Surveon Cloud NVR Solutions

The Best Scalable and Cloud-ready NVR

Surveon
Complete Megapixel Solutions

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Cloud NVR Solutions Overview (1/4)

Type	NVR in Cloud	NVR to Cloud
Topology		
Pattern	• The video recordings will be transferred from IP cameras to cloud directly. • Internet communication only. • Only one copy which stores in cloud.	• Recorded by NVR local and synced to cloud by internet, this topology enhances the safety of data transfer. • Combine close loop (NVR) and internet (cloud) communication. • At least two copies which store in NVR and cloud.
Characteristic	• Lower Budget: Integrate a system without a NVR. • Simple Functions: Dedicate to recording and remote viewing. • High Bandwidth Required: Work with internet connection.	• Premium NVR Functions: Include alarm, video analytics, etc. • Data Protection: Store two copies in NVR and cloud. • Auto Sync Replication: Automatically resume sync process from local NVR to remote cloud when internet re-connect.

- Surveon Cloud NVR Solutions can **record by local NVR and sync to cloud by internet**, this topology enhances the safety of data transfer.

- **Surveon Cloud NVR Solutions = The existing NVR advantages + the premium value of Cloud NVR**

Cloud-integrated Unified Storage

NVR License

EonStor GSe Pro Series

Surveon VMS & Camera

- **Surveon Enterprise NVR with Infortrend Cloud Storage**

  ➢ Native with Surveon NVR advantages of **enterprise design, data protection, and high reliability**.

  ➢ Support wide range cloud services for both **private and public cloud**.

  ➢ Powerful **data services** and rich built-in easy IT networking **applications**.

- **Data Protection & Long-time Recording**

  ➢ **12Gb/s SAS connection** for **JBOD** expansion

     up to 428 HDDs for years recording.

  ➢ Built-in **Infortrend patent RAID** with **Intelligent Drive**

     Integrity (IDR) for prevention of data corruption and drive rebuild.

  ➢ Support **iSCSI (SAN/NAS)** expansion for data backup or recording purpose.
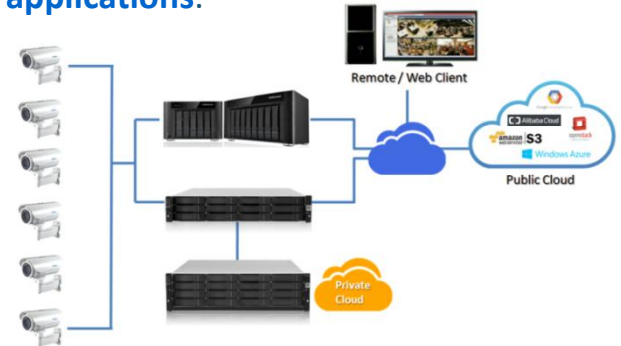
- **SAN, NAS & Cloud in Single System**

  - One storage supports **NAS, SAN, DAS, cloud, and NVR function**.

  - **File sharing** across multiple operating systems, including Windows, Linux, and Mac OS.

  - **Data can be directly written to block level storage** with unique technology and architecture.
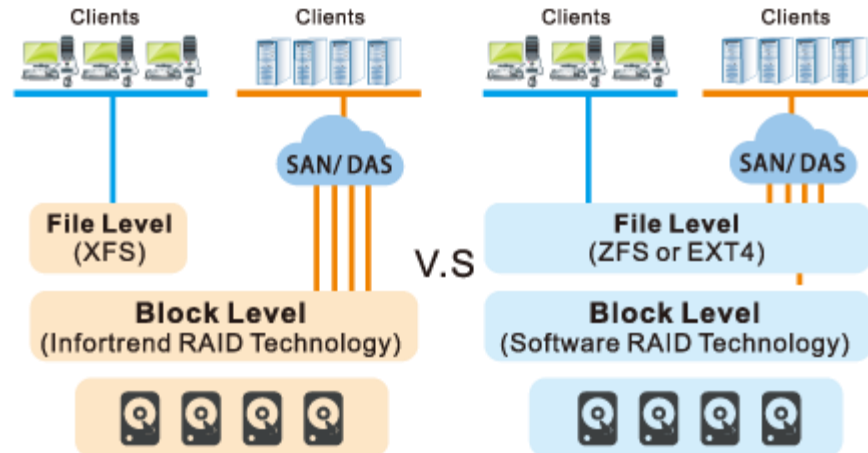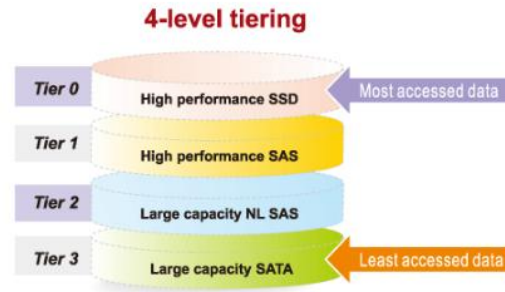
Premium Value of Cloud NVR (1/2)

