

IT & Electronics

Field Intelligence Report

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Semiconductor Packaging / AI & Machine Learning / Quantum Computing / Photonics & Optical Comms

Market Mood

78

/ 100 Optimistic

AI-Driven Infrastructure Transformation

Advanced packaging, AI agents, quantum computing, and optical networks converge to redefine IT infrastructure.

AI Accelerator Shipments	HBM Share of DRAM Wafer Capacity	Enterprise Quantum Spending	AI Data Center Electricity Consumption
130M units	23%	\$300M	2x
Projected over next 5 years	Projected by late 2026	First time exceeding research/government in 2025	Projected by 2030

Weekly Summary

The IT & Electronics domain is undergoing a profound transformation, primarily driven by escalating AI demands. Semiconductor packaging innovations like HBM4 and glass substrates are critical bottlenecks and enablers. AI & Machine Learning is seeing rapid adoption of autonomous agents and massive data center infrastructure investments, particularly in liquid cooling. Quantum computing is accelerating towards commercial viability with significant government and private funding, focusing on fault-tolerant systems and PQC. Photonics and optical communications are essential for next-gen AI networks, with 1.6T transceivers and co-packaged optics becoming mainstream. Western players must strategically invest in these converging technologies to secure competitive advantage and mitigate supply chain risks.

4 Sub-Topic Summary

Sub-Topic	Headline	Momentum	Key Insight
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Semiconductor Packaging	AI Drives 70% HBM Price Surge, Bottlenecks	Accelerating	AI demand has pushed HBM4 prices up 70% and created critical bottlenecks in CoWoS and ABF substrates, with shortages projected through 2028. Western players like Amkor and STMicroelectronics are expanding domestic advanced packaging, while new materials like glass substrates and advanced TIMs are emerging to manage increasing heat and complexity.
AI & Machine Learning	AI Agents Transform Workflows, \$500B+ Invest	Accelerating	Autonomous AI agents are automating over 50,000 service requests annually and are projected to be in 40% of enterprise apps by 2026. Massive investments, including NVIDIA's \$500B private equity fund and OpenAI's 8GW compute deal, are accelerating AI infrastructure build-out, making liquid cooling indispensable for high-density data centers.
Quantum Computing	Quantum Nears Commercial Tipping Point, \$20B+ US	Building	The US government is investing over \$20 billion in quantum computing, including \$1 billion for IBM's 300mm fab, accelerating the path to fault-tolerant systems by 2029. Enterprise spending hit \$300 million in 2025, surpassing research/government for the first time, signaling a shift to practical applications in drug discovery and materials science. Post-Quantum Cryptography migration is urged by 2027.

Photonics & Optical Comms	1.6T Optics & CPO Drive AI Networks, SiPh Main	Accelerating	1.6T optical transceivers are critical for next-gen AI networks, with silicon photonics (SiPh) becoming mainstream in 2026, holding 72% of 1.6T designs. Co-Packaged Optics (CPO) and Near-Packaged Optics (NPO) are reshaping data center architectures, driven by NVIDIA's CPO switches and \$2B investments in InP production. New materials like TFLN and hybrid photonic chips are advancing optical integration.
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JSR Accelerates Advanced Photoresist Production for Sub-3nm Nodes

Source: JSR Corporation TDnet / Gemini Grounding

Summary: JSR Corporation is significantly expanding its advanced photoresist capabilities, with a new EUV photoresist production facility in Taiwan anticipated to commence operations as early as 2028, co-developing materials with TSMC. Concurrently, JSR is ramping up t...

WHY ENGINEERS SHOULD CARE

Design teams targeting sub-3nm nodes should monitor JSR's Taiwan facility progress for potential EUV resist supply stability by 2028. Procurement leads must track MOR production ramp-up in South Korea...

Shin-Etsu Chemical Implements Significant Silicon Wafer Price Hikes Amid Surging AI Demand

Source: Shin-Etsu Chemical TDnet / Gemini Grounding

Summary: Shin-Etsu Chemical, a major global silicon wafer producer, implemented price increases for silicon wafers in June 2026. High-end specialty wafers for AI and HPC applications saw steeper increases of 18% to 22%, driven by the expiration of long-term agreements ...

