

Solutions Catalogue 2026



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PHISON

About Phison

Phison Electronics Corp. (TPEX:8299) is a global leader in NAND Flash controller IC and storage solutions. We provide a variety of services from controller design, system integration, IP licensing to total turnkey solutions, covering applications across SSD (PCIe/SATA/PATA), eMMC, UFS, SD and USB interfaces, reaching out to consumer, industrial and enterprise markets. As an active member of industry associations, Phison is on the Board of Directors for SDA, ONFI, UFSA and a contributor for JEDEC, PCI-SIG, MIPI, NVMe.



Experience
25+
Years



\$2.3B
2025 Revenue



80%+
R&D Exp. / OPEX



Global Headcount
5000+
75% R&D



20%+
Global SSD Controller
Market Share



BUSINESS FOCUS
Client | Embedded | Enterprise
Automotive | Gaming
Design Service
Power IC | Signal IC

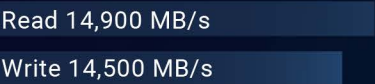
Lightning-Fast Gen5 Storage with 6nm Process

PS5028-E28

The Weapon of Choice for
Serious Gaming and Productivity

- PCIe Gen5x4
- TSMC 6nm process
- LPDDR4/4X and LPDDR5/5X both supported
- 3D TLC / QLC supported
- 8 channels with 32 CEs
- Capacity up to 32TB

Sequential Performance



Random Performance

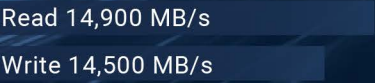


PS5037-E37T

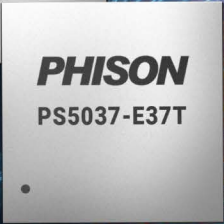
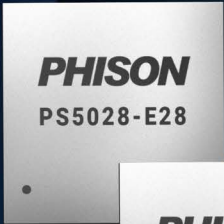
The Most Efficient Client SSD

- PCIe Gen5x4
- TSMC 6nm process
- DRAM-less
- 3D TLC / QLC supported
- 4 channels with 16 CEs
- Capacity up to 8TB

Sequential Performance



Random Performance



PCIe Gen5 Controller

	PS5037-E37T	PS5031-E31T	PS5028-E28	PS5026-E26
Interface	Gen5x4 NVMe	Gen5x4 NVMe	Gen5x4 NVMe	Gen5x4 NVMe
DRAM	N/A	N/A	LPDDR4 / LPDDR4X LPDDR5 / LPDDR5X	DDR4 / LPDDR4
NAND Flash	3D TLC / QLC	3D TLC / QLC	3D TLC / QLC	3D TLC / QLC
Capacity (up to)	8TB	8TB	32TB	16TB
Sequential R/W (up to)	14900/14500 MB/s	10600/9500 MB/s	14900/14500 MB/s	14000/12000 MB/s
Random R/W (up to)	3000K/3000K IOPS	1500K/2200K IOPS	3000K/3000K IOPS	1400K/1400K IOPS
ECC	LDPC Gen8 + RAID	LDPC Gen7 + RAID	LDPC Gen8 + RAID	LDPC Gen5 + RAID
Form Factor	M.2 2280 / 2242 / 2230	M.2 2280 / 2242 / 2230 CFexpress	M.2 2280	M.2 2280

SATA III Controller

	PS3117-S17T	PS3112-S12
Interface	SATA III	SATA III
DRAM	N/A	DDR4 / DDR3L
NAND Flash	3D TLC / QLC	3D TLC / QLC
Capacity (up to)	4TB	16TB
Sequential R/W (up to)	550/510 MB/s	550/530 MB/s
Random R/W (up to)	97K/86K IOPS	99K/90K IOPS
ECC	LDPC Gen4 + RAID	LDPC Gen3 + RAID
Form Factor	M.2 2280 / 2242 2.5" / mSATA	M.2 2280 / 2.5"