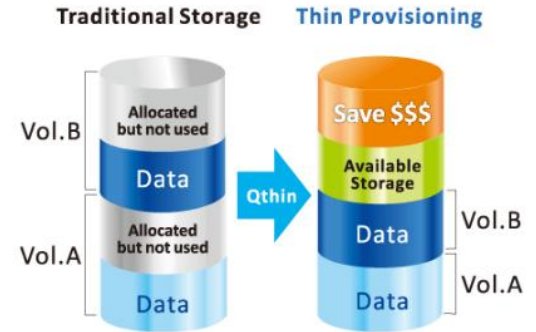- **Powerful Data Service & Cloud-integrated Features**

  - Supports **SSD cache, automated storage tiering, thin provisioning,** etc.

  - Supports cloud integrated features, including **data cache, tiering, and backup**.
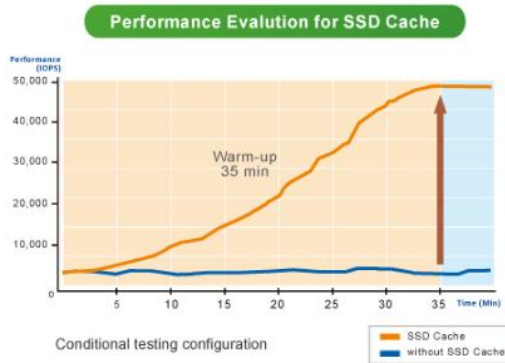
Maximum 3.2TB SSD Cache Pool

Automated Storage Tiering

Thin Provisioning

- **Rich Built-in Applications**

  - A NAS built-in with diverse application services such as **LDAP, Proxy, VPN, Syslog Server** to assist users simplify IT environment deployment.

- **Variety of Storage Expansions**

  - Supports storage expansion via **Cloud**, aside from iSCSI/NAS/JBOD.

How Cloud NVR Brings Productivity to You

	NAS+NVR	DAS/SAN+NVR	NAS+NVR+Cloud
Topology			
Advantage	• Single device fulfills both storage and surveillance needs. • Best C/P backup and storage solutions for SMB. • Easy file sharing with various built-in services. • Flexible expansion of storage capacity for future scale up.	• Up to 428 drives for long-time storage and years recording. • Smooth service to large workforces. • Superior data transfer performance for IOPS/throughput-demanding applications.	• Automatically replicate data to cloud. • Flexible cloud capacity usage and disaster recovery. • Easy data management and lower local maintenance cost.

Solutions Advantages

NVR Advantages

- The following NVR advantages are included in Surveon Cloud NVR Solutions.

Enterprise Design

- High Throughput
- Storage Expansion via JBOD
- Storage Expansion via iSCSI
- NVR Supports H.265
- Multiple Access
- SurveOne
- Sphone (Mobile Client)

Data Protection

- Triple Data Protection
- Backup/Archive to Storage
- Intelligent Driver Integrity (IDR)

High Reliability

- Easy Maintenance
  - Cableless Modules
  - Swappable Control Board
  - Hot-swappable HDD
  - Redundant Power Supply
- Industrial-grade Component
- 3-year Warranty

* For more details, please visit here.

Cloud NVR Premium Advantages

High-Integrated Services

- Cloud-integrated Solutions
  - ➤ SyncCloud
  - ➤ Data Cache
  - ➤ Data Tiering
  - ➤ Data Backup