WHY ENGINEERS SHOULD CARE

Procurement and financial planners should immediately re-evaluate BOM costs for advanced AI/HPC hardware, factoring in the 18-22% wafer price increase. Technical planners should assess the long-term s...

Japan Funds SiC CMOS for Harsh Environment Computing

Source: Cabinet Office / Gemini Grounding

Summary: Hiroshima University, FENITEC SEMICONDUCTOR, and QST secured ¥150 million in funding for the current year under the Cabinet Office's BRIDGE ES-X program. The project aims to establish a digital technology base using Silicon Carbide (SiC) CMOS integrated circui...

WHY ENGINEERS SHOULD CARE

Engineers designing systems for extreme temperature or high-radiation environments should track the progress of this SiC CMOS initiative. This project could yield robust, high-reliability digital comp...

This Week's Japan Technology Highlights

Japan's critical materials supply chain is strengthening with 149 certified plans, while JSR ramps up EUV photoresist production for 2028 and Shin-Etsu raises AI wafer prices by 18-22%.

China Watch | IT & Electronics

Full English content available after pipeline regeneration.

CXMT DRAM Progress and Market Expansion: China's Memory Self-Sufficiency Drive

■ China's Move

ChangXin Memory Technologies (CXMT) has completed R&D validation for its LPDDR6 mobile RAM, featuring peak speeds of 12.8 Gbps (10.7 Gbps base), 16Gb density, and a 1295-ball PoP design, with small-batch testing underway ahead of potential mass production ...

■ Technical Verification

[CONFIRMED]	CXMT has completed R&D validation for LPDDR6 mobile RAM with specified peak speeds (12.8 Gbps) and density (16Gb). / CXMT's global DRAM market share was 6.7% in 2026 and 8-9% in Q1 2026.
[BOTTLENECK]	Achieving commercially viable yield rates and consistent quality for high-speed, high-density LPDDR6 DRAM at scale. / Maturity of advanced packaging technologies (e.g., PoP designs) for mobile DRAM ...

■ Implications for Western Engineers

- Memory procurement teams: Evaluate CXMT LPDDR6 samples for specified performance (12.8 Gbps), power efficiency, and thermal char...
- Supply chain planners: Monitor CXMT's actual fab output and market share growth to assess potential shifts in global DRAM supply...
- Product design engineers: Benchmark CXMT's LPDDR6 against established suppliers for stack reliability, thermal behavior, and com...

Key Trends This Week (1 Total)

TR-01 HIGH Cross-Domain

AI Infrastructure Overhaul Accelerates Global Investment

Global AI infrastructure investment surges past \$500B, driving demand for advanced packaging, liquid cooling, and optical interconnects.

The insatiable demand for AI compute is triggering a massive, cross-domain infrastructure overhaul. NVIDIA leads a \$500B private equity fund for AI infrastructure (S2-25), while OpenAI secures 8GW of compute capacity (S2-29). This fuels demand for HBM4 (S1-01), advanced packaging (S1-11), liquid cooling (S2-17, S2-18), and 1.6T optical transceivers (S4-01). Data centers are fundamentally redesigning for 100kW+ GPU clusters (S2-20), with liquid cooling projected to reach 53% AI chip penetration by 2026 (S2-18). Western players must secure supply chains for these critical components.

AI Infrastructure Investment	OpenAI Compute Capacity	Liquid Cooling Penetration (AI Chips)
\$500B+	8 GW	53% by 2026

► NVIDIA ► OpenAI ► Intel ► Broadcom ► Coherent

Refs: S1-01 S1-11 S2-17 S2-18 S2-20

Macro Market Indicators

Indicator	Direction	Value	Note	Source
EU AI Act Transparency Mandates	↑	Live Aug 2, 2026	Companies face steep fines for non-compliance	resemble.ai (S2-02)
US CHIPS Act Quantum Allocation	↑	\$2B	Government commits to domestic quantum computing companies	CoinMarketCap (S3-32)
Global Data Center Liquid Cooling Market	↑	\$23.23B	Projected by 2035 due to AI heat	DataM Intelligence (S2-17)
Advanced Packaging Revenue Growth	↑	70% YoY	Applied Materials forecast for 2026, driven by AI	TrendForce (S1-11)

Macro Environment Summary

Global IT & Electronics markets are experiencing unprecedented growth and strategic shifts, primarily fueled by AI. Regulatory frameworks like the EU AI Act are imposing new compliance burdens, while governments globally are injecting billions into critical technologies like quantum computing and advanced semiconductor manufacturing. The demand for AI infrastructure is reshaping power and cooling requirements, with liquid cooling becoming standard. This environment necessitates agile strategic responses from Western manufacturers and investors to capitalize on opportunities and navigate evolving geopolitical and technological landscapes.

