

Infortrend Technology, Inc.

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Income Statement as of last Quarter

Unit: one million NT dollars, earnings per share is one NT dollar

	1~3Q'23		1~3Q'22		YoY	3Q'23		2Q'23		QoQ
	Amount	%	Amount	%	%	Amount	%	Amount	%	%
Operating revenue	1,037	100	991	100	4.64	371	100	301	100	23.25
Operating costs	506	49	522	53	-3.06	172	47	157	52	9.55
Gross profit	531	51	469	47	13.21	199	53	144	48	38.19
Operating expenses	368	35	355	36	3.66	130	35	120	40	8.33
Operating profit	163	16	114	11	42.98	69	18	24	8	187.50
Non-operating income and expenses	126	12	49	5	157.14	111	30	0	0	profit
Earnings before taxes	289	28	163	16	77.30	180	48	24	8	650.00
Net income	240	23	143	14	67.83	151	40	19	6	694.73
Earnings per share (NT\$)	0.88		0.52			0.55		0.07		

Vertical Market Applications: An Overview

Agenda

- GS/GSe U.2 and G3 new storage devices
- Office Applications – Store, Share and Backup
- Database, Virtualization and VDI
- Media and Entertainment (M&E)
- High Performance Computing (HPC)
- Picture Archiving and Communication System (PACS)
- Surveillance

GS/GSe U.2 and G3 new storage device

GS U.2 and G3 are high-performance storage solutions specially designed for enterprises. These series implement the new generation Intel Ice Lake CPU which can provide better performance and cost-effectiveness.

GSe U.2 and G3 are unified storage solutions tailored for SMBs, which could be suitable for budget needs.



GS/GSe U.2 and G3 new storage device

GS/GSe U.2 series can be equipped with U.2 NVMe SSD to provide better performance and cost-effectiveness

- **High performance**

- ✓ One appliance can provide up to 1.1M IOPS, 24GB/s Read and 12GB/s Write throughput.
- ✓ Implements the latest Intel Ice Lake-D(Xeon) CPU.
- ✓ Support PCIe Gen4 U.2 SSD.
 - Provides 2 times the bandwidth than PCIe Gen3 U.2 SSD

- **High capacity**

- ✓ One appliance can provide 48 U.2 SS in 4U rack.

- **Supports 100GbE network**

- ✓ Supports RDMA, which can offload CPU and lower latency.
- ✓ One single port can provide up to 12GB/s performance.
- ✓ Cost-effective

GS/GSe U.2 and G3 new storage device

GS/GSe G3 includes a broad and complete product line to choose from, from standard-level 2U 12-bay models to the high-density 4U 90-bay models, as well as single-controller GSe series, allowing customers to find the most suitable storage devices

- **High performance**

- ✓ One appliance can provide up to 16GB/s Read and 12GB/s Write throughput.
- ✓ Implements the latest Intel Ice Lake-D(Xeon) CPU.

- **Complete product line**

- ✓ Standard model

- GS/GSe 3012 - GS/GSe 4012
- GS/GSe 3016 - GS/GSe 4016
- GS/GSe 3024 - GS/GSe 4024

- ✓ High-density model

- GS/GSe 3040 - GS/GSe 4040
- GS/GSe 3060 - GS/GSe 4060
- GS/GSe 3090 - GS/GSe 4090

Office Applications – Store, Share and Backup

For enterprise-level office file storage, GS*/CS* provides a unified storage space for file sharing and backup. Considering information security and efficiency, more and more companies no longer use USB flash drives, external hard drives or cloud drives, but instead deploy their own local NAS.

- **Files stored in GS/CS centrally**

- ✓ Data is centrally managed by IT, and capacity usage is improved by setting quotas and file access permissions.
- ✓ With RAID protection, data will not be lost even if the hard disk is damaged. CS has an additional node protection to prevent data loss when a node is damaged.
- ✓ Add JBOD devices to expand capacity. GS, CS can also expand its performance and capacity by adding nodes to satisfy storage and sharing requirements of enterprises.



*GS is a unified storage developed by Infortrend which supports cloud services, suitable for small and medium-sized enterprise applications

*CS is a clustered NAS developed by Infortrend, suitable for large-scale enterprise applications

Office Applications – Store, Share and Backup

- **File sharing**

- ✓ Provides file sharing and collaboration in the same office.
- ✓ GS also supports cloud services, allowing the headquarters and branches to share files and collaborate with each other.
- ✓ Implement deduplication and compression to maximize the available space and provide better storage space utilization.
- ✓ Supports immutable object storage, prevents data from being tampered with by malicious people by establishing Write Once Read Many (WORM), and avoids ransomware threats.