- Rich Built-in Applications
  - ➤ LDAP, Proxy, VPN, Syslog, and NVR Server

Powerful Data Services

- Local/Remote Replication
  - ➤ Snapshot
  - ➤ Volume Copy/Mirror
- Remote Replication
- Thin Provisioning
- Automated Storage Tiering
- SSD Cache
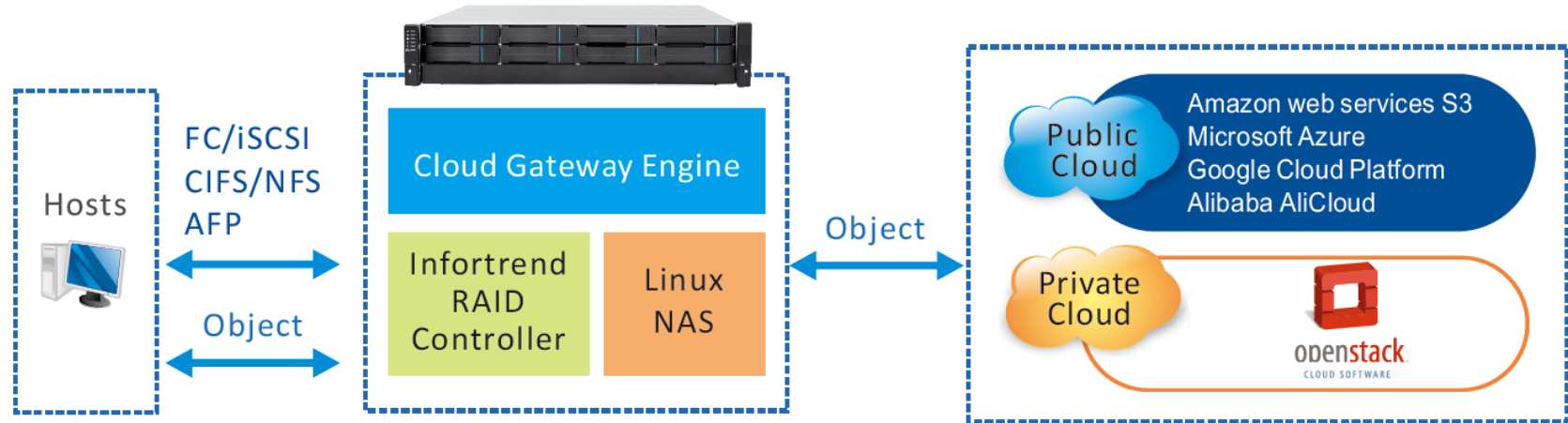
Outstanding System Scalability

- Boost Data Transfer Speed
- Up to 428 Drives Expansion
- Flexible High-speed Host Interface
  - ➤ FC, iSCSI, SAS, FCoE

Reliable Cache Protection

- Super Capacitor

EonStor GSe Pro Highlight

Cloud-integrated Unified Storage

Block-level RAID Controller
Delivers excellent performance for enterprise database, mail server, and virtualization

Cloud Gateway Engine
Integrates with cloud storage for data caching, tiering, or backup

Object Protocol Support
Allows users to access a file by using AWSS3 and OpenStack-compatible object storage protocols

Easy-to-use Interface Web-based Management Tool

- EonOne provides a web-based **setup wizard, workflow**, and a single control panel for file, block, and object service.

- Supports **Storage Resource Management** which allows IT personnel to track and analyze performance and capacity usage to **optimize system resource utilization**.

Cloud-integrated Solutions (1/2)

SyncCloud

- Allows data in multiple EonStor GSe Pro storages to be synchronized with data on cloud storage, including:

  - ➢ Dropbox

  - ➢ Google Cloud

  - ➢ Amazon S3

  - ➢ Alibaba Aliyun

  - ➢ OpenStack

  - ➢ Microsoft Azure (Q1, 2018)

Data Cache, Tiering, and Backup

- Premium cloud functions and easy integration with cloud storage via intelligent data allocation algorithms and RESTful APIs.

Data Reduction Technology
Deduplication
Compression
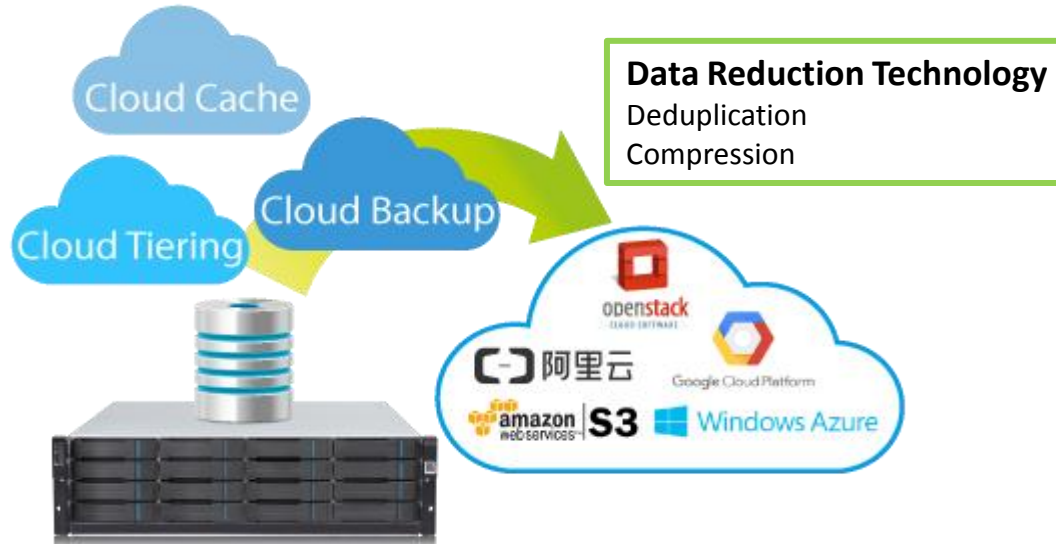
Rich Built-in Applications