Market Data: SOXX (Semiconductors) Weekly Trend

520.05 USD -5.52%

References (138 Total)

ID	Title	Source	Date	Region	Sub-Topic
S1-01	SK Hynix Secures HBM4 Future: 70% Price Surge, 2026 Capacity Sold Out, and \$3.87B US Investment for Advanced Packaging Independence	Adalytica	2026-08-20	South Korea	Semiconductor Packaging
S1-02	HBM4 Breaks Bottlenecks: Hybrid Bonding Delivers 20%+ Thermal Reduction, 40% Power Efficiency Boost, 2.0TB/s+ Bandwidth	SemiHub.io	2026-08-14	International	Semiconductor Packaging
S1-03	SK Hynix Pioneers Optical Interconnects Beyond HBM, Outlines Roadmap for AI Bandwidth Challenges	Adalytica	2026-08-21	South Korea	Semiconductor Packaging
S1-04	Hanmi Semiconductor Leads HBM4 TC Bonder Market, Diversifies Client Base with Micron Deals to Reduce SK Hynix Dependency	digitimes	2026-08-13	Taiwan	Semiconductor Packaging
S1-05	China Invests 40 Billion Yuan (\$5.5 Billion) in New Advanced Packaging Projects for AI/HPC to Prepare for Next Chip Shortage	All-About-Industries	2026-08-14	China	Semiconductor Packaging
S1-06	Hanmi Semiconductor Invests \$92 Million in Largest-Ever 8th Plant for AI/HBM Demand, Enters U.S. Market	Pulse 2.0	2026-08-18	South Korea	Semiconductor Packaging
S1-07	Amkor Technology Expands U.S. Advanced Packaging Footprint by 67 Acres in Arizona, Bolstering Domestic Manufacturing	Amkor Technology, Inc.	2026-08-19	US	Semiconductor Packaging
S1-08	JCET Achieves 79.4% YoY Net Profit Growth in H1 2026, Accelerates Advanced Packaging to Meet AI Demand	PR Newswire	2026-08-20	China	Semiconductor Packaging
S1-09	PackCon 2026 to Discuss How Sustainable Packaging Drives Business Value	EuroCham Singapore	2026-08-26	Singapore	Semiconductor Packaging
S1-10	Advanced Thermal Interface Materials Evolve to Combat AI Chip Heat, Spanning Liquid Metals to Polymer Composites	Exponential Industry	2026-08-15	US	Semiconductor Packaging
S1-11	Applied Materials Raises Advanced Packaging Revenue Forecast to Over 70% Growth on AI Demand, Unveils New HBM Systems	TrendForce	2026-08-14	US	Semiconductor Packaging
S1-12	SK Hynix Breaks Ground on \$3.87 Billion Advanced Packaging Plant in Indiana for HBM Production	The Korea Herald	2026-08-13	South Korea	Semiconductor Packaging
S1-13	ABF Substrate Shortages Projected Through 2028 Amid AI Boom; Taiwanese, Japanese, Korean Manufacturers Secure Orders Until 2030	digitimes	2026-08-16	Taiwan	Semiconductor Packaging
S1-14	Semiconductor Inspection Equipment Market to Reach \$13.4 Billion by 2034, KLA Leads in Advanced Packaging Process Control	Exponential Industry	2026-08-16	US	Semiconductor Packaging

