a new feature for ASUSTOR NAS devices to utilize Btrfs and iSCSI volumes to take snapshots of the information inside a NAS. Snapshot Center supports up to 256 snapshots of a volume and can be done every five minutes, creating a backup that can be restored easily if data is damaged or lost.

MyArchive now supports Btrfs and snapshots. Btrfs for MyArchive supports snapshots and version history to help protect against accidental deletions or modifications. MyArchive drives run independently of internal NAS volumes, ensuring that snapshots are supported even when internal NAS volumes do not support snapshots.

Cloud Backup Center

Combine multiple business cloud services
Backblaze B2, Microsoft Azure Blob Storage, Alibaba Cloud, Baidu Cloud, JDCloud, Google Cloud, IBM Cloud.
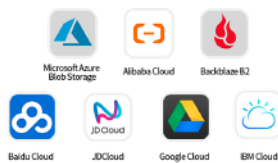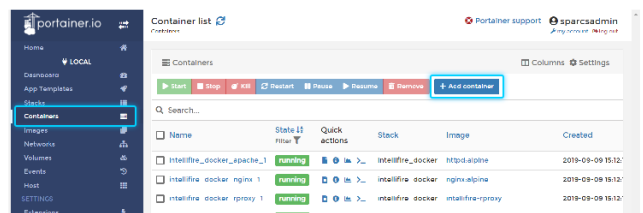
Virtual Applications with Virtualbox

Deploy all kinds of operating systems to your NAS
ADM brings a newer Linux Kernel, providing better system security and stability

Portainer – Easy Docker Deployments

Even more possibilities for ADM with Portainer for Docker images. With thousands of images, Portainer can download and deploy more types of programs than ever before. Portainer is incredibly user friendly and employs a graphical interface to make docker images easier to deploy than ever.

Virtual Applications with Linux Center

ASUSTOR NAS users can now run the native Linux® system on their NAS, enjoying the rich variety of Linux® apps. Linux Center features easy installation without extra configurations. It effectively turns the NAS into a computer with unlimited possibilities.

Comprehensive Backup Solutions

ASUSTOR's comprehensive backup solution provides more than twelve backup options, including, but not limited to Amazon S3, Dropbox, Google Drive, and Onedrive. ASUSTOR Backup Plan for Windows as well as Time Machine for macOS provide easy backups for desktop and laptops while MyArchive removable hard drives provide long term storage. Btrfs is now supported and with Snapshot Center, can take snapshots of your information in the event of unintentional modification. Restore previous versions easily with Snapshot Center.
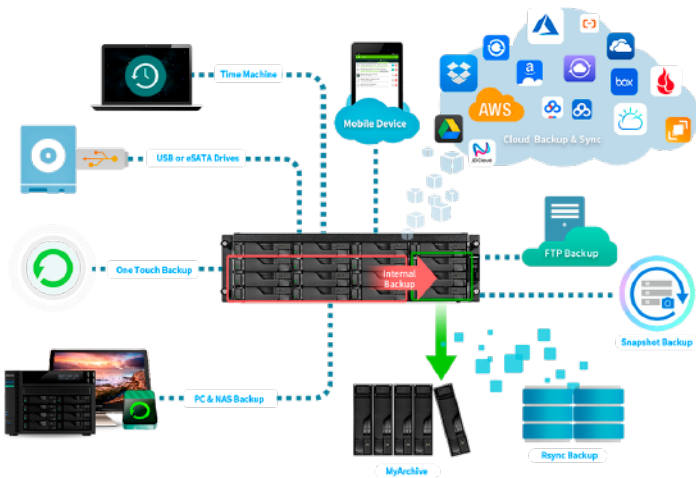
Virtual Storage

The Lockerstor 16R Pro provides an enterprise-class hardware and software solution. The Lockerstor 16R Pro is compatible with VMware, Citrix, Hyper-V virtual storage environments as well as supporting iSCSI/IP-SAN and NFS protocols, which seamlessly integrate with existing IT environments, making the Lockerstor 16R Pro optimal and cost-effective storage solutions.
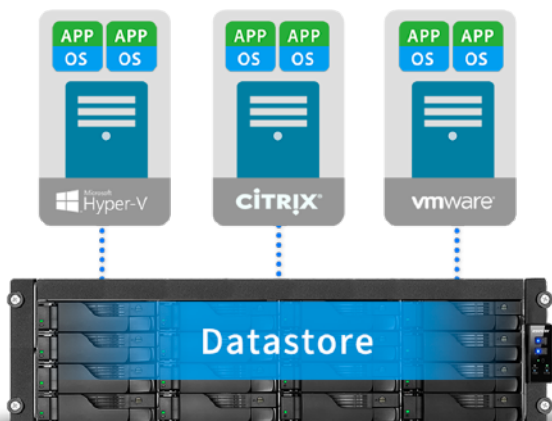
Exclusive MyArchive storage technology

