Phison Announcement

2023/10/16

2023 OCP Global Summit: Phison Introduces New High-speed Signal Conditioner IC Products, Expanding its PCIe 5.0 Ecosystem for AI-Era Data Centers

Delivering a Holistic Vision for Modern Data Performance, Phison Becomes the Only Provider to Offer PCIe 5.0, CXL 2.0 Compatible Retimer and Redriver Signal Integrity Solutions and PCIe 5.0 Enterprise SSDs

SAN JOSE, Calif. – October 16, 2023 – Phison Electronics (8299 TT), a global leader in NAND controllers and storage solutions, announced today that the company has expanded its portfolio of PCIe 5.0 high-speed transmission solutions with PCIe 5.0, CXL 2.0 compatible redriver and retimer data signal conditioning IC products. Leveraging the company's deep expertise in PCIe engineering, Phison is the only signal conditioners provider that offers the widest portfolio of multi-channel PCIe 5.0 redriver and retimer solutions and PCIe 5.0 storage solutions designed specifically to meet the data infrastructure demands of artificial intelligence and machine learning (AI+ML), edge computing, high-performance computing, and other data-intensive, next-gen applications. At the 2023 Open Compute Project Global Summit, the Phison team is showcasing its expansive PCIe 5.0 portfolio, demonstrating the redriver and retimer technologies alongside other enterprise NAND flash, illustrating a holistic vision for a PCIe 5.0 data ecosystem to address the most demanding applications of the AI-everywhere era.

"Phison has focused industry-leading R&D efforts on developing in-house, chip-to-chip communication technologies since the introduction of the PCIe 3.0 protocol, with PCIe 4.0 and PCIe 5.0 solutions now in mass production, and PCIe 6.0 solutions now in the design phase," said Michael Wu, President & General Manager, Phison US. "Phison's accumulated experience in high-speed signaling enables our team to deliver retimer and redriver design solutions that are optimized for top signal integration, low power usage, and high temperature endurance, to deliver interface speeds for the most challenging compute environments."

Phison Announcement

2023/10/16

Phison's PCIe 5.0 Retimers PS7201 and PS7202

Emerging high-speed interconnect protocols like PCIe 5.0 and CXL 2.0 are driving the need for a new generation of signal conditioning solutions. Phison's PS7201 and PS7202 retimer solutions are designed to meet the growing demand for data performance, and follow industry standard retimer footprints. Phison retimer solutions also offer distinctive features such as:

- Advanced signal enhancement for all PCIe-deployed devices, including NAND flash, GPU, CPU, FPGA, ASIC, DPU, and other accelerator technologies
- High EQ boosting range up to 42dB
- Integrated AC coupling capacitors
- CXL 2.0 compatibility
- Low latency of 5ns
- Hot plug and bifurcation support
- Pin-to-pin compatibility with competing solutions
- Protocol awareness accommodates various system configurations, suitable for a wide range of industries and applications
- The Baseboard Management Controller (BMC) delivers user-friendly diagnostic tool and standard C-SDK to support real-time monitoring for local and remote management and provide users with the utmost confidence in their system's performance

Phison's PCIe 5.0 Redrivers PS7102 and PS7103 with PHiTUNE software

All of Phison's Redriver solutions are certified by PCI-SIG, the consortium that owns and manages PCI specifications as open industry standards. In addition to Phison's redriver solutions, Phison is the only provider of a full line of multi-lane redrivers, including:

- Advanced signal enhancement for all PCIe-deployed devices
- Up to 28.5dB equalization range
- Low latency of 70ps
- CXL 2.0 compatibility
- PS7101 2-lane redriver, with Mux/Demux capabilities
- PS7102 8-channel redriver
- PS7103 16-lane redriver
- Pin to pin compatibility with competing solutions

Leveraging the company's expertise and IP in both PCIe 5.0 signal conditioning and end device PCIe 5.0 NAND flash solutions, Phison is the only provider in the industry to offer its exclusive auto tuning tool PHiTUNE for its redrivers. Pairing Phison's PHiTUNE software with the Phison E26 PCIe Gen5 SSD, Phison redriver solutions automatically detect recovery counts. The software then uses artificial intelligence to determine the optimal gain parameters to be stored in the Redriver's onboard non-volatile memory in the customer's R&D environment. This unique tool enables R&D engineers to collect signal data and conduct signal optimization to find the best parameters for the corresponding environment automatically in about 30 minutes.