ID	Title	Source	Date	Region	Sub-Topic
S1-15	Fraunhofer IKTS Achieves Real-Time Detection of 8µm Packaging Seal Defects Using Optical Coherence Tomography (OCT)	Fraunhofer-Gesellschaft	2026-08-13	Germany	Semiconductor Packaging
S1-16	STMicroelectronics Maintains \$2 Billion Investment Amid Net Loss, Bolstering SiC, 300mm Fabs, and Advanced Packaging	Seeking Alpha	2026-08-19	Switzerland	Semiconductor Packaging
S1-17	Japan's Shinko Electric Develops 22-Layer Glass Substrates for AI Chips, Resolving Internal Cracking and Delamination Issues	TrendForce	2026-08-18	Japan	Semiconductor Packaging
S1-18	TSMC CoWoS and ABF Substrate Supply Bottlenecks Threaten AI Chip Production Amid \$265B Market Opportunity	Silicon To Software	2026-08-17	US	Semiconductor Packaging
S1-19	Morgan Stanley Taps Samsung Electro-Mechanics as Top Korean Tech Pick Amid Surging AI Chip Substrate Demand	Evrin Ağacı	2026-08-13	Turkey	Semiconductor Packaging
S1-20	Sumitomo Bakelite and Mitsubishi Chemical Raise Packaging Material Prices for CoWoS and HBM Amid Surging Demand	Global Times	2026-08-13	China	Semiconductor Packaging
S1-21	HANMI Semiconductor Invests \$91.4 Million in Largest-Ever 8th Production Facility in Incheon to Meet Soaring AI Chip Demand	Business Wire	2026-08-18	South Korea	Semiconductor Packaging
S1-22	Henkel Launches LOCTITE ABLESTIK CDF900 Conductive Die Attach Film with Over 8 W/m-K Thermal Conductivity for High-Power AI Packages	Henkel	2026-08-19	Germany	Semiconductor Packaging
S1-23	Lens Technology Enters Advanced Chip Packaging with Self-Developed Through-Glass Vias (TGV) Substrates and Dedicated 30,000sqm Factory	Chinadaily.com.cn	2026-08-15	China	Semiconductor Packaging
S2-01	Google Gemini 3 Pro Leads 2026 VLM Rankings in Multimodal Reasoning and OCR, Open-Weight Models Gain Practicality	Mixpeek	2026-08-17	Global	AI & Machine Learning
S2-02	EU AI Act's Transparency Mandates Go Live August 2, 2026: Companies Face Steep Fines for Non-Compliance	resemble.ai	2026-08-17	Europe	AI & Machine Learning
S2-03	KDnuggets Releases Top 10 Open-Source Benchmarks for AI Coding Agents in 2026, Highlighting SWE-bench and Terminal-Bench	KDnuggets	2026-08-20	Global	AI & Machine Learning
S2-04	Microsoft Copilot Studio Powers Graebel's Automation of Over 50,000 Service Requests Annually with Multi-Agent Workflows	Microsoft Tech Community	2026-08-13	US	AI & Machine Learning
S2-05	Levelop Releases 2026 AI Agent Workflow Automation Guide, Detailing LLM-Driven Autonomous Decision-Making and Tool Integration	Levelop	2026-08-17	Global	AI & Machine Learning

