

## **TRENDFOCUS' analysts have more practical data storage industry experience than any other research firm.**

**Mark Geenen** is the founder and president of TRENDFOCUS. Mr. Geenen brings extensive skill and knowledge of the data storage industry including over 25 years researching and consulting in the HDD, component, and storage industry markets. Globally, he is a sought-after conference speaker, is frequently cited in industry and business press, and has authored several articles. Mr. Geenen is on the Global Board of Directors of IDEMA, the trade association for the data storage industry, and is an Executive Council member of the Advanced Storage Technology Consortium (ASTC).

**John Kim**, Vice President, is our senior analyst and is leading TRENDFOCUS' expertise in demand interconnects for enterprise storage, personal computing, CE, and external storage. Mr. Kim has over 25 years of HDD industry experience, including 16 years with TRENDFOCUS. From 1991 to 1998 he was Director of Sales and Marketing for Kobe Precision and, prior to that, held a top marketing role at Microscience International. Mr. Kim's experience in Asian markets anchors the company's wide exposure in that region.

**John Chen**, Vice President, is driving TRENDFOCUS' efforts in enterprise and client end market demand modeling. His experience in the data storage industry spans more than 25 years. With engineering degrees from both U.C. Davis and U.C. Berkeley, Mr. Chen was deeply involved in magnetic media and sputter process development throughout the 1990s, followed by years of senior managerial experience in program management and technical sales at Komag. He also served in an enterprise commodity management role and has provided key technical input in various M&A and intellectual property marketing activities.

# TRENDFOCUS

**The Data Storage Industry's  
Most Trusted Market Intelligence**

HDDs and NAND/SSDs

Cloud, Hyperscale, Enterprise,  
and Client Markets

Technology & the Storage Supply Chain

## TRENDFOCUS

20370 Town Center Lane  
Suite 240  
Cupertino, CA 95014  
Tel: 408.996.9903 Fax: 408.996.9910  
Email: [info@trendfocus.com](mailto:info@trendfocus.com)

[www.trendfocus.com](http://www.trendfocus.com)



## The Data Storage Industry's Most Trusted Market Intelligence

TRENDFOCUS blends both "top down/bottom up" and 360° statistical analysis providing our clients with the exacting data set needed to make complex decisions in today's environment.

Delivered with nimble and agile customer support, our research deliverables include:

- ▶ Quantitative supply/demand trend analyses: production plans vs. demand, shipments, market shares, pricing, and technology transitions
- ▶ Storage demand interlinks into the wider computing/IT ecosystem
- ▶ Competitive analysis and risk assessment
- ▶ Capital investments and trends

### Research Expertise In:

#### Storage Market Segments & Demand Interlinks to

Cloud, Hyperscale, and Enterprise Storage  
PCs, Tablets, Convertibles, Smartphones, Consumer Electronics

#### HDD & NAND/SSD Storage & Supply Chain

Demand Drivers, Technology Interconnects  
Key Components  
Equipment and Materials

#### Supply Chain Risk, Capital Investment Assessment

## New For 2014...

### Cloud, Hyperscale, & Enterprise Storage Service

*The storage industry's ONLY dedicated data set summarizing and forecasting skyrocketing storage demand.*

TRENDFOCUS deliverables include:

- ▶ Hyperscale/DIY vs. traditional OEM segmentation analysis for HDDs and SSDs
- ▶ HDD forecasts by nearline, workload-limited, and archive
- ▶ SSD forecasts by SATA, SAS, PCIe
- ▶ \$/GB, exabyte and revenue forecasts by HDD and SSD type
- ▶ Impact on storage supply chain, including head/disk ratios

### Hybrid/SSHD, Ultra-Slim (5mm) HDDs in PCs and Tablets

*(Included in SDAS: HDD Information Service)*

HDD manufacturers are ramping up output of new HDD designs and performance enhancements to extend the life of HDDs in client devices. TRENDFOCUS will offer detailed analyses and forecasts of thinner HDDs and solid-state hybrids in mobile products such as PCs, convertibles, and tablets.

### PCIe, SATA, & Non-Traditional SSD Form Factors

*(Included in the NAND/SSD Information Service)*

TRENDFOCUS' NAND/SSD Information Service will spotlight the complex transitions in SSD interfaces and form factors in the enterprise and client markets.

### Supply Chain Risk, Capital Investment Assessment

Enterprise storage growth and slowing areal density growth are creating profound challenges for the HDD supply chain. Our component services will delve deeper into head and disk ratios, manufacturing capacity analysis, and capital investment requirements.

# TRENDFOCUS Information Services

## **NEW!** Cloud, Hyperscale, & Enterprise Storage Service

New in 2014, this service analyzes hyperscale/DIY/commodity hardware and traditional OEM demand for HDDs and SSDs. Included are HDD forecasts by nearline, workload-limited, and archive/cold models; SSD forecasts by SATA, SAS, PCIe; \$/GB, exabyte and revenue forecasts by HDD and SSD type; and resulting impact on the storage supply chain.

## Storage Interlinks Service

Storage Interlinks "connects the dots" between storage devices and end markets. We map HDD and SSD shipments to the demands of multiple market segments, and include technology trends, capacities, costs, and more!

## SDAS: HDD Information Service

TRENDFOCUS' exacting, well-timed analysis of HDD supply and demand provides clients with the most comprehensive market research tool available.

## NAND/SSD Information Service

A distinctive data set on SSDs utilized in client and enterprise storage applications, the NAND/SSD Information Service charts the growth of acceleration and storage architectures. We analyze bit growth through lithographic transitions and capacity expansions, and provide a NAND consumption model by SSD application.

## Key Components: Rigid Disk Media/Substrate, Recording Head Information Services

This research provides clients with unique and detailed coverage of the disk media, substrate, and recording head markets.

## Proprietary Consulting

TRENDFOCUS has an extensive history of successful project collaborations with global clients. We encourage you to leverage our expertise to address your specialized data needs.

## Subscribers to each TRENDFOCUS Information Service will receive the following:

### Unique Customer Service and Support

Clients have full access to TRENDFOCUS analysts, at no extra charge. We take pride in our consistently responsive customer support.

### Quarterly Updates & Long-Term Forecasts

Comprehensive and timely market updates focusing on key industry metrics.

### Executive Briefs and Periodic Installments

Event-driven publications analyzing spot market issues.

### FOCUS ON Documents

In depth white papers examining complex market and technology issues.

### Daily Global News

Widely sourced global news delivered via email.