PCIe Gen4/3 Controller

	PS5033-E33T	PS5029-E29T	PS5027-E27T	PS5021-E21T	PS5019-E19T	PS5015-E15T
Interface	Gen4x4 NVMe	Gen4x4 NVMe	Gen4x4 NVMe	Gen4x4 NVMe	Gen4x4 NVMe	Gen3x4 NVMe
DRAM	N/A	N/A	N/A	N/A	N/A	N/A
NAND Flash	3D TLC / QLC	3D TLC / QLC	3D TLC / QLC	3D TLC / QLC	3D TLC / QLC	3D TLC / QLC
Capacity (up to)	8TB	8TB	8TB	4TB	2TB	2TB
Sequential R/W (up to)	7400/6600 MB/s	7400/6600 MB/s	7400/6600 MB/s	5000/4800 MB/s	3600/3000 MB/s	3400/3000 MB/s
Random R/W (up to)	1000K/1400K IOPS	1000K/1400K IOPS	1000K/1400K IOPS	800K/950K IOPS	500K/610K IOPS	500K/720K IOPS
ECC	LDPC Gen7 + RAID	LDPC Gen7 + RAID	LDPC Gen5 + RAID	LDPC Gen4 + RAID	LDPC Gen4 + RAID	LDPC Gen4 + RAID
Form Factor	M.2 2280 / 2242 / 2230	M.2 2280 / 2242 / 2230	M.2 2280 / 2242 / 2230	M.2 2280 / 2242 / 2230 BGA SSD / CFexpress	M.2 2280 / 2242 / 2230	M.2 2280 / 2242 / 2230



With 25+ years of NAND expertise, Phison delivers advanced storage and AI solutions through its premium brand, Pascari. Backed by industry-leading R&D, Pascari meets the demands of modern data-centric applications, offering fast time-to-market with built-in AI and data security features.



Reliable

We have been innovating data storage for over two decades. Trust, transparency and our customers' confidence means everything to us.



Enabling

We empower enterprise with quality SSD products that lead the industry on performance, efficiency and capacity.



Partners

We're more than just an SSD vendor. We're a technology, engineering and business partner. Our lab is your lab.



Flexible

Our business model is flexible and so are we. Finding custom solutions to enterprise engineering challenges is what we do.



Pioneering

We are leaders, unafraid of challenging ourselves and the status quo in pursuit of accelerating enterprise innovation.



Pascari X202Z

Storage Class Memory

The Pascari X202Z is a PCIe Gen5 cache SSD built for extreme endurance and performance. Optimized for enterprise caching, it delivers ultra-low latency, fast writes, and up to 60 DWPD, ideal for AI, real-time analytics, and database workloads.



Next-Gen Solution

PCIe Gen6 Enterprise SSD

Designed for next-generation computing, our PCIe Gen6 solution provides a future-ready foundation for data center workloads, delivering the efficiency and performance needed for AI, HPC, and data-intensive applications.



aiDAPTIV™ Technology

AI Application

aiDAPTIV™ technology is a software-hardware hybrid solution that enables training, inference, and deployment at the edge on PCs, servers, and IoT devices. Leveraging flash-accelerated memory to extend GPU capacity, it enables LLMs without the need for cloud.

Performance X-Series

High-performance enterprise SSDs built for extreme write-intensive workloads, delivering scalable capacity and advanced features in the latest form factors.

Pascari X201
High Performance PCIe Gen5

Seq. R/W 14,800/11,800 MB/s
Seq. R/W 3,300K/1,050K IOPS

Pascari X202Z
Write Intensive Application

Up to 60 DWPD
Seq. R/W 14,800/10,000 MB/s
Ran. R/W 3,000K/850K IOPS



Scan a QR code to find more X-Series Products

Boot Drive B-Series

Reliable and consistent boot SSDs engineered to ensure stable system operation and predictable I/O performance in large-scale server environments.

Pascari B200P
Reliable PCIe Boot Drive

- ✓ PCIe Gen5 fast booting
- ✓ Next-generation 3D NAND technology
- ✓ Optimized for data center boot applications



Scan a QR code to find more B-Series Products

Data Center D-Series

Versatile enterprise SSDs optimized for high-capacity data center deployments, offering a seamless balance of performance and power efficiency across multiple form factors.

Pascari D201
Data Center PCIe Gen5

Capacity Up to 15.36TB in E1.S form factor

Pascari D206V
Ultra High Capacity PCIe Gen5

Capacity Up to 245.76TB



Scan a QR code to find more D-Series Products

SATA S-Series

High-capacity SATA SSDs that enhance performance and power efficiency in legacy servers, extending infrastructure lifespan without major system changes.