ID	Title	Source	Date	Region	Sub-Topic
S2-06	US Government Finalizes Framework for Voluntary Pre-Release Safety Testing of Frontier AI Models with Top Labs in 2026	aigovernance.com	2026-08-18	US	AI & Machine Learning
S2-07	AI Agents Replacing Human B2B Buyers in Top-of-Funnel Activities, Demanding Vendor Data Restructuring for Machine Consumption	MarketScale	2026-08-18	Global	AI & Machine Learning
S2-08	BenchLM.ai's August 2026 Ranking: Claude Mythos 5 Achieves Top Score of 83.3 in Reasoning AI Models	BenchLM.ai	2026-08-20	Global	AI & Machine Learning
S2-09	SAP Forecasts 40% of Enterprise Apps to Feature Autonomous AI Agents by 2026	SAP	2026-08-18	Germany	AI & Machine Learning
S2-10	Anthropic Reportedly Pursuing \$6 Billion Acquisition of Decart AI to Boost Compute Efficiency	NDTV Profit (Bloomberg News)	2026-08-13	US	AI & Machine Learning
S2-11	EU AI Act Main Provisions Go Live August 2, 2026, Imposing Strict Rules on High-Risk Systems	NetSuite	2026-08-20	US	AI & Machine Learning
S2-12	Network Bio Secures \$50 Million Funding and \$30M+ AI Partnership for Disease-Specific AI Model Development	Pulse 2.0	2026-08-20	US	AI & Machine Learning
S2-13	AI Workloads Fundamentally Reshaping Data Center Power Demand and Infrastructure, IEA Projects Doubled Consumption by 2030	Data Center Dynamics	2026-08-17	UK	AI & Machine Learning
S2-14	EU AI Act Mandates AI Governance for Manufacturers, with Penalties up to 7% of Global Annual Turnover	Entech	2026-08-19	US	AI & Machine Learning
S2-15	AI Chip Race Shifts to Advanced Packaging as 130M Accelerators Ship; TSMC's CoWoS Dominates, Intel Pursues Alternatives	The Korea Economic Daily	2026-08-20	South Korea	AI & Machine Learning
S2-16	Agentic AI Transforms Enterprise Workflows with Autonomous Reasoning and Multi-Step Action Execution	Moveworks	2026-08-14	US	AI & Machine Learning
S2-17	AI Data Center Boom Fuels Power & Cooling Infrastructure Investment, Liquid Cooling Market to Hit \$23.23 Billion by 2035	DataM Intelligence	2026-08-18	India	AI & Machine Learning
S2-18	TrendForce Predicts Liquid Cooling to Dominate AI Infrastructure by 2026, Reaching 53% AI Chip Penetration Driven by Google	ET Datacenters	2026-08-20	India	AI & Machine Learning
S2-19	Major AI Acquisitions: Stripe Buys OpenRouter for \$7B+, SpaceX Acquires Cursor for \$60B	Superpower Daily	2026-08-17	US	AI & Machine Learning
S2-20	Blueprint for 100 kW+ GPU Cluster AI Data Centers Released: Liquid Cooling Becomes Indispensable	Soetek	2026-08-18	US	AI & Machine Learning

ID	Title	Source	Date	Region	Sub-Topic
S2-21	New Guide on AI Governance Strategy Released; EU AI Act Penalty Regime to Apply from August 2, 2025	Adaptive Security	2026-08-13	US	AI & Machine Learning
S2-22	NYC Bar Association Issues Formal Opinion on Ethical Use of AI for Non-Client Conversation Recording and Summarization	New York City Bar Association	2026-08-18	US	AI & Machine Learning
S2-23	Eli Lilly Forges Partnership with Gateway Labs Alumnus to Develop Trans-Amplifying RNA Vaccine Platform for Infectious Diseases	Fierce Biotech	2026-08-20	US	AI & Machine Learning
S2-24	Amgen Terminates \$500M+ Collaboration with TScan, TScan CEO Affirms No Impact on Core Strategy	Fierce Biotech	2026-08-19	US	AI & Machine Learning
S2-25	NVIDIA Leads \$500 Billion Private Equity Investment to Accelerate Global AI Infrastructure and Power Solutions	Microgrid Knowledge	2026-08-17	US	AI & Machine Learning
S2-26	Broadcom Partners with OpenAI to Co-Develop Custom AI Accelerators Capable of Handling Up to 10 Gigawatts	Facebook (via news report)	2026-08-20	US	AI & Machine Learning
S2-27	Twin1 AI Raises \$20 Million Seed Round to Build AI-Powered Digital Twins for Professional Knowledge Workers	Business Wire / Morningstar	2026-08-20	US	AI & Machine Learning
S2-28	Wingspire Equipment Finance Provides \$140 Million Financing for High-Performance AI Compute Infrastructure Expansion	Business Wire	2026-08-20	US	AI & Machine Learning
S2-29	OpenAI, SB Energy, and NVIDIA Partner to Secure 8 Gigawatts of AI Compute Infrastructure at PORTS-Pike Campus	OpenAI official announcement	2026-08-17	US	AI & Machine Learning
S2-30	Partners Group Invests Over \$1 Billion in UK's AVK to Power AI Data Centers, Expanding On-site Energy Infrastructure	Digitalisation World	2026-08-13	UK	AI & Machine Learning
S2-31	Velaure AI Secures \$110 Million Series A at \$1+ Billion Valuation for Ultra-Low-Power AI Compute, Targeting 2-4x Performance Per Watt	Pulse 2.0 / Morningstar	2026-08-18	US	AI & Machine Learning
S2-32	Rundoo Secures Total of \$48 Million in Financing, Including \$30 Million Series B, for AI-First Platform Serving Independent Supply Stores	Business Wire	2026-08-19	US	AI & Machine Learning
S3-01	Silicon Quantum Chips Secures Over \$14.8M in Series B Funding to Advance Photonic Quantum Computing	Dealroom News	2026-08-15	China	Quantum Computing
S3-02	S&P; Global Q2 Quantum Report Highlights IBM's Nighthawk Processor and Logical Qubit Progress	S&P; Global	2026-08-17	US	Quantum Computing