- **Providing various built-in services to assist users simplify IT environment deployment**

  - ➤ **LDAP Server**: Simplifies the management flow for a large number of user accounts, saving IT administration time and effort.

  - ➤ **Proxy Server**: Provides web content caching, enhancing web access speed and security.

  - ➤ **VPN Server**: Secures the connection from a remote location to company internal resources.

  - ➤ **Syslog Server**: Collects history logs of other network devices for easy troubleshooting.

  - ➤ **NVR Server**: Enables the storage to record and backup surveillance videos.
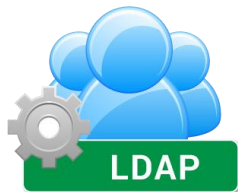
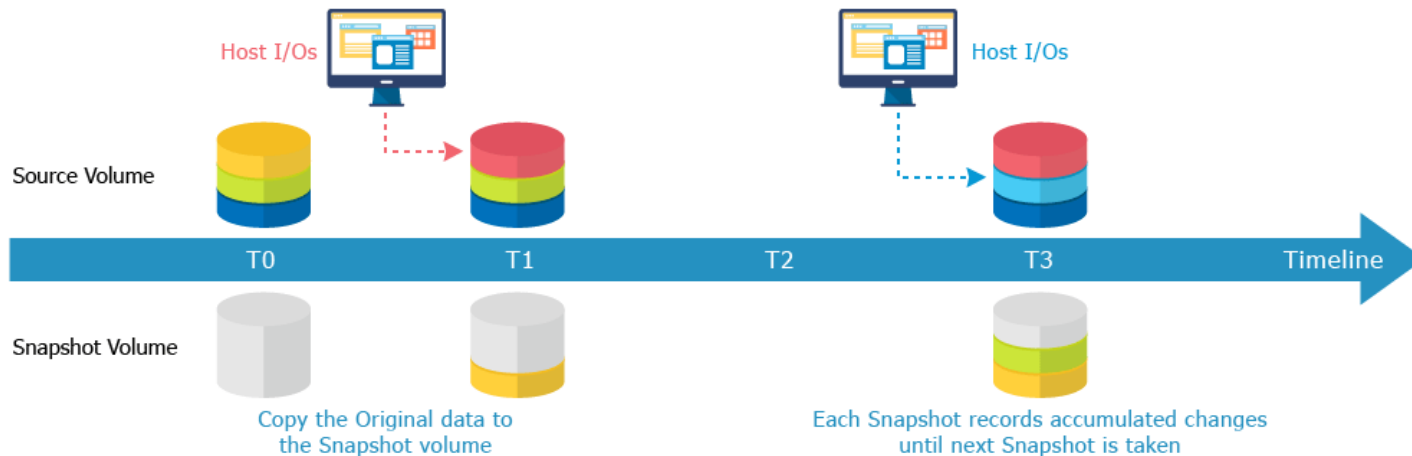| LDAP Server	Proxy Server	VPN Server	Syslog Server	NVR Server

Snapshot

- **Up to 4096 snapshots** per system with advanced license.

- **Split and re-sync mirroring** between source and copy as business needs require.

- **Minimal manual intervention** is required to perform data protection with SANWatch / EonOne scheduling function.

Source Volume

Host I/Os   Host I/Os

T0   T1   T2   T3   Timeline

Snapshot Volume

Copy the Original data to
the Snapshot volume

Each Snapshot records accumulated changes
until next Snapshot is taken

Volume Copy/Mirror

- Immediately use **disk-based full data copies** to support applications when source data volume fails.

- Restore files and roll back data **in seconds**.