Pascari SA52
Reliable SATA Storage

- ✓ Wide-ranging capacity options: 240GB – 15.36TB
- ✓ Enhanced data reliability
- ✓ Versatile configurations for varied workloads: read-intensive (1 DWPD), mixed-workload (3 DWPD)



Scan a QR code to find more S-Series Products

aiDAPTIV™ Technology



Scan a QR code to find
aiDAPTIV™ details

A turnkey solution for organizations to train large data models on-site at a price they can afford. It enhances foundation LLMs by incorporating an organization’s own data enabling better decision making and innovation.



AI Application	
Training	Inference
Py Torch AI Framework	Llamacpp / vllm AI Framework
aiDAPTIV Middleware Middleware Library	
GPU	Cache Memory Specialized SSD



Cache Memory

aiDAPTIV Middleware

Full-spectrum AI Solutions

Seamless Integration with
VRAM/DRAM & High-endurance
Flash

Coordinates the Swapping
Between VRAM, DRAM and
Cache Memory

End-to-End User Experience
Spanning Training to Inference



AI Notebook PC

Deploying 120B MoE Models for
Inference with iGPU



Workstation PC

Up to 100B Parameter
Full Model Training



Server

Up to 671B Parameter
Full Model Training

100+ Business Deployments

Accessible Local AI: Bringing intelligence to Every PC



Automobile



Legal



Finance



Government



Health



Education



**Fits Your
Budget**

Offloads expensive HBM & GDDR memory with cost-effective flash memory. Significantly reduces the need for high-cost and power-hungry GPU cards.



**Simple to Use
and Deploy**

Offers all-in-one AI toolset that streamlines ingestion, fine-tuning, and inference via an intuitive GUI. Deploys anywhere – from home and classroom to office and data center – using standard power.



**Keeps Your
Data Private**

Enables LLM training behind your firewall. Gives you full control over your private data and peace of mind with data sovereignty compliance.

Industrial and Space NAND Storage Solutions

Highly application-aware, optimized for mission critical systems

What Are Significant Features in Embedded Storage for Industrial Application?

Extended and Optimized Integration for Industrial Application

- Optimization of NAND flash endurance and firmware performance
- Manufacturing specialty for the industrial application

Featured Robust Security

- On-the-fly hardware-based encryption (TCG OPAL 2.0 / option for FIPS140-3)
- Write protect / cryptographic erase

Data Integrity and Board Compatibility

- Consistent performance by significant workload
- Exclusive qualification in system-level architecture

Rigorous Manufacturing and Testing for Product Survivability

- High / Low temperature ELF screening from IC to system-level
- Enhancement of underfill and sidefill for vibration/shock resistance

Durability and Longevity Committed

- Long-life cycles support with management of BOM and DCN / EOL notice
- Health monitoring / Firmware upgrade / FA diagnosis for before and after-service

Innovation and Technology Lead

- Celestial grade with radiation test qualified
- Electronic engineering for space environment

High-end Performance and True Industrial PCIe SSD

Product Series	MPT5	MPT9	MPD6	MPTC	MPDB
Interface	PCIe Gen4 x 4	PCIe Gen4 x 4	PCIe Gen4 x 4	PCIe Gen5 x 4	PCIe Gen5 x 4
Controller	PS5021-E21TI	PS5029-E29TI	PS5018-E18DI	PS5037-E37TI	PS5028-E28DI
Capacity	64GB - 1024GB	256GB - 4096GB	480GB - 7680GB	256GB - 4096GB	480GB - 7680GB
Cache Memory	DRAM-less	DRAM-less	DDR4	DRAM-less	DDR4 / DDR5
Sequential R/W	3650/2900 MB/s	7300/6600 MB/s	7200/6700 MB/s	10300/8600 MB/s	14000/12000 MB/s
Reliability (TBW)	>1,340 (based on 1024GB)	> 4,500 (based on 4096GB)	>12,000 (based on 7680GB)	>5,000 (based on 4096GB)	>12,000 (based on 7680GB)
Security	TCG OPAL / Pyrite	TCG OPAL / Pyrite	TCG OPAL / Pyrite	TCG OPAL / Pyrite	TCG OPAL / Pyrite
HW PLP Circuit	NA	NA	Support	NA	Support
Form Factor	BGA SSD	M.2 2280 / 2242 / 2230	M.2 2280 / 22110 E1.S / U.2	M.2 2280 / 2242 / 2230 BGA SSD	M.2 2280 / E1.S