ID	Title	Source	Date	Region	Sub-Topic
S3-03	SpinQ Outlines Quantum Computer Applications in Healthcare, Materials Science, and Cybersecurity	SpinQ	2026-08-17	China	Quantum Computing
S3-04	USTC Team Achieves Record 420km Quantum Memory Entanglement, Paving Way for Quantum Internet	The Quantum Insider	2026-08-15	China	Quantum Computing
S3-05	Lockheed Martin Unveils "Quantum Opportunity Beyond Computing" with Federal Target for 2028 Deployment	Lockheed Martin	2026-08-17	US	Quantum Computing
S3-06	India's QpiAI Unveils 8-Inch Quantum Chip Foundry in Bengaluru, Aiming for 10,000-Qubit Processors	The Quantum Insider	2026-08-17	India	Quantum Computing
S3-07	Arizona Researchers and Nord Quantique Advance Quantum Error Correction, Dramatically Lowering Logical Qubit Error Rates	Facebook	2026-08-18	US	Quantum Computing
S3-08	US Government Expands Strategic Quantum Investments as Europe Prepares "EU Quantum Act" for Sovereignty	WisdomTree	2026-08-19	US	Quantum Computing
S3-09	Quantinuum and Oracle Partner to Bring Helios Quantum Computing to Oracle Cloud Infrastructure	Techfinitive	2026-08-18	US	Quantum Computing
S3-10	US Department of Energy Pioneers AI for Automated Quantum Algorithm Discovery	—	2026-08-14	US	Quantum Computing
S3-11	IBM Interconnects Cryogenic Quantum Modules, Accelerating Path to 2029 Fault-Tolerant Starling System	HPCwire	2026-08-19	US	Quantum Computing
S3-12	Utilities Sector Forecasts Increased Demand, Approaching "Commercial Tipping Point" for Quantum Computing by 2028-2030	Utility Dive	2026-08-17	US	Quantum Computing
S3-13	Machine Learning Advances Decoding of Topological Quantum Codes: Key for Fault-Tolerant Quantum Computing	arXiv	2026-08-16	Global	Quantum Computing
S3-14	HKCert Urges Post-Quantum Cryptography (PQC) Migration to Address "Harvest Now, Decrypt Later" Risk	HKCert	2026-08-19	Hong Kong	Quantum Computing
S3-15	IBM and University of Chicago Achieve "Quantum Advantage" Solving Classically Intractable Problem in 15 Minutes with 70 Logical Qubits and New Error Correction	SciTechDaily	2026-08-17	US	Quantum Computing
S3-16	DigiCert Issues Post-Quantum TLS Migration Guidance: Recommends Hybrid Key Exchange and ML-DSA Authentication	DigiCert	2026-08-18	US	Quantum Computing
S3-17	Europe Launches Six Industrial Programs with €300M Investment for Mass Production of Quantum Computer Components	Techniques de l'Ingénieur	2026-08-21	France	Quantum Computing

