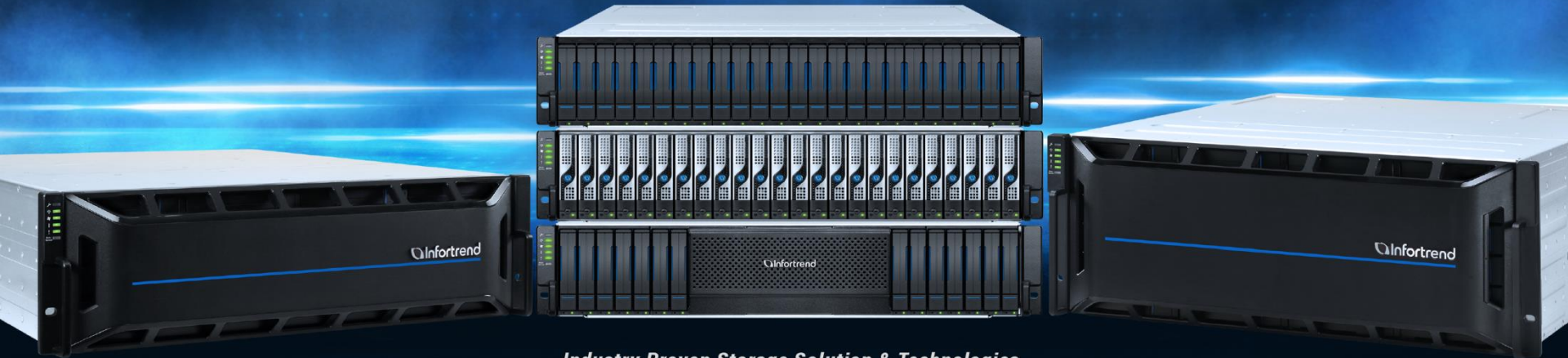Infortrend®

SAN STORAGE — UNIFIED STORAGE — SCALE-OUT NAS — AI STORAGE APPLIANCE
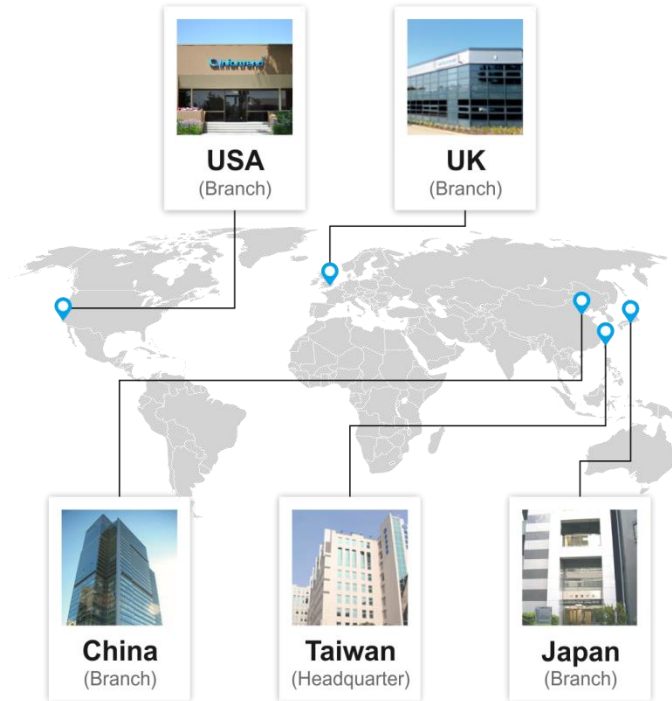
30 Years of Continuous Innovation

Industry Proven Storage Solution & Technologies

2023 V1.3

Infortrend Fact Sheet

- Established: **1993**

- Publicly Listed: **2002**

- Headquarter: **Taipei, Taiwan**

- Worldwide Employees: **500**

USA
(Branch)

UK
(Branch)

China
(Branch)

Taiwan
(Headquarter)

Japan
(Branch)

Why Infortrend

- **30 years of experience** in developing high-performance RAID storage solutions
- Deployed more than **1,000,000** world-wide rack-mounted systems
- Dedicated focus on R&D – **Time to Market**
- **300+ engineers dedicated** to R&D to deliver superior products
- **Price-Performance leader** in the market
- All products **designed and manufactured in-house**

High Quality from Design to Manufacturing

Total Quality Management (TQM)

- Implement TQM in design, supply chain, manufacturing, and quality management

- Weekly quality review is driven by the top management team

Process Control Methodology

- Foolproof software automation for production testing

- Six sigma process control methodology
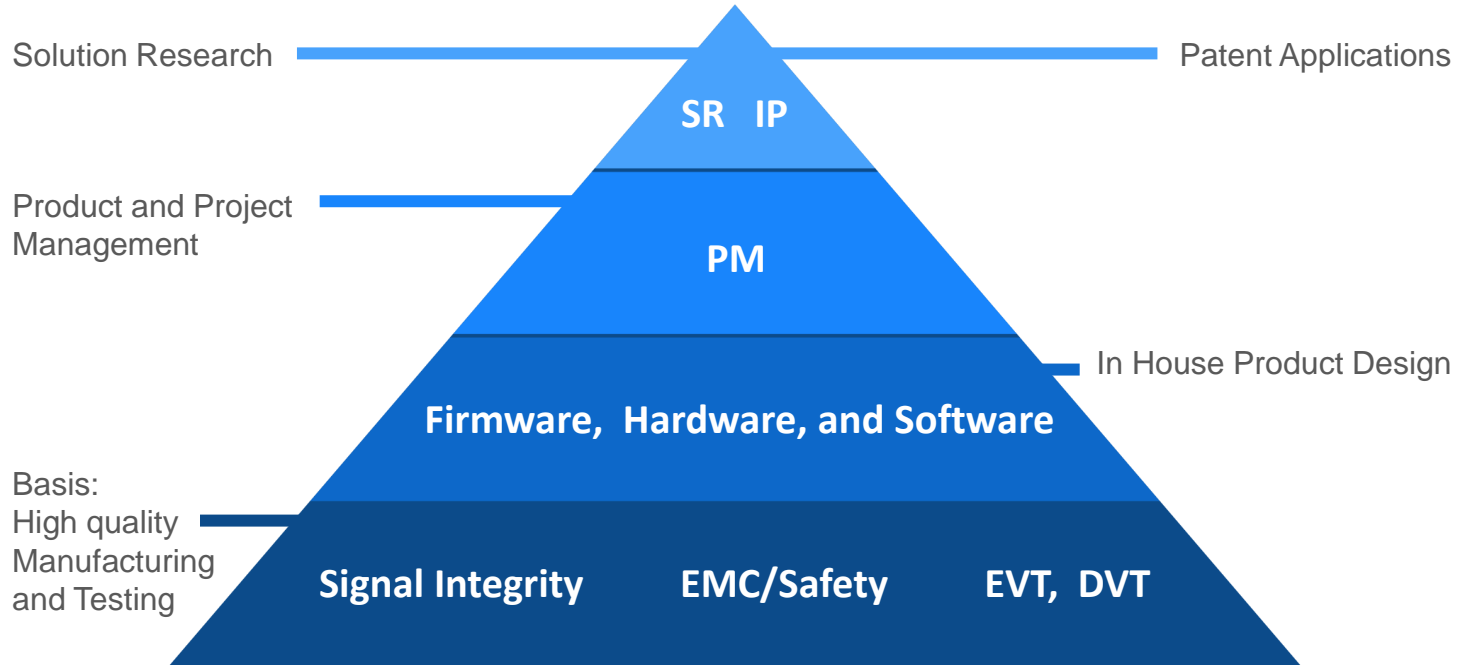
Shop Floor Control and Traceability