- Take advantage of **scheduling and capacity control** mechanisms.
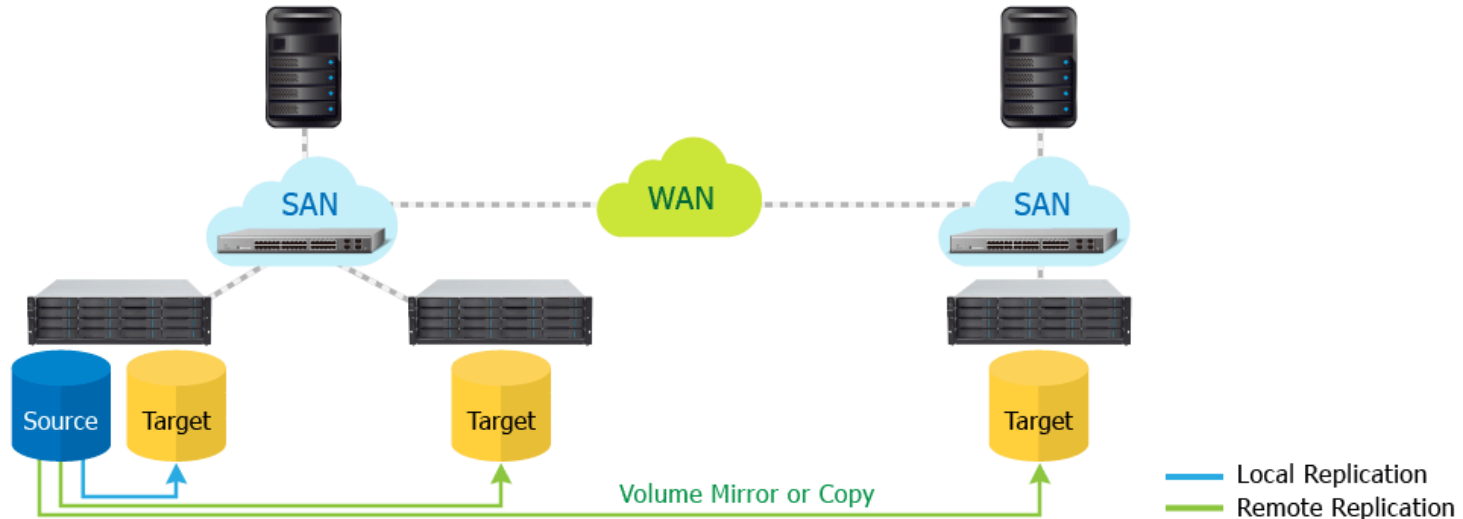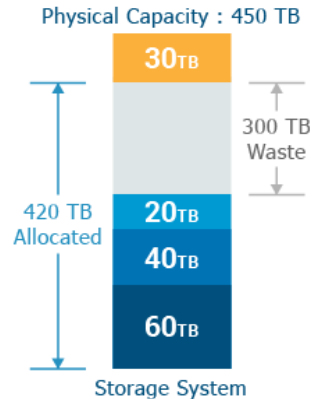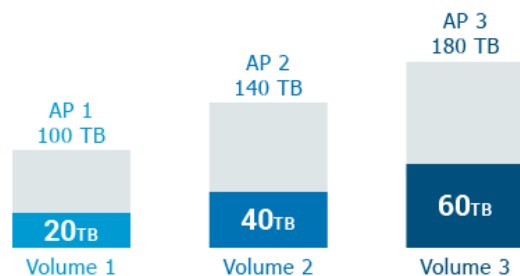
Thin Provisioning

- **Up to 80-90%** storage utilization improvement with **just-in-time** capacity allocations.

- Add disk space as needed and delay storage purchases to leverage disk drive price declines.

- Simplifies capacity planning and volume utilization tracking.

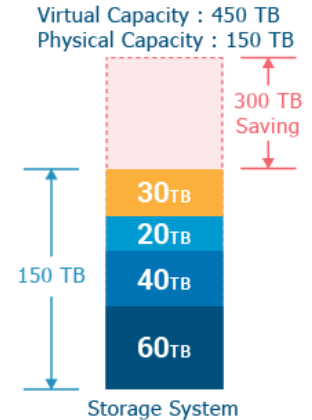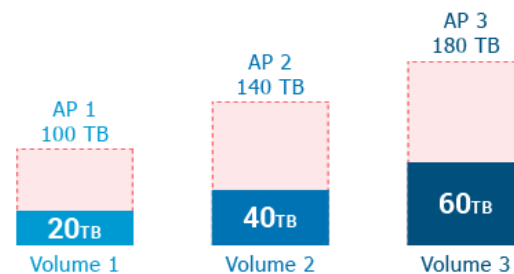- Data volumes can be expanded without disrupting business production.

