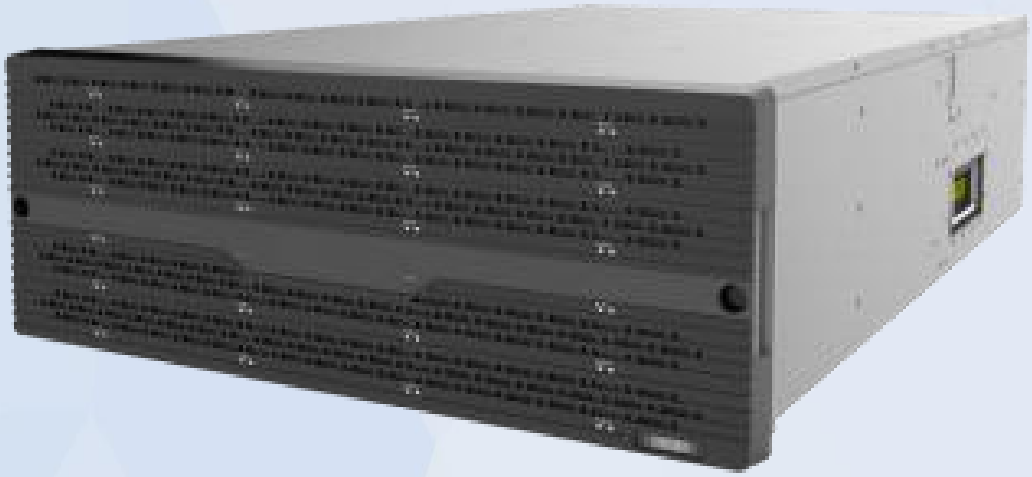
ZRJ EN1824 IPSAN Network Storage

Product Overview

The EN1800 series is a new generation of highly cost-effective storage products tailored for AIoT solutions. The series integrates data management, permanent data protection, block virtualization RAID technology, and the industry's leading disk management technology. It features high performance, high reliability, high scalability, easy management, and simple maintenance. It also supports iSCSI, FC, NFS, and CIFS storage protocols, and can provide both block storage and file storage, offering users a comprehensive storage solution.



Main Features

High performance

It supports iSCSI to solve the inherent fragmentation problem of file storage.

The specialized cache algorithm greatly improves disk access performance and extends disk lifespan.

SSD Cache greatly enhances the access performance of hot data.

Fusion

It integrates SAN and NAS: one device provides both SAN and NAS capabilities, offering block access and file access services.

It integrates iSCSI SAN and FC SAN, supporting 8Gb/s and 16Gb/s FC interfaces, as well as Gigabit and 10G Ethernet interfaces.

It supports heterogeneous integration, which maps storage resources of third-party devices to VX18 series devices via the iSCSI protocol, enabling local management of third-party storage resources and provision for external use.

RAID Features

Block virtualization technology RAID-NT supports dynamic storage pools, automatic data load balancing, hot spare space evenly distributed across each disk in the storage pool, and reconstruction performance of over 2TB/h.

During RAID reconstruction, it automatically adjusts the array group's rebuild speed based on current system load.

Reconstruction in seconds: only the changed parts of the data are rebuilt, shortening the reconstruction time to seconds.

Rapid reconstruction: Data is rebuilt by copying, and endangered data is migrated to a hot spare disk in a short time.

Disk pre-copying supports disk health management and pre-copies data for risky disks.

Inspection, repair, and fault tolerance: Automatic array inspection, disk fault repair, and disk bad block remapping functions effectively reduce disk failures;

It supports disk fault tolerance processing, which ensures business continuity when multiple disks in the array have errors.
It supports disk migration, enabling online hot-swapping of disks and migration of disks between device arrays.