- **Multiple backup features and data disaster recovery**

- ✓ Provides multiple backup functions that can backup user PC, file server and public cloud data, make sure data is well protected.
- ✓ Cooperates with well-known enterprise-level backup software, such as Veeam, to meet the backup strategy requirements of customers and their applications.
- ✓ Provide multiple data protection functions such as snapshot, remote replication and cloud replication, which can recover damaged data in a short period of time, allowing enterprises to resume operations.

Office Applications – Store, Share and Backup

- **High availability**

- ✓ Redundant controller and power supply hardware design allows service to continue when a controller or power supply fails.
- ✓ As a cluster system, CS allows users to access data through other nodes even if a node is damaged.

- **Easy deployment for a quick start**

- ✓ Web graphical installation and setting wizard provides simple deployment procedure that can be done in 5 minutes, and the service can be ready in 30 minutes.
- ✓ In addition to “system” management permissions, EonOne also provides “user account” management permissions to set up space quota and read-write permissions.
- ✓ EonOne supports Multi-Factor Authentication (MFA), allowing IT managers to have one more layer of protection to prevent people from gaining management rights.
- ✓ EonView can automatically mount the storage shared space, allowing users to share and back up data without complicated settings.

Database, Virtualization and VDI

With the explosive growth of data, various key industries such as semiconductor industry chain, financial, military, etc., statistical operations on data have been converted from paper operations to databases for digital management and control. As a result, the need for databases, virtualization and virtual desktops is greater than ever. These applications have a common requirement for the storage devices: To be able to quickly handle a large number of small I/O reads and writes, it is necessary to use storage devices with high IOPS to keep the system running smoothly.



Database, Virtualization and VDI

Applications such as Database, virtualization and VDI require high IOPS storage devices. U.2 models are the first choice for such applications.

- **Provides up to 1.1M IOPS with U.2 SSD**

- ✓ Compared to traditional NL-SAS HDD, U.2 SSD can provide nearly 10 times IOPS.
- ✓ Both DS* and GS have models that support U.2 SSD, suitable for high-performance SAN applications.
- ✓ GS can be used as SAN and NAS at the same time.

- **High reliability**

- ✓ RAID protection and redundant design can be used with remote backup and snapshots to recover data.
- ✓ GS supports HA service, two GSs can provide redundant services for the same application at the same time to achieve uninterrupted services.



*DS is an enterprise-level block storage developed by Infortrend.

Backup

As data continues to grow, applications such as database systems, big data, and multimedia data require storage devices that are faster, secure, and easily scalable for efficient data backup. Fast backup ensures frequent data backups, remote data replication provides disaster recovery protection, and good scalability ensures the safe backup of large amounts of data.



Backup

Backups for various applications all require high-capacity storage devices, and the use of HDD storage models is the preferred choice for such applications.

- **High-density model**

- ✓ GS G3 provide 4U 60 and 90 bay high density models, by using 20TB hard drive, it can provide up to 1.5 PB usable capacity.

- **High scalability reliability**

- ✓ Support more than 800 drives in a single appliance by connecting to JBOD
- ✓ Scale-out to 4 appliances to provide more than 70PB capacity.

- **Complete data protection**

- ✓ Support WORM and data encryption.
- ✓ Support local and remote data replication.



Media and Entertainment (M&E)

For 4K and 8K high-resolution video editing workloads, GS and CS provide complete M&E storage solutions to meet the needs of post-production companies. They also support mainstream video editing software, allowing professional editors to share and edit collaboratively, which greatly improves work efficiency and helps them to focus more on content creation.

- **Supports 4K video editing and rendering at the same time**
 - ✓ GS supports up to 20 4K video streams of playback to meet the needs of small workgroups with fewer than 10 workstations.
 - ✓ CS supports up to 72 4K video streams of playback to meet the needs for huge, high-quality media workflow of large-scale post-production companies with 10 or more workstations.



Media and Entertainment (M&E)

- **Equipped with U.2 NVMe SSD, GS and CS can allow collaborative editing of 4K and 8K high-resolution video and audio**
- **Provides a variety of modular I/O cards for high-speed network environments.**
 - ✓ 16/32 Gbps FC
 - ✓ 10/25/100 GbE iSCSI
- **Supports mainstream non-linear editing software**
 - ✓ Final Cut Pro
 - ✓ Adobe Premiere Pro
 - ✓ DaVinci Resolve
- **Supports online expansion of storage capacity to store multimedia files under a single namespace.**
- **Provides easy-to-use management software EonOne and client utility EonView, allowing those without any storage experience to easily manage and deploy their storage.**

High Performance Computing (HPC)

In recent years, technology has progressed rapidly, and high-performance computing processors are faster and more accurate, bringing revolutionary progress in many fields. When performing faster and more accurate analysis, it is necessary to rely on the storage device to improve performance and capacity, to properly handle data access from multiple analysis servers and quickly store the analyzed data. Due to the explosive growth of related demands, general data storage devices can no longer suffice.