Other unique features delivered by Phison redrivers include:

- Support for unique I2C modes of operation enables system R&D engineers to independently tune parameters depending on hi/low frequency for different cable or PCB materials to achieve the best compensation for signal attenuation (PS7102 and PS7103)

- Support for linearity up to 1200mVpp, allowing for more accurate signal transmission and reception than competing products
- Phison's linear swing feature for its redriver solutions reduces waveform disturbances and improves overall signal quality
- EQ boosting range up to 28.5 dB to provide improved signal extension capabilities in comparison to competing solutions

Industry-leading Partners Converge to Provide a Holistic AI Infrastructure

Already in deployment in both Intel- and AMD-based platforms, Phison partners and customers are expressing excitement about Phison's PCIe retimer and redriver signal integrity solutions as part of Phison's wider PCIe 5.0 data ecosystem.

"Thanks to Phison for providing the exclusive PHiTUNE tool, which enables us to quickly deploy and integrate ASRock Rack motherboards with the Phison PS7101 Redriver IC, ensuring stability and integrity in high-speed signal transmission," said Weishi Sa, President, ASRock Rack. "ASRock Rack has always been committed to providing high-performance and reliable server and workstation systems as well as motherboards. We are delighted that Phison's Redriver IC contributes to achieving this goal in collaboration with ASRock Rack. We look forward to further cooperation between our two companies in the future."

"Phison's PCIe 5.0 Redriver IC PS7101 is an exciting high-speed transmission innovation," said Daniel Hou, CEO of Giga Computing. "It provides servers with more flexible parameters to solve the signal attenuation problem, enabling Giga Computing to offer users a versatile server capable of handling various computational workloads. Through Phison's PHiTUNE tool, we can quickly enhance the support of GIGABYTE's servers for different PCIe 5.0 components, meeting the requirements for seamless signal transmission and accelerating the launch of our server products. In the future, we also look forward to continued partnership between Giga Computing and Phison."

If you would like to schedule a meeting with a Phison representative on-site at OCP, go here. To receive PHISON press release or announcement, please register for our IR distribution application form at Phison IR Distribution List.

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 and IEEE-SA.
To know more about Phison, please visit Phison Website or Phison Q&A for details. Read more on our blog: www.phisonblog.com

Forward-looking Statements

Information included in this press release that are not historical in nature are "forward-looking statements". Phison cautions readers that forward-looking statements are based on Phison's

reasonable knowledge and current expectations, and are subject to various risks and uncertainties. Actual results may differ materially from those contained in such forward-looking statements for a variety of reasons including without limitation, risks associated with demand and supply change, manufacturing and supply capacity, design-win, time to market, market competition, industrial cyclicality, customer's financial condition, exchange rate fluctuation, legal actions, amendments of the laws and regulations, global economy change, natural disasters, and other unexpected events which may disrupt Phison's business and operations. Accordingly, readers should not place reliance on any forward-looking statements. Except as required by law, Phison undertakes no obligation to update any forward-looking statement, whether as a result of new information, future events, or otherwise.

Contacts

PHISON Spokesperson
Antonio Yu
TEL: 037-586-896 #10019
Mobile: 0979-105-026
Email: antonioyu@phison.com

PHISON Deputy Spokesperson
Kuo-Ting Lu
TEL: 037-586-896 #26022
Mobile: 0979-075-330
Email: kuoting_lu@phison.com

Phison media inquiries:
noe@alanizmarketing.com
press_americas@phison.com

Phison product inquiries:
sales@phison.com