Traditional Full Provisioning

Infortrend Thin Provisioning

Automated Storage Tiering

- **Up to 150%** performance improvement at no additional costs compared to a non-tiered configuration.

- Enjoying higher performance with massive capacity increased by deploying high-capacity near line drives in lower tiers.

- Based on data usage patterns, migration ensures optimized distribution of data in storage pools.

- Simple set up with little effort or training by SANWatch/EonOne management tool.

	Access Rate	Recommended Drive Type	Recommended RAID Level
Tier0	Most Frequent	SSD	RAID1
Tier1	Frequent	SAS	RAID1
Tier2	Infrequent	NL-SAS	RAID5 or 6
Tier3	Rarely	SATA	RAID5 or 6

Logical Volume: High Performance / Performance / Capacity / Capacity

SSD Cache

- Increased read performance with less response time for read-intensive data.

- **Up to 16 times faster** than systems without SSD Cache and further reduces 88% response time.

- Simple set up with little effort or training with SANWatch/EonOne management tool.

Read Performance Improvement by SSD Cache

Conditional testing configuration
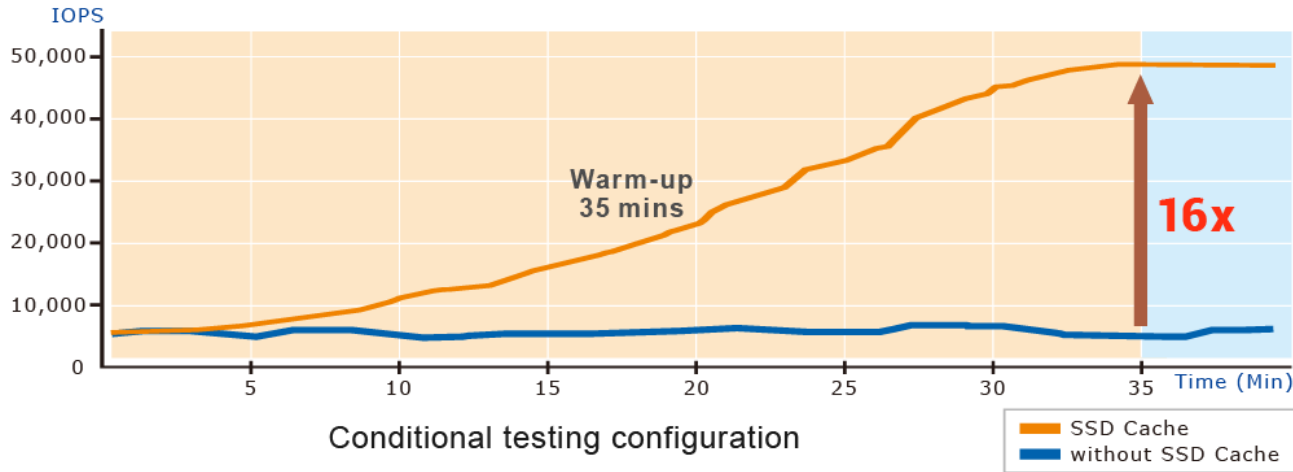
*SSD Cache speeds up read performance by up to 16 times based on Infortrend's tested configurations.

Outstanding System Scalability

- **Boost Data Transfer Speed**: Faster read/write performance with better stability.

- Future-proof expansion solutions offers ample data capacity of **up to 428 drives**.

	GSe Pro 105	GSe Pro 108	GSe Pro 205	GSe Pro 208	GSe Pro 1004	GSe Pro 1008	GSe Pro 3008
Max. Drives	37	40	37	40	4	8	428