High Performance Computing (HPC)

EonStor CS can meet the needs of multiple high-performance servers for parallel computing, real-time data analysis and file sharing.

- **Provides up to 100GB/s bandwidth and 100PB storage capacity for massive data analysis and storage.**
 - ✓ A single cluster can be expanded up to 144 nodes, and a single node can support up to 120 hard drives.
 - ✓ With U.2 NVMe SSD, the read/write speed can be further improved.
- **Supports storage tiering to improve access efficiency.**
 - ✓ Based on data types and access frequency, frequently-accessed (hot) data is stored in SSDs, while archival (cold) data is stored in HDDs.
- **Supports load balancing to make parallel computing smoother.**
 - ✓ Workloads can be automatically distributed through DNS to avoid overloading network channels and nodes.
- **Provides high availability with a multi-level protection mechanism so that HPC applications are not interrupted when any part of the hard drive or node is damaged.**

High Performance Computing (HPC)

EonStor GS U.2 can be equipped with PCIe Gen4 U.2 NVMe SSD and 100GbE network, suitable for demanding SAN/NAS applications.

- **Supports 100GbE and PCIe Gen4 U.2 SSD**

- ✓ One single 100 GbE port can provide up to 12GB/s performance.
- ✓ 24/12 GB/s throughput and 1.1M IOPS can deal with heavy workloads.
- ✓ With PCIe Gen4 U.2 NVMe SSD, the read/write speed can be further improved.



High Performance Computing (HPC)

EonStor GS G3 can fully leverage the performance of multiple HDDs, suitable for applications with high bandwidth and large capacity requirements.

- **Supports up to 60bay model**

- ✓ 16/12 GB/s throughput can deal with high-throughput applications.
- ✓ One single appliance can support more than 1PB raw capacity.

- **Supports scale-up, expands storage capacity and still maintains performance**

- ✓ Scale-up allows one single node to support up to 896 HDDs/SSDs.



Picture Archiving and Communication System (PACS)

PACS manages medical imaging files such as MRI, CT and X-ray. In addition to providing large capacity, the storage system must also have high performance to ensure that multiple doctors can read these image files simultaneously and quickly.



Picture Archiving and Communication System (PACS)

- **EonStor GS/GSe**

- ✓ Integrates both SAN and NAS and supports scale-out.
- ✓ Each GS can simultaneously allow 10 doctors to review CT or MRI images within 3 seconds. When multiple doctors access different image folders at the same time, the performance of multiple GSs can be fully leveraged.
- ✓ SSD cache can speed up file operations. When the number of medical image files and directories increases, a good user experience can still be maintained.



Picture Archiving and Communication System (PACS)

- **EonStor CS**

- ✓ Supports scale-out, can easily cope with the demand for performance and capacity growth.
- ✓ Each CS can simultaneously allow 15 doctors to access CT or MRI images within 3 seconds.
- ✓ Automatically allocate file storage through the Auto tiering function, and use the high performance of SSD and the large capacity of HDD to configure the most cost-effective solution.



Surveillance

The video surveillance industry requires low-cost capacity, system expansion, performance, and complete data protection. Infortrend has various storage systems and cooperates with video management software providers such as Milestone, Genetec, and Digifort to provide comprehensive video surveillance integration solutions.



Surveillance

- **Real-time recording and playback: DS*/GS**

- ✓ Suitable for medium-scale surveillance solutions, supporting 500 to 2000 3 MP IP cameras and retaining video recordings for up to 180 days.
- ✓ Provides high availability with redundant controllers on SAN (DS and GS) and NAS (GS) for stable recordings.
- ✓ Capacity can be expanded to 8PB (DS) and 16PB (GS), with GS scale-out it can be further expanded to 64PB (GS).

- **Video archive in control center: CS**

- ✓ Suitable for large-scale surveillance, supporting more than 3000 3 MP IP cameras and retaining video data for up to 180 days.
- ✓ Capacity can be expanded to 100PB, which can meet the huge capacity demand of a variety of video surveillance solutions.
- ✓ With multi-level data protection, data will not be lost when a disk or node fails.

- **Recording, playback, and storing: EonServ***

- ✓ Suitable for small and medium-sized surveillance, EonServ supports 450 3 MP IP cameras and keeps video recordings for up to 90 days.
- ✓ All-in-one storage and server with simplified architecture at a reduced cost.
- ✓ Capacity can be expanded up to 4PB.

*EonServ is an enterprise-level storage server developed by Infortrend.

THANK YOU