MyArchive provides unlimited storage for your cold data for allowing for flexible storage management. MyArchive allows users to take less frequently accessed data or highly confidential data and store it independently on a hard disk. When not in use, MyArchive disks can be ejected from the NAS and separately stored, increasing the life of hard disks, saving power and most importantly providing added security for critical data. Every ASUTOR NAS is able to create and read MyArchive hard disks. Users can take their created MyArchive hard disks to any other another ASUSTOR NAS for direct access. This provides a significant boost in transfer speeds when compared with file transfers over a network. MyArchive now supports Btrfs and snapshots.

Enterprise Surveillance System

The powerful ASUSTOR NAS provides optimal reliability for Enterprise looking to set up a surveillance system. 4 free camera channels are offered, making it an extremely cost-effective surveillance solution for users with smaller demands. For users with larger demands, the number of camera channels can be expanded up to 100 via purchasable camera licenses. After installing Surveillance Center and its corresponding mobile app AiSecure, users will also be able to stream live surveillance feeds to their smartphones while on the go, keeping an eye on their most valued assets from anywhere.

5 Steps 60 Sec

- Start quick installation wizard
- Automatic camera search
- Add cameras with just one click
- Configure video format
- Configure recording schedule

Supports up to
100
camera channels

Hardware Specification

AS7116RDX (3U)

Processor	Intel Xeon 9th Generation Quad-Core Processor	LAN Port	4x Gigabit LAN
Hardware Encryption Engine	Intel AES NI	M.2 SSD Slots	2x M.2 22110/2280/2260/2242 NVMe or SATAIII SSD
Memory	8GB ECC UDIMM DDR4	PCIe	1x Gen3 x8 slot (x8 link); 2x Gen3 x4 slots (x4 link) *for optional expansion 10, 25, 40, 50 GbE / SAS card
Memory Module Pre-installed	8GB (1x 8GB)	Service Port	1x RS-232 Com Port
Total Memory Slots	4	Disk Tray Lock	Yes
Memory Expandable up to	max. 128GB, 32GB x4, Support mixed capacity	Reset Button	Yes (username/password)
Internal Disk	16x (2.5" / 3.5" SATAII/III HDD or SSD)	Front Panel LED	Power, Status, Inspection, 1GbE, 10GbE, Alert SAS, HDD1~16
External Device Interface	4x USB 3.2 Gen 2 Type-A, 2x USB 3.2 Gen 2 Type-C	Power Supply	Internal Power Supply: 100~240V, 550W x2
Dimensions	132(H) x 439(W) x 535(D) mm	Volume Type	Single, JBOD, RAID 0/1/5/6/10, RAID 1/5/6/10 + Hot Spare

A. Power LED Indicator
B. Inspection LED Indicator
C. System Status LED Indicator
D. Alert LED Indicator
E. SAS LED Indicator
F. Network LED Indicators
G. Hard Disk LED Indicator

Software & Features

Operating System
· ADM 3.5 Onwards
· Supports Online Firmware Updates
· Built-in App Central for Various Apps

Supported OS
· Windows XP, Vista, 7, 8, 10, Server 2003, Server 2008, Server 2012, Server 2016
· Mac OS X 10.6 Onwards
· UNIX, Linux, BSD

Access Control
· Maximum Number of Users: 16384
· Maximum Number of Groups: 512
· Maximum Number of Shared Folders: 512
· Maximum Number of Concurrent Connections: 2048
· Supports Windows Active Directory/LDAP

File Explorer
· Web-based File Management
· ISO File Mounting   · Share Links
· Task Monitor   · Browse Files on Local PC
· Thumbnail Previews
· Data Access via External Optical Drive
· Supports video playback

System Administration
· Log Type: System Log, Connection Log, File Access Log
· Real-time Online User Monitor
· Real-time System Monitor
· User Quota
· Virtual Drive (ISOMounting, Maximum 16)
· UPS Support

Storage Management
· Support Multiple Volumes with Spare Disks
· Volume Type: Single disk, JBOD, RAID 0, RAID 1, RAID 5, RAID 6, RAID 10
· Support for Online RAID Level Migration Support for Online RAID Capacity Expansion