ID	Title	Source	Date	Region	Sub-Topic
S3-18	Xanadu and University of Alberta Accelerate Cancer Drug Discovery with Quantum Computing Framework for Photosensitizer Design	Xanadu / University of Alberta News	2026-08-13	Canada	Quantum Computing
S3-19	Dirac Labs Secures \$1.8M Pre-Seed Funding to Scale Diamond-Based Quantum Navigation Sensors for GPS-Denied Environments	Quantum Computing Report	2026-08-20	US	Quantum Computing
S3-20	FDA Approves Phase 2 IND for Quantum BioPharma's Lucid-MS, Targeting Progressive Multiple Sclerosis Demyelination	NeurologyLive	2026-08-13	US	Quantum Computing
S3-21	Google Unveils Quantum AI Campus and Sets 2029 Target for Building Error-Corrected Quantum Computer	CIO Bulletin	2026-08-18	US	Quantum Computing
S3-22	IBM Advances Fault-Tolerant Quantum Computing by Successfully Coupling Modular Cryogenic Systems, Paving Way for 'Starling'	Datanami	2026-08-17	US	Quantum Computing
S3-23	Brookhaven National Laboratory Develops Superconducting Qubits with Over 1 Millisecond Coherence, Advancing Quantum Information Science	Brookhaven National Laboratory (BNL) Newsroom	2026-08-13	US	Quantum Computing
S3-24	Quantum Computing Sees Major Boost: PsiQuantum Secures \$1 Billion as US Government Commits \$2 Billion via CHIPS Act	Facebook	2026-08-19	US	Quantum Computing
S3-25	New York State to Invest \$60 Million in Up to Four Quantum Technology Commercialization Hubs to Accelerate Startup Growth	TechTarget	2026-08-19	US	Quantum Computing
S3-26	Infleqtion Inaugurates Colorado Quantum Innovation Center, Anchoring 'America's Quantum Peak' and Announcing Materials Science Collaboration with NVIDIA Using Logical Qubits	Infleqtion (Press Release)	2026-08-18	US	Quantum Computing
S3-27	Photonics Spectra Reports PIC Startup Solinide Raises \$4.6M, Alongside Key Quantum Investments and Partnerships Across US and Canada	Photonics Spectra	2026-08-21	US	Quantum Computing
S3-28	Cornell University Reduces Tantalum Quantum Chip Deposition Temperature by 200°C Using Krypton Gas, Enhancing Compatibility with Semiconductor Infrastructure	Tom's Hardware	2026-08-19	US	Quantum Computing
S3-29	Rigetti Computing Establishes Dedicated Systems Delivery Organization to Accelerate Customer Deployments and Quantum Processor Roadmap Progression	Markets Insider (Press Release from Rigetti)	2026-08-20	US	Quantum Computing

ID	Title	Source	Date	Region	Sub-Topic
S3-30	QpiAI Opens 'Asia's Largest' Quantum Chip Foundry in Bengaluru, Targeting 10,000-Qubit Processors by 2027	YourStory	2026-08-17	India	Quantum Computing
S3-31	D-Wave Technology Powers NTT DOCOMO's Second Production Quantum Application in Network Operations, Accelerating Practical Deployment	D-Wave Quantum (Press Release)	2026-08-18	Canada	Quantum Computing
S3-32	U.S. Department of Commerce Invests Over \$2 Billion in Quantum Computing, Allocating \$1 Billion to IBM for 300mm Superconducting Quantum Wafer Fab 'Anderon'	CoinMarketCap	2026-08-13	US	Quantum Computing
S3-33	Indian Deep-Tech Startup Quarkitech Secures ₹2 Crore Pre-Seed Funding and ₹1.5 Crore Grant from IITM-CDOT for Data Technology Development	Facebook (StartupCity India)	2026-08-14	India	Quantum Computing
S3-34	Crypto VCs Prioritize Quantum-Ready Infrastructure by 2027, KPMG Report Reveals Q2 2026 Quantum Computing Investment Trends	Moon Pursuit Capital	2026-08-15	US	Quantum Computing
S3-35	Quantinuum Announces Multi-Year Partnership to Integrate Helios Quantum Computer with Oracle Cloud Infrastructure, Reports \$8 Million Q2 2026 Revenue (279% YoY Growth)	WisdomTree	2026-08-20	US	Quantum Computing
S3-36	U.S. Businesses Identify 5 Key Quantum Computing Investment Areas: Focus on Superconducting, Trapped-Ion, Photonic Qubits, R&D; Partnerships, Materials Science, Integration, and PQC	Nightparlor	2026-08-17	US	Quantum Computing
S3-37	India's National Quantum Mission Grants Up to ₹30 Crore to 8 Startups, While QpiAI Inaugurates Asia's Largest 8-inch QPU Foundry in Bengaluru	Raksha Anirveda	2026-08-19	India	Quantum Computing
S3-38	Chattanooga Launches 'CO.LAB Q' Quantum Startup Accelerator, While Enterprise-Grade Quantum Computing Facility Becomes Operational in Basel, Switzerland	Facebook (CO.LAB)	2026-08-17	US	Quantum Computing
S3-39	Bleichroeder Acquisition Corp. II Shareholders to Vote on Merger with Quantum Computing Firm Pasqal on August 25, Pasqal Seeks Over \$300 Million in New Funding Through Nasdaq Listing	Quantum Computing Report	2026-08-20	US	Quantum Computing
S3-40	New York State Launches \$60 Million RFP for Regional Quantum Technology Commercialization Hubs, Offering Up to \$15 Million for Each of Four Hubs	Quantum Computing Report	2026-08-13	US	Quantum Computing