SAS

GSe Pro 3008
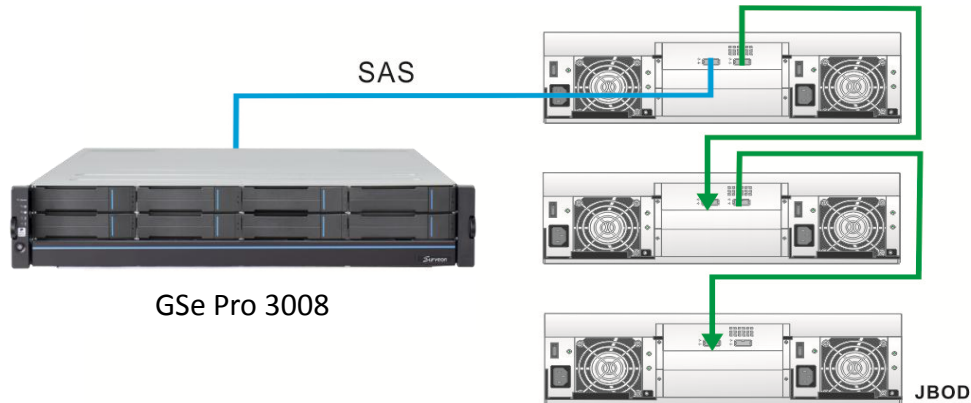
Support up to 7*JB 3060 expansion enclosures

JBOD

Flexible High-speed Host Interface

- **Offer rich and flexible options with host (front-end) connection ports**

  - FC: 8Gb/s, 16Gb/s

  - GbE/iSCSI: 1Gb/s, 10Gb/s, 40Gb/s

  - Others: 10Gb/s FCoE, 6Gb/s and 12Gb/s SAS

Converged Board (4 in 1)