Data Protection

It features a mirroring function: when the primary resource fails, online services automatically and seamlessly switch to the mirrored resource to maintain business continuity.
It features a snapshot function: data can be restored via snapshot rollback, and an additional data access channel is provided via snapshot view/copy.
It supports data replication/backup: critical data can be replicated/backed up locally or remotely between devices.
It is equipped with a Data Vault: in the event of abnormal system power loss, it continues to supply power to ensure that cached data is written into the Data Vault, thus guaranteeing data integrity.
It supports the WORM (Write Once Read Many) function, which allows data to be written once and read multiple times, protecting important data from tampering.
It supports link protection, including link aggregation and dynamic fault switching, which improves data read-write bandwidth while ensuring the availability and smoothness of data paths.

Hardware Design

It adopts modular redundant components and a cable-free design: all modules are interconnected via telecom-grade connectors. Key components such as power modules, battery modules, and fan modules use a redundant architecture, supporting hot-swapping and online replacement. This ensures business continuity and data reliability, achieving a system availability of 99.999%.
It uses leading hardware, based on Intel's 64-bit cutting-edge multi-core processor design, with multi-channel high-performance DDR5 memory interfaces and advanced PCIe 4.0 and SAS 4.0 bus technologies.

It features dual BIOS to ensure reliable system startup and safe BIOS updates.
The two-level watchdog (software and hardware) ensures that the system can automatically restore services without human intervention in the event of a system failure.
It features intelligent temperature control: an adaptive temperature adjustment system automatically senses temperature changes and adjusts the fan speed in multiple gears. Intelligent fan speed adjustment not only reduces the fan's own power consumption but also reduces its operational load, extending its service life.

Dustproof, shock-absorbing, and corrosion-resistant

It features a unique disk dustproof design that effectively blocks dust.
The patented disk vibration reduction technology reduces disk resonance transmission and external impacts on disks.
It adopts proprietary anti-corrosion early warning technology and patented disk anti-corrosion technology to minimize external corrosion to disks and extend their lifespan.

Simple maintenance management

It is equipped with a comprehensive alarm mechanism, supporting indicator alarms, email alarms, SMS alarms, digital tube alarms, and SNMP alarms, etc.

Green, environmentally friendly and energy-saving

Disk hibernation: disks with no business I/O are put into hibernation to reduce disk power consumption and extend their service life.
It employs CPU intelligent frequency modulation technology, which automatically adjusts CPU frequency according to system load, effectively saving energy consumption.

Specifications

Item	Description
Number of controllers	1
processor	Intel 64-bit multi-core processor
Single controller memory	Standard 32GB, expandable to 128GB
Network Interface	5*2.5Gb Ethernet ports 4-port 2.5Gb Ethernet port (optional) 2-port 10Gb Ethernet port (optional) 4-port 10Gb Ethernet port (optional)
PCI-E slot	3
Backend extension interface	2*4x12Gbps Mini SAS HD ports (optional)
USB interface	2
Serial Port	1
HDMI interface	2
Disk Type	SATA/SSD
Disk capacity	4~20TB
Number of disk channels	twenty four
Battery	Standard 1/Maximum 2
Power Module	Standard 1/Maximum 2
Power Input	AC power supply: 100V~127V/200V~240V AC; 60Hz/50Hz
Weight (Fully configured disk)	<46kg
Power consumption (full disk configuration)	<452W
Dimensions (H×W×D)	175mm*482mm*589mm (H*W*D)
Certification	CE, FCC, CB, RoHS, WEEE, CCC, CQC
Operating temperature	5°C ~ 40°C
Recommended operating temperature	10°C ~ 35°C

Features	Mirroring, snapshot rollback, snapshot view, snapshot copy, consistent snapshot group, NAS backup, worm, heterogeneous virtualization, block virtualization RAID-NT
RAID	Supports JBOD, RAID 0, 1, 10, 5, 6, 50, RAID-NT Supports multiple hot backup modes such as automatic blank disk global hot backup and dedicated hot backup
Maximum number of logic resources	1024
Protocol	iSCSI, NFS (V2, V3, V4), CIFS/SMB, FTP
Supported operating systems	Windows, Linux, AIX, HP-UNIX, Solaris, VMware, etc.
Alerts	Indicator, email, SNMP Trap, SMS, digital tube, etc.

Ordering Information

Product Model	Product Description
EN1824	24-slot network storage device (with single power supply and single battery by default)