Intelligent and Comprehensive SATA SSD

Product Series	MST3	MSD2
Interface	SATA III	SATA III
Controller	PS3117-S17TI	PS3112-S12DI
Capacity	64GB – 4096GB	120GB – 15360GB
Cache Memory	DRAM-less	DDR4/DDR3L
Sequential R/W	550/510 MB/s	550/530 MB/s
Reliability (TBW)	> 5,000 (based on 4096GB)	>25,000 (based on 15360GB)
Security	TCG OPAL	TCG OPAL
HW PLP Circuit	NA	Support
Form Factor	2.5" / M.2 2280 / 2242 mSATA / CFast / Half Slim / mSATA mini	2.5" / M.2 2280 / 2242

Make Phison Your Automotive Storage Solutions Partner

Phison's automotive storage solutions are certified for automotive-grade standards and are widely trusted by automotive partners, paving the way to smarter and safer driving experience

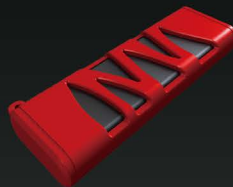


	Dash Cams	Telematics	ADAS	Navigation Maps	IVI Systems	Central Gateway	PCIe Signal Conditioning
 SD Cards (MiM Series) NAND: 2D / 3D SLC, pSLC, MLC, TLC Density: 128MB – 1TB Package: SD / microSD	●			●			
 eMMC (MEM Series) NAND: 2D MLC / 3D TLC Density: 4GB – 256GB Package: BGA 153-ball / BGA 100-ball	●	●	●	●	●	●	
 UFS (MUM Series) NAND: 3D TLC Density: 64GB – 1TB Package: : BGA 153-ball	●		●	●	●		
 BGA SSD (MPT Series) NAND: 3D TLC Density: 64GB – 1TB Package: BGA 345-ball / BGA 291-ball			●	●	●	●	
 USB 3.0 NAND: 3D pSLC, TLC Density : 64GB – 512GB Package : SIP-15 / Pen Drive	●						
 Redriver PCIe 5.0 / 6.0 Channel : 4CH Package : FCLGA							●



External SSD Solutions

Feel The Efficiency with Phison External SSD

U32C-U21	PU31 Pro	U32C
		
• PS2251-21 Controller • USB 4 Gen 3x2 + Type C • Capacity up to 32TB • Seq. R/W up to 4000/3600 MB/s • Kioxia 3D TLC/ Micron 3D QLC	• PS5021-E21T Controller • USB 3.2 Gen 2x2 / Gen 2 + Type C • Capacity up to 2TB • Seq. R/W up to 2000/2000 MB/s • Kioxia 3D TLC / SK hynix 3D TLC / SK hynix 3D TLC	• PS2251-17 Controller • USB 3.2 Gen 2 + Type C • Capacity up to 4TB • Seq. R/W up to 1100/1000 MB/s • Micron 3D QLC / SK hynix 3D TLC Kioxia 3D TLC



SD / microSD Solutions



Video Recording

Stable Performance and High TBW

- Capacity : up to 2TB
- Application : DVR, Surveillance, Action Cameras
- SDA Spec : CL10, U3, V30, A2
- Special Feature : Low WAF, Health Monitor



Extreme Speed (300MB/s Data Transfer)

High End Imagery

- Capacity : up to 2TB
- Application : High End DSC, 4K/8K Reading/Writing
- SDA Spec : CL10, U3, V60/V90, A1, UHS-II
- Special Feature : High Sequential Performance



Gaming

Fast Loading and Saving

- Capacity : up to 1TB
- Application : Nintendo SW/SW2, Portable/Handheld consoles
- SDA Spec : CL10, U3, V30/V60/V90, A2, UHS-II, SDEX
- Special Feature : High Capacity, Multi Interface Compatible (UHS-II, microSD Express)