4*10GbE/iSCSI

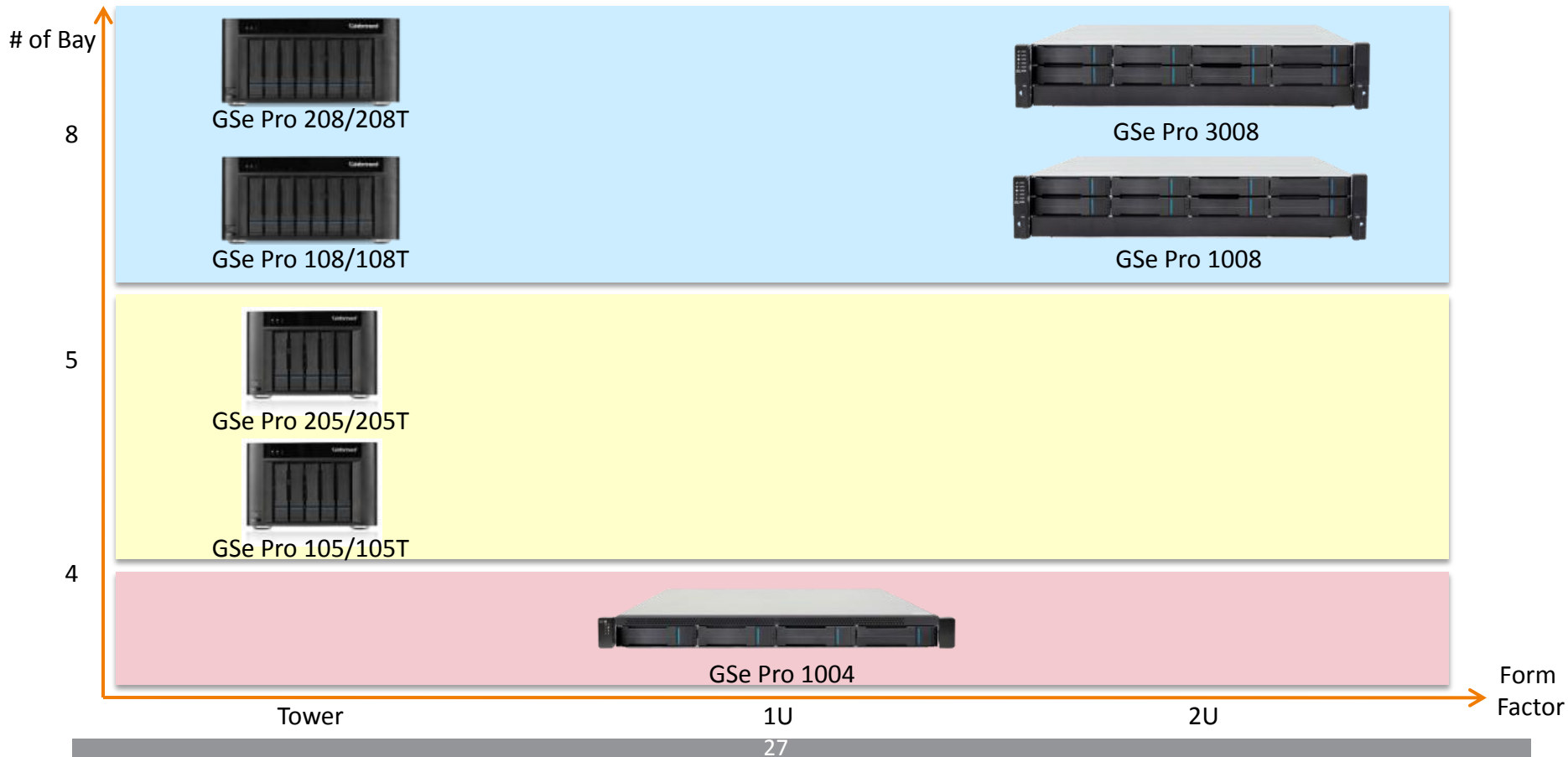4*8Gb/s FC

2*16Gb/s FC

4*10Gb/s FCoE
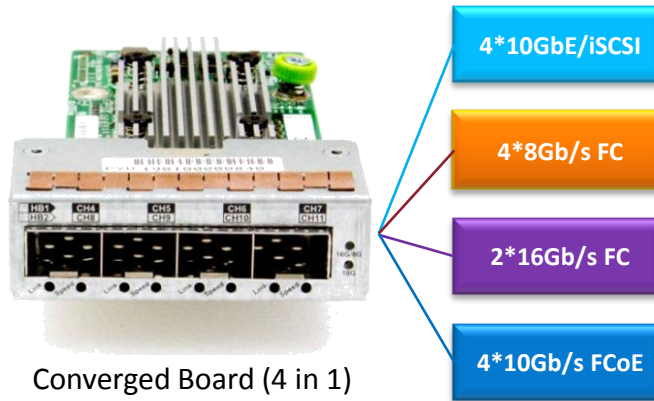
Super Capacitor

- Provides reliable super capacitor backup with flash module to ensure data safety with no maintenance effort.

Product Portfolio

EonStor GSe Pro Product Line Map

EonStor GSe Pro Desktop Solutions

	EonStor GSe Pro 105/105T	EonStor GSe Pro 108/108T	EonStor GSe Pro 205/205T	EonStor GSe Pro 208/208T
Max. Recording Channel	Up to 64	Up to 64	Up to 64	Up to 64
CPU	Intel Avoton (Atom) / 4 Core 2.40GHz		Intel Broadwell DE 2-Core 2.20 GHz/4-Core 1.60 GHz	
Max. memory Size	16GB (DDR-3)		32GB (DDR-4)	
Cache Protection	No BBU/Super capacitor options			
Host Board Design	2		2	
Drive Side	6Gb/s SATA			
Max. Drives	37	40	37	40
Onboard iSCSI Ports	4 x 1Gb/s iSCSI ports (RJ-45)		2 x 1Gb/s iSCSI ports (RJ-45) 2 x 10Gb/s iSCSI ports (SFP+)	
Additional Host Interface Options	8Gb/s FC, 16Gb/s FC, 10Gb/s iSCSI		8Gb/s FC, 16Gb/s FC, 10Gb/s iSCSI, 10Gb/s FCoE	
Form Factors	Desktop	Desktop	Desktop	Desktop
(3.5") SATA Models	5-bay GSe Pro 105/105T	8-bay GSe Pro 108/108T	5-bay GSe Pro 205/205T	8-bay GSe Pro 208/208T

EonStor GSe Pro Rack-mount Solutions

	EonStor GSe Pro 1004	EonStor GSe Pro 1008	EonStor GSe Pro 3008
Max. Recording Channel	Up to 16	Up to 16	Up to 64
CPU	Intel Atom 4C, 2.40 GHz	Intel Atom 4C, 2.40 GHz	Intel Pentium-D 4 Core 1.60 GHz
Max. memory Size	32GB (DDR-3)	32GB (DDR-3)	64GB (DDR-4)
Cache Protection	No BBU/Super capacitor options		Super capacitor + Flash module
Host Board Design	N/A		2
Drive Side	6Gb/s SATA		
Max. Drives	4	8	428
Onboard iSCSI Ports	4x 1GbE/iSCSI		
Additional Host Interface Options	N/A		16Gb/s FC, 8Gb/s FC, 10GbE FCoE, 40GbE/iSCSI, 10GbE/iSCSI, 1GbE/iSCSI, 12Gb/s SAS
Form Factors	1U 4-bay Rackmount	2U 8-bay Rackmount	2U 8-bay Rackmount
(3.5") SATA Models	1U 4-bay GSe Pro 1004	2U 8-bay GSe Pro 1008	2U 8-bay GSe Pro 3008

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