- Forward / backward traceability and up to PCBA component level

- Foolproof routing control for operation and service

Close Loop Corrective Action

- Web-based integrated CAR (corrective action request) system

- Benchmark — 8D problem-solving methodology

Dedicated Focus on R&D

Total 300+ technical staff

Solution Research — Patent Applications

SR   IP

Product and Project Management

PM

In House Product Design

Firmware, Hardware, and Software

Basis:
High quality Manufacturing and Testing

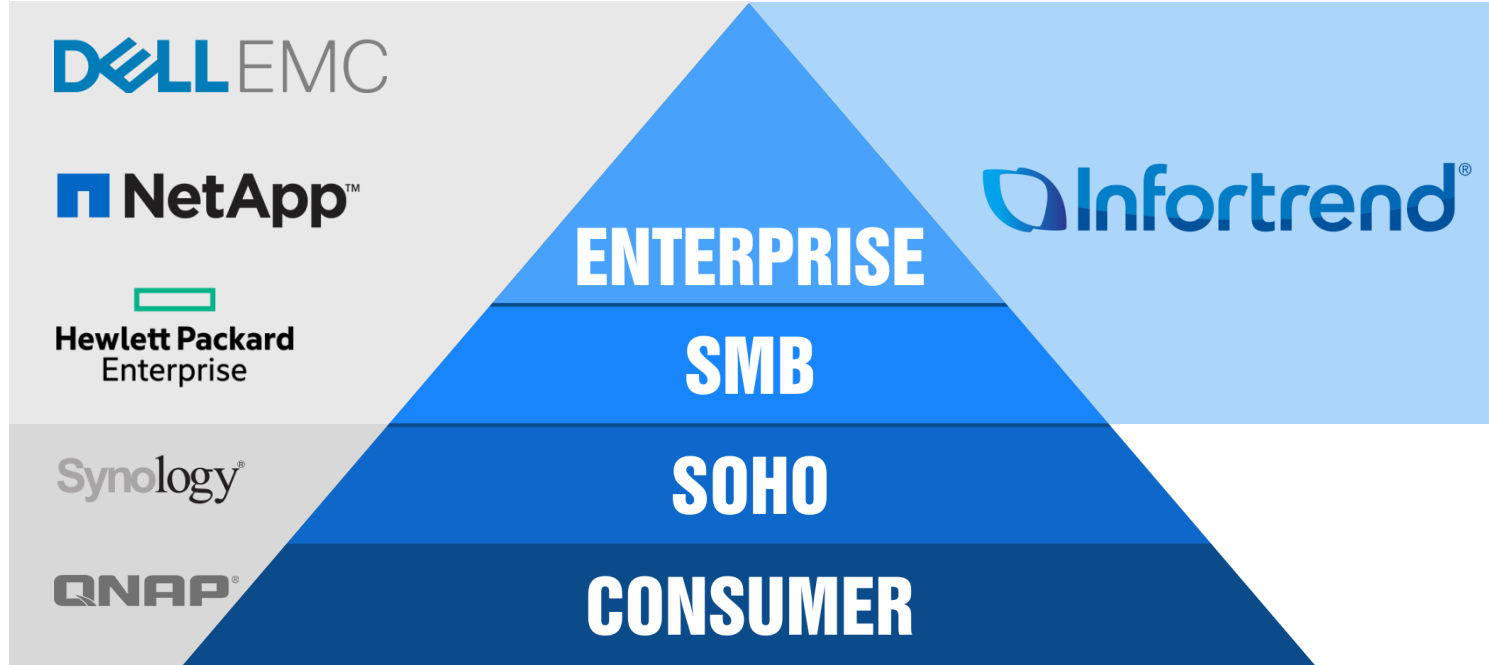**Signal Integrity   EMC/Safety   EVT, DVT**

Worldwide Achievements & Recognitions

- Infortrend recognized as a vendor in **Gartner's Magic Quadrant for Primary Storage** from 2010~2019

- Infortrend awarded **Editor's Choice – Company** by **Storage Magazine** in 2020

- EonStor GS Gen2 awarded **Cloud Product of the Year** by **Storage Magazine** in 2020

- EonStor GSa all-flash SAN-in-a-box won **Best of Show Award** at **2019 NAB Show**

- EonStor GSa 2024 received a **5-star review** along with **Editor's Choice Award** from **IT Pro** in 2019

- Infortrend listed in **10 Most Promising Storage Solution Providers** by **CIOReview** in 2018

- Infortrend listed in **20 Most Promising Storage Solution Providers** by **CIOReview** in 2017

- EonStor DS 4024B **ranked #2 worldwide** in **Top 10 SPC-2 by Price-Performance**