Disk Management
· Scheduled Bad Block Scans
· Scheduled S.M.A.R.T Scans

External Devices
· Supports USB External Storage Devices
· USB Wi-Fi Dongle Support
· Bluetooth Dongle/Speaker Support
· USB Printer Support
· USB DAC/IR Receiver/Keyboard/Mouse Support
· USB CD ROM Drives/DVD ROM Drives/BD-ROM Drives

Energy Control
· Configurable Disk Hibernation and Sleep Mode Wait Time
· Configurable Time Period for Sleep Mode Activation
· Automatic Sleep

Network
· TCP/IP (IPv4 & IPv6)
· Link Aggregation: Supports 802.3ad and Six Other Modes for Load Balancing and/or Network Failover
· Jumbo Frame (MTU)
· VLAN
· EZ Connect
· Wireless Network
· DDNS/EZ-Router
· Supports Wake-on-LAN (WOL)

Network Protocols
· CIFS/SMB, SMB 2.0/3.0, AFP, NFS, FTP (Unicode Supported), TFTP, WebDAV, Rsync, SSH, SFTP, iSCSI/IP-SAN, HTTP, HTTPS, Proxy, SNMP, Syslog

Security
· AES 256-Bit Encryption
· Firewall: Prevent Unauthorized Access
· Alert Notifications: E-mail, SMS
· Encrypted Connections: HTTPS, FTP over SSL/TLS, SSH, SFTP, Rsync over SSH
· Built-in Hardware Encryption Engine:
· AS31/32/40/50/51/61/62/63/64/70/ Nimbustor/Lockerstor/ Lockerstor Pro series RAID Scrubbing: detects the integrity and consistency of RAID 5 and RAID 6 drive data

Backup Solutions
· Rsync (Remote Sync) Backup
· Cloud Backup   · FTP Backup
· External Backup   · One Touch Backup
· EZ Sync

EZ Sync Manager
· Automatically synchronizes files between a PC and NAS
· Can restore previous versions of files
· Supports file sharing
· AiData now supports accessing EZ Sync files

Supported Browsers
· Internet Explore 11 Onwards, FireFox, Chrome, Safari, Microsoft Edge

Network Recycle Bin
· Share folder-based
· Maintains original directory structure and file permission
· On-click restore
· Supports scheduled emptying
· Filtering rules
  1.File size 2.File extension
· Deletion Settings
  1.File size 2.File date

Sever
· VPN server, SNMP server, RADIUS server, Syslog server, Mail server, DHCP server, Web server, FTP server, Print server, Rsync server

ACL
· Provides both Windows ACL and Linux ACL permission configuration methods
· Can enable Windows ACL for specific shared folders
· Comprehensive support for Windows' 13 types of advanced permission settings
· Can view Windows ACL permission settings from within ADM
· Supports local users and groups
· Exclusive permission reset function allows users to quickly restore default permissions

SSD Cache
· SSD-like performance with traditional hard drives
· Supports read-only access and read-write cache mode
· Supported Models: AS31/32/50/51/61/62/63/64/70/ Nimbustor/Lockerstor/ Lockerstor Pro series

Snapshots
· Btrfs Snapshots
· 256 snapshots
· iSCSI LUNs
· Supported Models: AS31/32/40/50/51/61/62/63/64/70/ Nimbustor/Lockerstor/ Lockerstor Pro series Snapshot Center will not display Volume snapshots information in other models.

Supported Languages
· Deutsch, English, Français, Italiano, Nederlands, Русский, 日本語, 한글, 简体中文, 繁体中文, Česká, Polski, Svenska, Dansk, Norsk, Suomi, Português, Türkçe, Español, Magyar

iSCSI/IP-SAN
· Maximum Targets: 256
· Maximum LUNs: 512
· Maximum Snapshot Versions of a Single LUN: 256
· Target Masking
· LUN Mapping
· ISO File Mounting
· Supports MPIO
· Persistent (SCSI-3) Reservations

Featured Apps

· Antivirus
· Download Center
· FTP Explorer
· DataSync for CloudDrive
· Cloud Backup Center
· VirtualBox
· RADIUS Server
· Mail Server
· DataSync Center

· LooksGood
· Photo Gallery
· SoundsGood
· ASUSTOR Live
· Linux Center
· Surveillance Center
· UPnP Media Server
· VPN Server
· VPN Client

Mobile Apps

· AiMaster
· AiFoto
· AiMusic

· AiVideo
· AiData
· AiDownload

· AiSecure
· AiRemote

Dealer Seal