AI and IoT/ Embedded

Prompt Data Processing

- Capacity : up to 2TB
- Application : AI edge computing, POS, Boot up (Raspberry Pi)
- SDA Spec : CL10, U3, V30, A2, SDEX
- Special Feature : Power Loss Protection and Auto Read Refresh



Automotive

AEC-Q100

- Capacity : up to 1TB
- Application : Vehicle logger, Infotainment, DVR, GPS
- SDA spec : CL10, U3, V30, A2, SDEX
- Special Feature : Rigorous Testing (Temperature and Life), Health Monitor



eMMC Solutions

4GB	8GB	16GB	32GB	64GB	128GB	256GB
PS8225		PS8229		PS8229	PS8229	
Micron 2D MLC		Kioxia 64L TLC		Kioxia 112L TLC	Samsung 2XXL TLC	
PS8227		PS8232		PS8231		
Samsung 2D MLC		YMTC 64L TLC		SK hynix 176L TLC		



UFS Solutions

	UFS 2.2	UFS 3.1	UFS 4.1
Controller	PS8329	PS8329	PS8363
Interface	HS-G3x2 UFS 2.2	HS-G4x2 UFS 3.1	HS-G5x2 UFS 4.1
NAND Flash	SanDisk, 3D TLC, 1Tb	KIOXIA, 3D TLC, 1Tb	KIOXIA, 3D TLC, 1Tb
Capacity	128GB / 256GB / 512GB	128GB / 256GB / 512GB	256GB / 512GB / 1TB
NAND Channel, Max Speed	1 CH, 3200 MT/s	1 CH, 3200 MT/s	2 CH, 3600 MT/s
Seq. R/W (up to)	1055/1055 MB/s	2025/1775 MB/s	4300/4050 MB/s
4KB Ran. R/W (up to)	250K/255K IOPS	290K/360K IOPS	590K/850K IOPS
Writebooster	Supported	Supported	Supported
HPB 2.0	Supported	Supported	Supported
Package Type	BGA-153	BGA-153	BGA-153
Dimensions	11.5 mm x 13.0 mm	11.0 mm x 13.0 mm	9.0 mm x 13.0 mm
Operational Temperature	-25°C to 85°C	-25°C to 85°C	-25°C to 85°C

Strategic Supplier for High-Speed Connectivity Solutions



Retimer

Product	PS7261 / PS7262	PS7201 / PS7202
Interface	PCIe 6.x / CXL 3.x	PCIe 5.0 / CXL 2.0
# of Channels	32 (16-lanes) / 16 (8-lanes)	32 (16-lanes) / 16 (8-lanes)
Package	FCCSP (eCUF)	FCCSP (eCUF)
EQ Auto-tuning Tool	Diagnostic Tool with GUI	Diagnostic Tool with GUI
Equalization Range	36 dB	42 dB
Low-Latency Modes	<10 ns	<5 ns
Operating Junction Temperature	-10°C to 110°C	-10°C to 110°C
Application	Server	Server
Pin-to-pin	Pin-to-pin Compatibility with Mainstream Designs	

Redriver

Product	PS7163 / PS7161	PS7103	PS7151	PS7351
Interface	PCIe 6.0	PCIe 5.0	PCIe 5.0	UFS 4.0
# of Channels	32 (16-lanes) / 4 (2-lanes)	32 (16-lanes)	4 (2-lanes)	4 (2-lanes)
Package	FCCSP / FCLGA	FCCSP	FCLGA	FCLGA
Output Linear Range	1500 mVppd	1200 mVppd	1500 mVppd	490 mVppd
EQ Auto-tuning Tool	PHiTUNE	PHiTUNE	PHiTUNE	PHiTUNE
Equalization Range	0~20 dB	0~28.5 dB	0~20 dB	0~10 dB
Latency	70 ps	70 ps	70 ps	176 ps
Operating Junction Temperature	-40°C to 125°C	-40°C to 125°C	-40°C to 125°C	-40°C to 125°C
Application	Server / Workstation	Server / Workstation / PC	Server / Workstation PC / NB	AI PC / NB Chromebook
Pin-to-pin	Pin-to-pin Compatibility with Mainstream Designs			

Evolving Data Storage Intelligence