Market Position

DELL EMC

NetApp™

Hewlett Packard
Enterprise

Synology®

QNAP®

Infortrend®

ENTERPRISE

SMB

SOHO

CONSUMER

Vertical Markets

Media & Entertainment

- 4K/8K VFX/ Video Editing
- Rendering/ Coloring
- Broadcasting

High Performance Computing

- AI & Machine Learning
- Government / Academic research center

Surveillance / Backup

- Massive & seamless scale-out capability
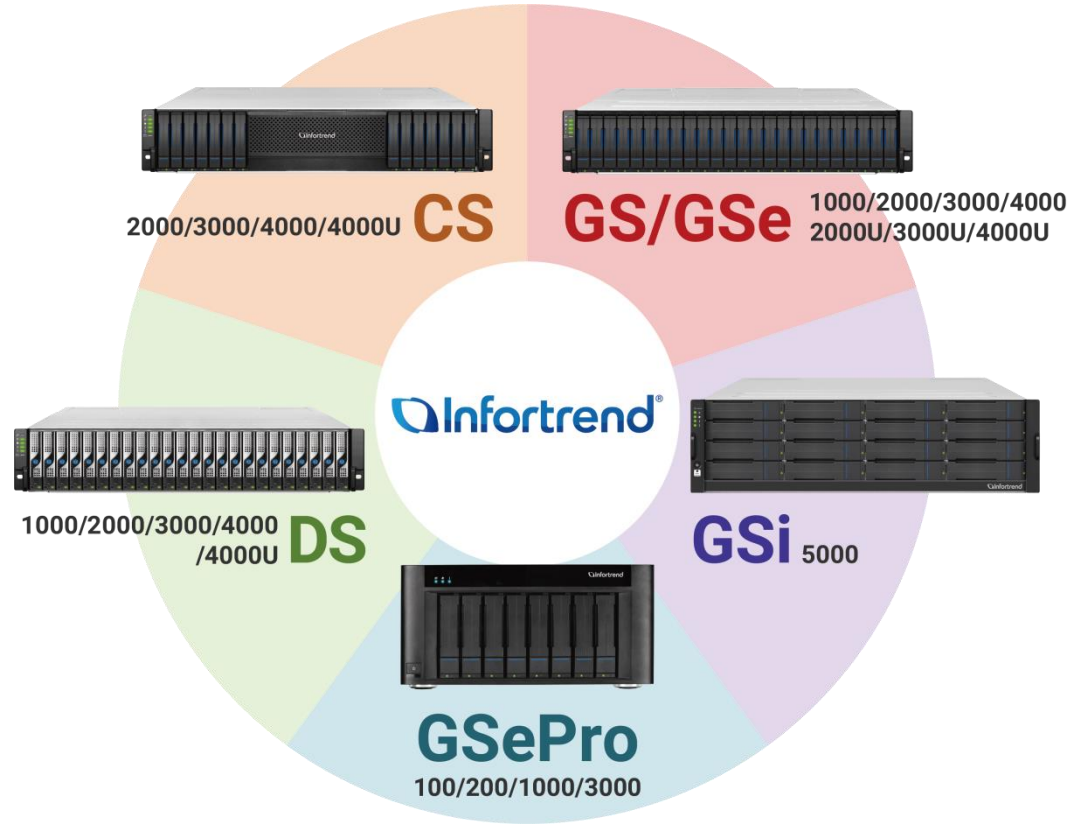- Milestone certified solution

Portfolio

Scale-Out NAS
EonStor CS storage family

Unified Storage (SAN+NAS)
EonStor GS/GSe storage family

SAN Storage
EonStor DS storage family

AI Storage Appliance
EonStor GSi storage family
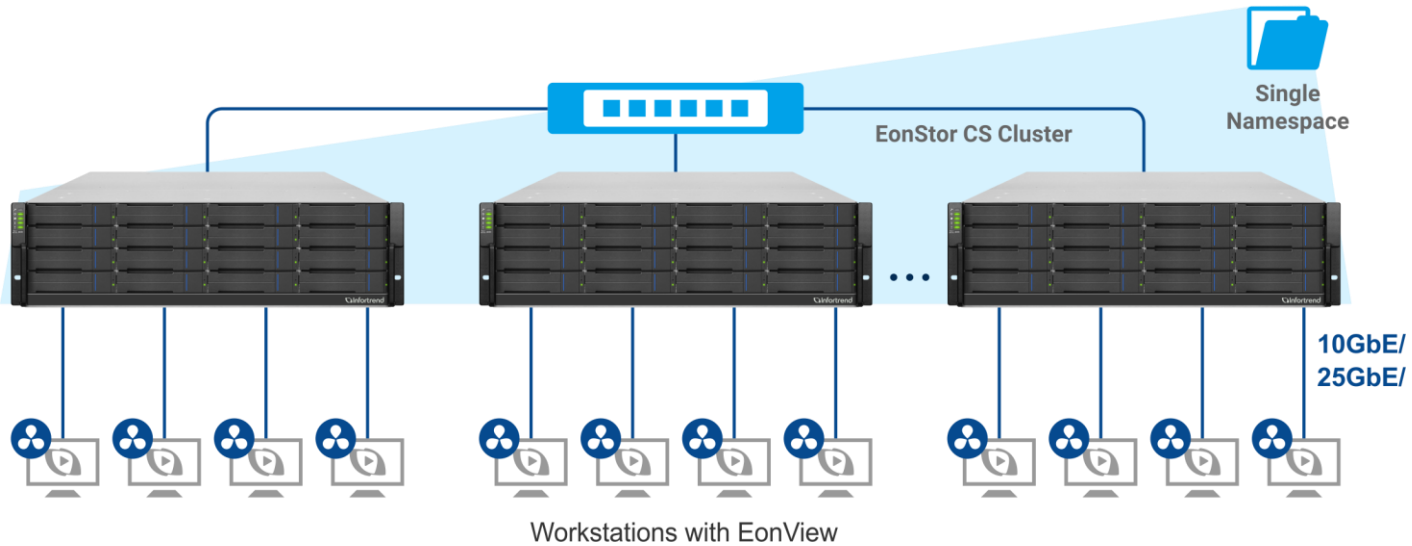
Entry Commercial NAS
EonStor GSe Pro storage families

2000/3000/4000/4000U **CS**

GS/GSe 1000/2000/3000/4000
2000U/3000U/4000U

1000/2000/3000/4000
/4000U **DS**

GSi 5000

GSePro
100/200/1000/3000

CS Introduction

EonStor CS Family

The most valued and reliable
scale-out network attached storage

QUALITY   SPEED   RESULTS   COSTS

Single
Namespace

EonStor CS Cluster

• • •

10GbE/
25GbE/

Workstations with EonView

High Performance and Capacity

EonStor CS is a Scale-out NAS system, which supports horizontal scalability (Scale-out) by adding more devices, linearly expanding both capacity and performance as the system grows. The entire cluster can reach up to 100+ GB/s read/write speed and 100+ PB capacity.
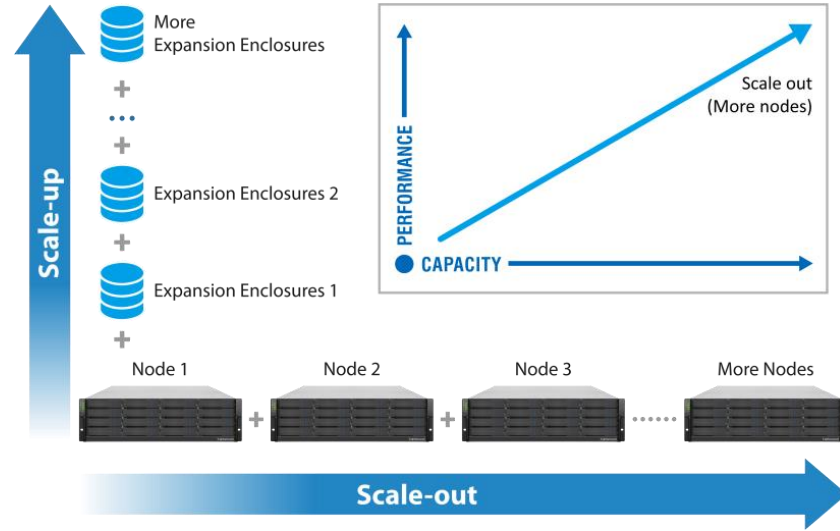
100+ GBps
Read/Write speed

144
Nodes

100+
PB

High Scalability

- Horizontal scalability (Scale-out)
  - Connecting more devices (nodes) to increase both capacity and performance
  - Up to 144 nodes

- Vertical scalability (Scale-up)
  - Adding disk drives to an existing system via JBOD to increase capacity
  - Up to 120 HDDs per node

EonStor CS Family Overview

Maximum Performance (vertical axis)

CS 4000U
- High performance solution
- Supports U.2 NVMe SSD
- 2U14-bay

CS 4000
- High performance solution
- Supports SSD node with 2U25-bay
- 2U25, 3U16, 4U24, 4U60-bay

CS 3000
- Cost/performance Scale-out NAS
- 3U16, 4U24-bay

CS 2000
- For Essential Backup/Archive
- 4U 60-bay

Product Series (horizontal axis)
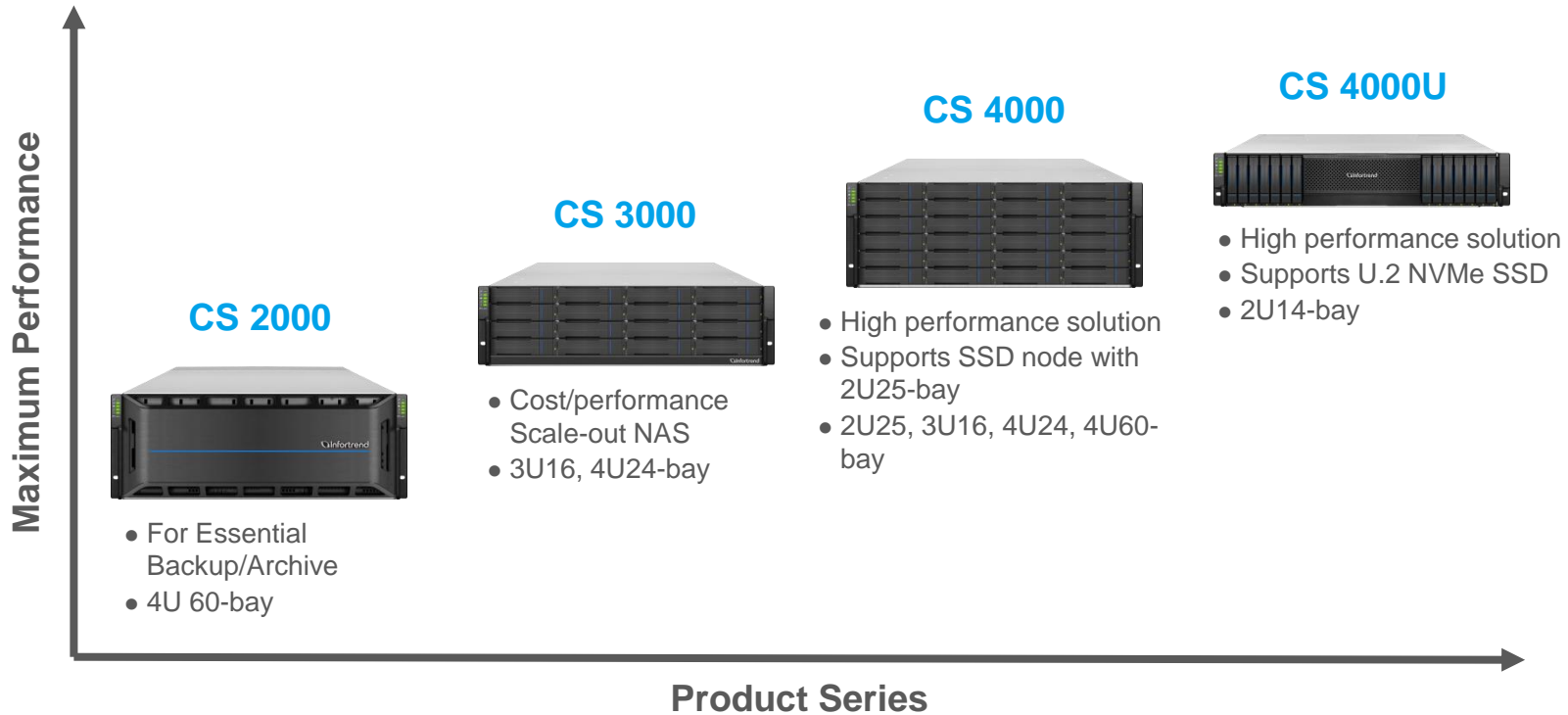
Case Study: Post-Production House

- **Challenges**

  Insufficient performance and capacity of the existing storage system

- **Applications**

  4K/HD video editing for a studio with more than 30 users

- **System Requirements**
  - Performance: Read & Write $\geq$ 5GB/s
  - Capacity: 650TB usable
  - Protocol: SMB/CIFS

- **Why Infortrend?**
  - High Performance: Read/Write = 5.9/5 GB/s
  - Data Protection: EC 2+1, RAID 5
  - Model: CS 3060D x 2 (4 nodes) with 120 HDDs

CS 3060 4-node Cluster

10GbE Network

10GbE Network

10GbE Network

Windows Client

Mac Client
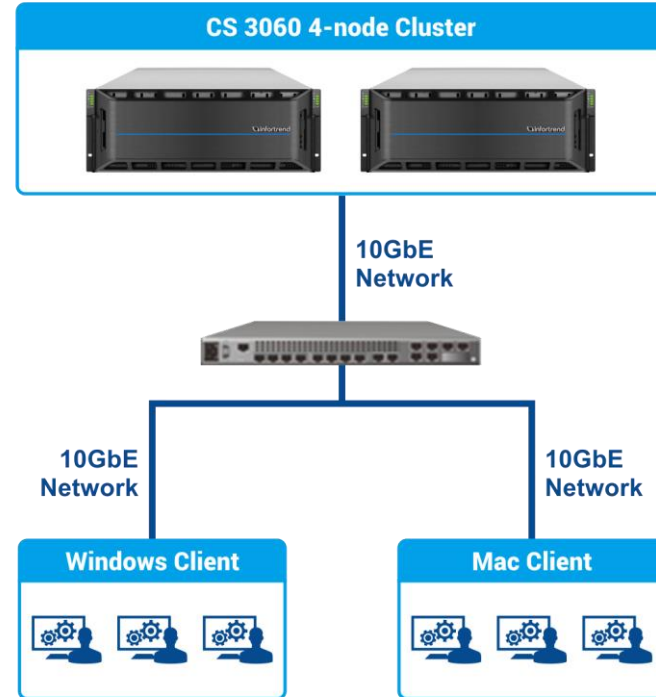
GS Introduction
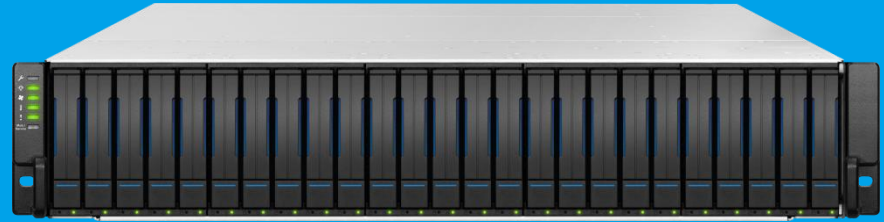
Infortrend GS Overview

GS Family

Scale-out High Availability Unified Storage

- High availability solution designed for enterprises
- Support block and file scale-out with up to 4 GS
- Support U.2 SSD, SAS SSD or HDD drive interface
- Support 100GbE RDMA
- Built-in EonCloud gateway standard license

GSe Family

Scale-out Unified Storage

- Unified storage designed for SMB
- Support block and file level scale-out with up to 4 GS
- Support U.2 SSD, SAS/SATA SSD or HDD drive interface
- Support 100GbE RDMA
- Built-in EonCloud gateway standard license

GSe Pro Family

Entry-level Unified Storage

- Unified systems deliver stable performance and NAS services within affordable budgets
- Single controller with SATA or SAS drive interface
- Built-in EonCloud gateway standard license
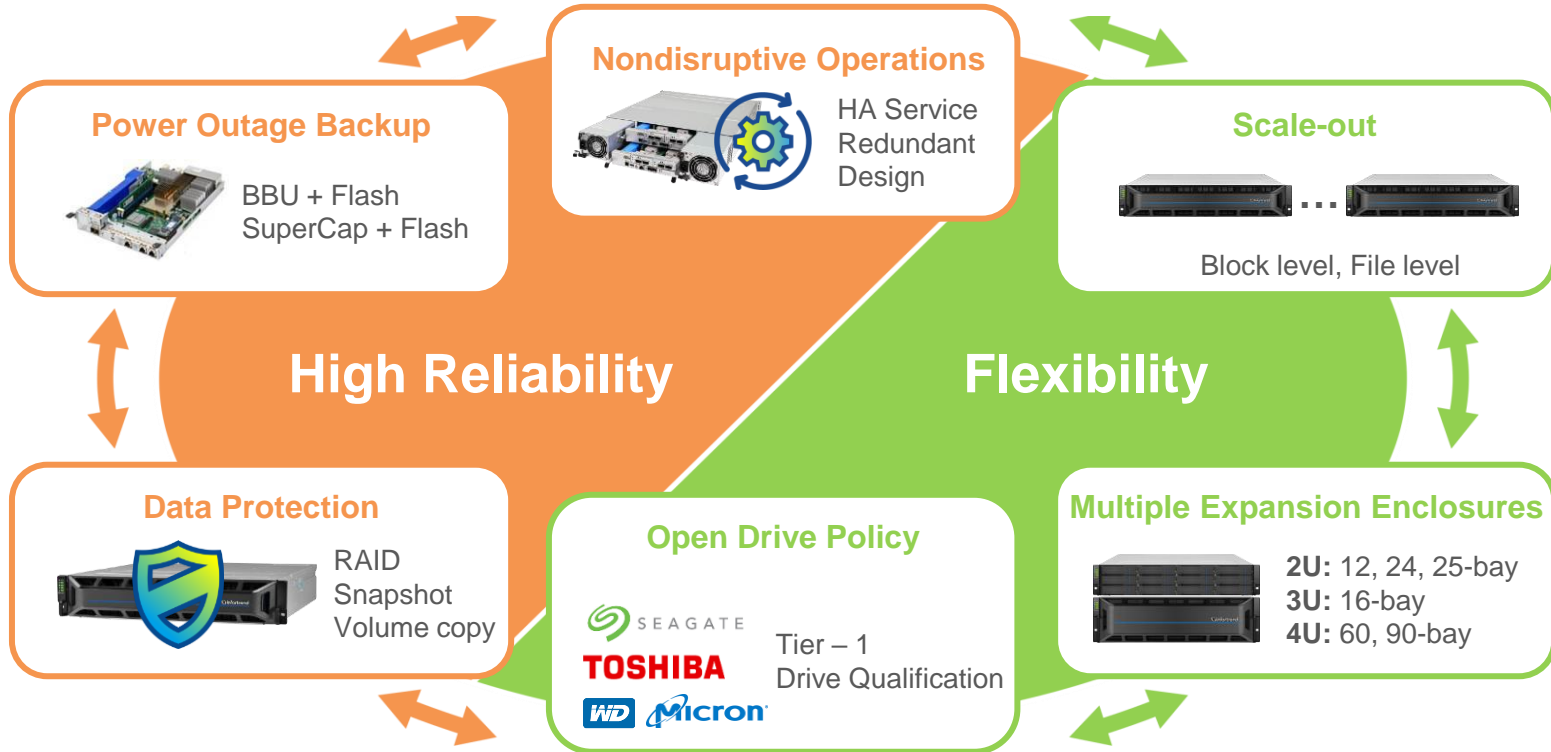
EonStor GS - SAS HDD Series Overview

Performance / Scalability

High Density

GS 4000 G3

High Density

GS 3000 G3

GS 2000

GS 1000

- 896 Drives
- R/W=16/12 GB/s (block)
  R/W=14.5/5.5 GB/s (file)
- 2U12, 3U16, 4U24, 4U40,
  4U60, 4U90-bay

- 896 Drives
- R/W=16/10 GB/s (block)
  R/W=12.5/3.6 GB/s (file)
- 2U12, 3U16, 4U24, 4U40,
  4U60, 4U90-bay

- 896 Drives
- R/W=11/4.3 GB/s (block)
  R/W=5.9/2.6 GB/s (file)
- 2U12, 3U16, 4U24-bay

- 448 Drives
- R/W=5.7/2.4 GB/s (block)
  R/W=2.5/0.75 GB/s (file)
- 2U12, 3U16, 4U24-bay

Product Series

EonStor GS - U.2 NVMe Hybrid-Flash Series Overview

Performance / Scalability

GS 2000U
- 896 Drives
- 600K IOPS
  R/W=11/7 GB/s (block)
  R/W=4.2/1.3 GB/s (file)
- 2U24

GS 3000U
- 896 Drives
- 1000K IOPS
  R/W=11.8/7.5 GB/s (block)
  R/W=9/3.5 GB/s (file)
- 2U24

GS 3000UT

100 GbE
- 896 Drives
- 950K IOPS
  R/W=24/10 GB/s (block)
  R/W=15/5.2 GB/s (file)
- 2U24, 4U48

GS 4000U

100 GbE
- 896 Drives
- 1100K IOPS
  R/W=24/12 GB/s (block)
  R/W=18/6 GB/s (file)
- 2U24, 4U48
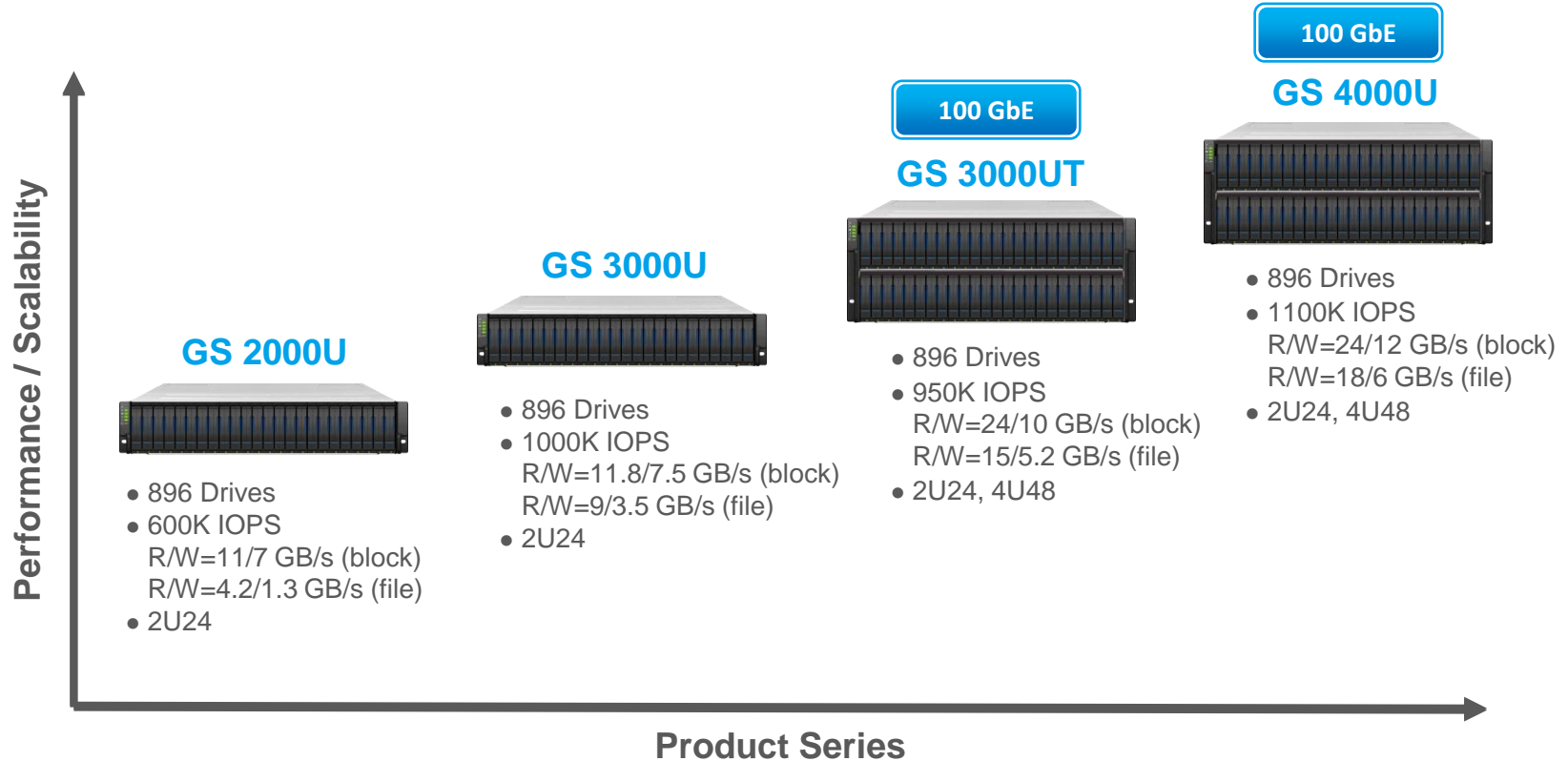
Product Series

EonStor GSe - SAS HDD Series Overview

Performance / Scalability

GSe 1000
- 448 Drives
- R/W=2.8/0.9 GB/s (block)
  R/W=1/0.4 GB/s (file)

GSe 2000
- 896 Drives
- R/W=5.5/2.6 GB/s (block)

High Density

GSe 3000 G3
- 896 Drives
- R/W=8/5 GB/s (block)
  R/W=6.3/1.8 GB/s (file)
- 2U12, 3U16, 4U24, 4U40, 4U60, 4U90-bay

High Density

GSe 4000 G3
- 896 Drives
- R/W=8/5.8 GB/s (block)
  R/W=7.3/2.6 GB/s (file)
- 2U12, 3U16, 4U24, 4U40, 4U60, 4U90-bay
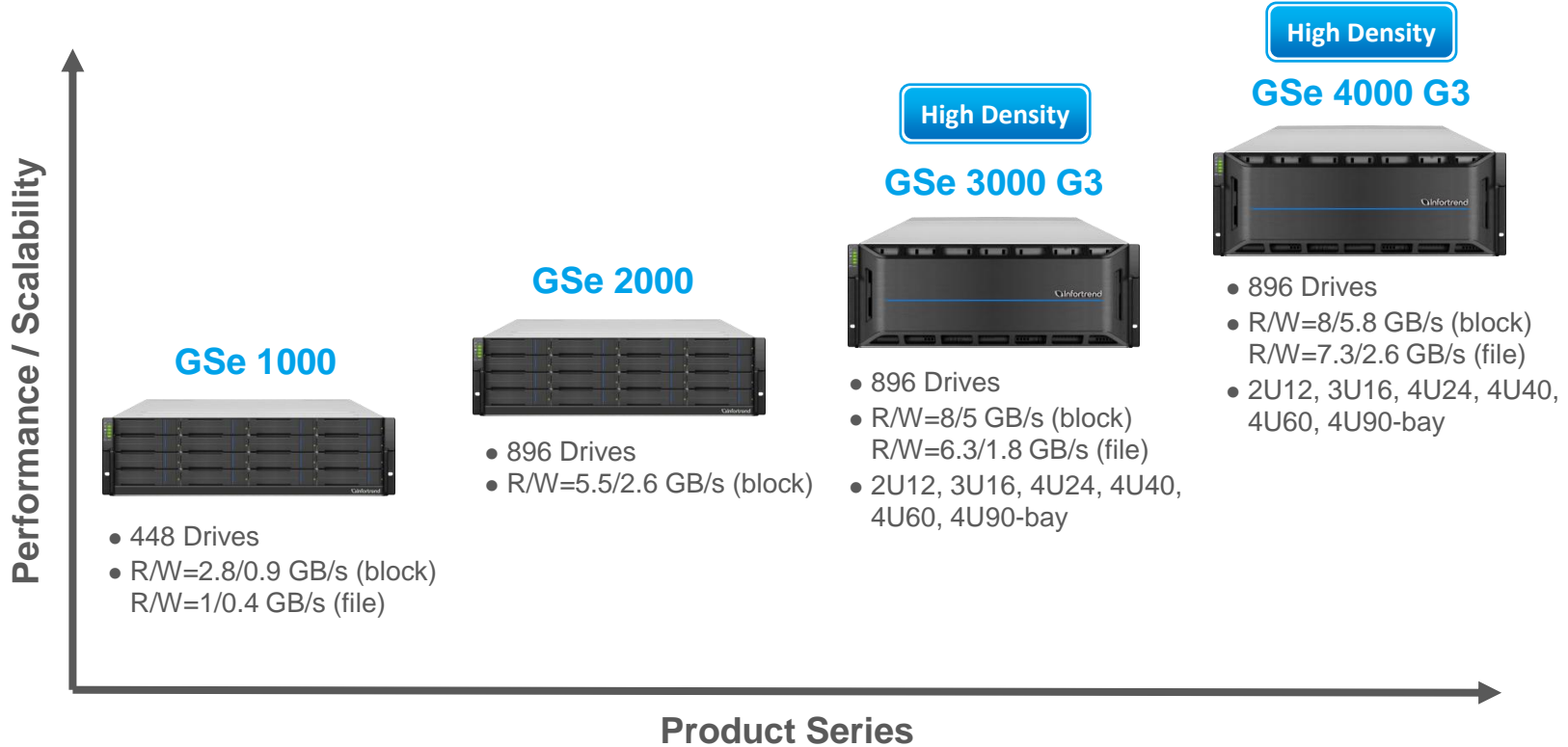
Product Series

EonStor GSe - U.2 NVMe Hybrid-Flash Series Overview

Performance / Scalability

Product Series

GSe 2024U

- 896 Drives
- 376K IOPS
  R/W=6.3/4.3 GB/s (block)
  R/W=2.1/0.73 GB/s (file)

GSe 3024U

- 896 Drives
- 560K IOPS
  R/W=6.3/5.4 GB/s (block)
  R/W=4.9/2 GB/s (file)

GSe 3024UT

100 GbE

- 896 Drives
- 513K IOPS
  R/W=12/9 GB/s (block)
  R/W=5/2 GB/s (file)

GSe 4024U

100 GbE

- 896 Drives
- 600K IOPS
  R/W=12/9 GB/s (block)
  R/W=8/3 GB/s (file)
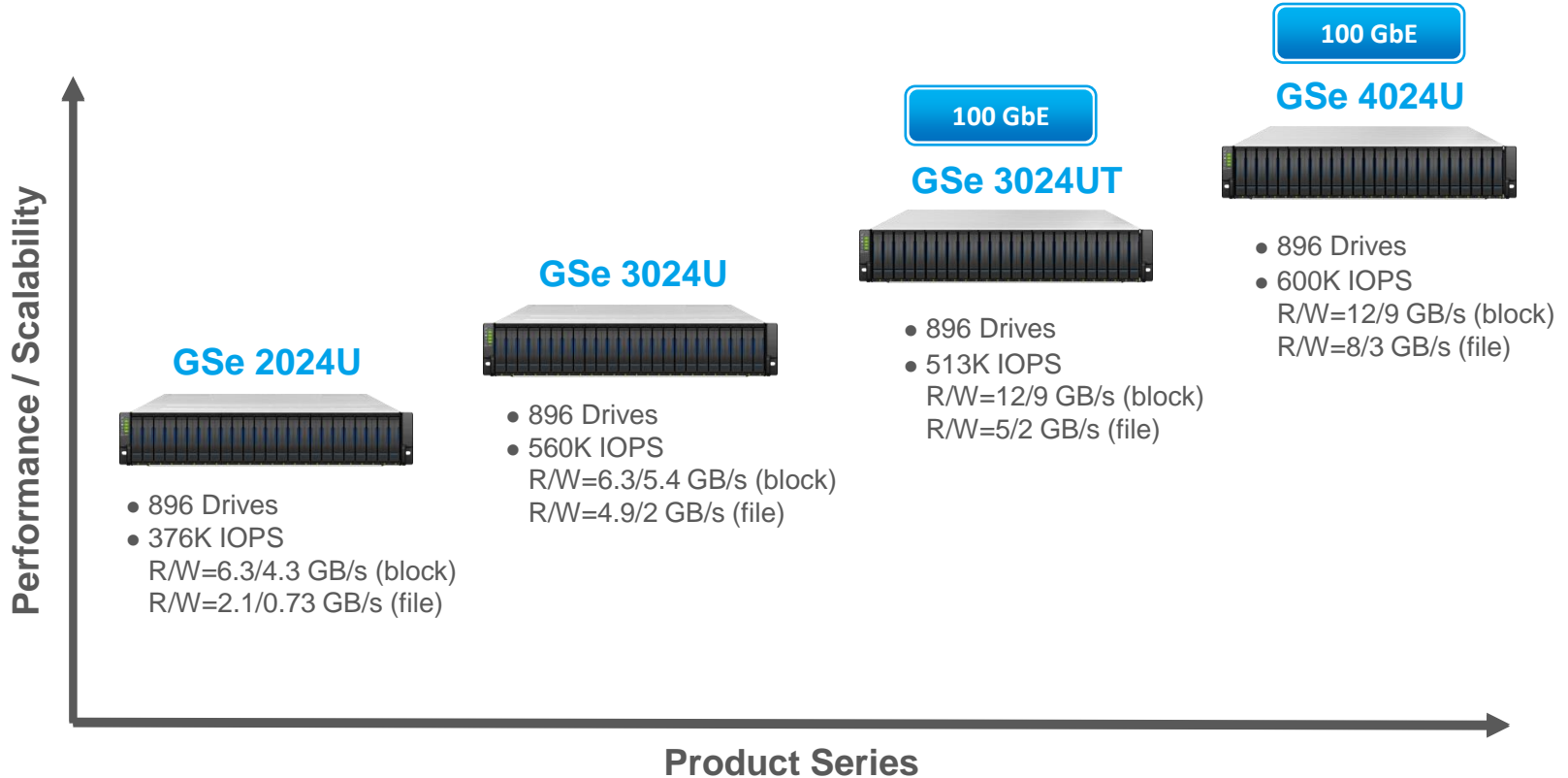
DS Introduction

EonStor DS at a glance

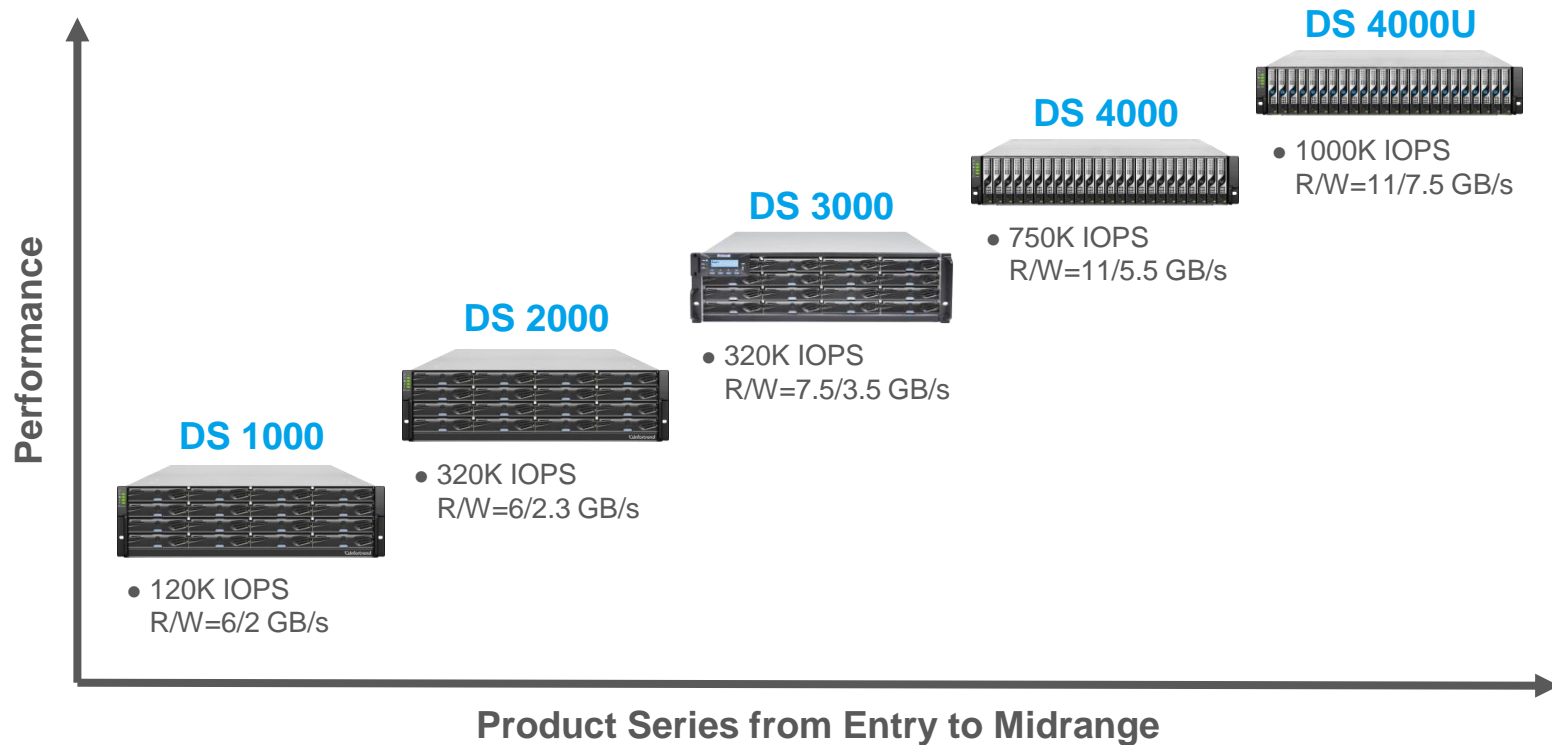Excellent price/performance SAN storage for various environments

IOPS-intensive Applications

Server Virtualization, Virtual Desktop Infrastructure (VDI), Database, Online Transaction Processing, etc.

Cost-sensitive Solution

Surveillance, Mail server, Backup

EonStor DS Family Overview

Performance (y-axis)

DS 1000
- 120K IOPS
  R/W=6/2 GB/s

DS 2000
- 320K IOPS
  R/W=6/2.3 GB/s

DS 3000
- 320K IOPS
  R/W=7.5/3.5 GB/s

DS 4000
- 750K IOPS
  R/W=11/5.5 GB/s

DS 4000U
- 1000K IOPS
  R/W=11/7.5 GB/s

Product Series from Entry to Midrange (x-axis)

EonStor DS Advantages

- **Multiple form factor choices**

  High-density 4U 60-bay form factor for limited rack space

- **High cost/performance value**

  Up to 5.3PB capacity from entry-level DS 1000 Gen2 series

- **High availability solution**
  - Automatically recovers bad sectors, extends drive life, and prevents rebuild by intelligent media scan mechanism
  - Redundant components
  - Cache Backup Technology

Learn More

THANK YOU

Infortrend®