ID	Title	Source	Date	Region	Sub-Topic
S3-41	Quantinuum and Quanta Computer Forge Joint Development Agreement for Industrialization of Fault-Tolerant Trapped-Ion Quantum Hardware Manufacturing	Quantinuum	2026-08-14	US	Quantum Computing
S3-42	Boston Consulting Group Reports Enterprise Quantum Computing Spending Hit \$300 Million in 2025, Surpassing Combined Research and Government Investment for the First Time	Facebook (Techmeme)	2026-08-15	US	Quantum Computing
S3-43	U.S. Government Invests \$20 Billion in Quantum Computing, Accelerating Practical Applications with IBM's Condor Processor Targeting Over 1,000 Qubits by 2025	r/informaq - Reddit	2026-08-17	US	Quantum Computing
S3-44	Quantum Computing Investment Wave Transforms Data Center Real Estate Market: Unique Infrastructure Requirements for Quantum Facilities Halt \$10 Billion in Development	MarketScale	2026-08-18	US	Quantum Computing
S3-45	BTQ Technologies Acquires French Quantum Company QPerfect, Advancing Quantum Algorithm Development with University of Strasbourg Collaboration	Facebook (Kaizen Executive)	2026-08-13	France	Quantum Computing
S3-46	Quantum Computing Inc. (QCI) Revenue Surges to \$5.55 Million in Q2 2026, Maintains \$1.3 Billion Cash Position, Continues M&A; Strategy for Room-Temperature Quantum Solutions	Simply Wall St	2026-08-17	US	Quantum Computing
S3-47	Global Governments Continue Massive Quantum System Investments: UK Commits £2.5 Billion, China Heavily Invests, US CHIPS Act Allocates \$280 Billion to Secure Technological Leadership	Facebook (CGTN Europe)	2026-08-14	International	Quantum Computing
S4-01	HT Electronics Underscores 1.6T Optical Transceivers as Critical Enablers for Next-Gen AI Networks	HT Electronics	2026-08-17	Global	Photonics & Optical Comms
S4-02	OpenLight and Tower Semiconductor Accelerate Photonic IC Development with Enhanced PH18DA Platform for AI and Sensing	Embedded	2026-08-13	US	Photonics & Optical Comms
S4-03	Near-Packaged Optics (NPO) Gains Traction as Interim Solution Amid CPO Challenges; Broadcom Unveils 3.2T Product Line	Tom's Hardware	2026-08-13	US	Photonics & Optical Comms
S4-04	Leading Optical Transceiver Manufacturers Drive Silicon Photonics into Mainstream Production in 2026; Intel, Cisco, Marvell, Coherent Launch SiPh Products	FB-LINK Technology	2026-08-19	China	Photonics & Optical Comms

ID	Title	Source	Date	Region	Sub-Topic
S4-05	NTT West Explores IOWN Next-Gen Optical Network for Yumeshima Post-Expo Development, Aiming for Smart City Foundation	NTT West	2026-08-13	Japan	Photonics & Optical Comms
S4-06	Intel Accelerates Co-Packaged Optics (CPO) Development to Strengthen AI Data Center Market Presence	Simply Wall St	2026-08-18	US	Photonics & Optical Comms
S4-07	Marvell Expands Photonic Fabric to Enable Disaggregated HBM Memory Pooling for Multi-Rack AI Systems via Optical Interconnects	Converge Digest	2026-08-20	US	Photonics & Optical Comms
S4-08	Caltech Breakthrough Achieves Fiber-Optic-Level Low-Loss Optical Transmission on Silicon Chips in Visible Spectrum	ScienceDaily	2026-08-17	US	Photonics & Optical Comms
S4-09	Georgia Tech Launches Special Topics Course on Photonics for AI Systems, Addressing Hyper-Scale Data Center Needs	Georgia Tech	2026-08-17	US	Photonics & Optical Comms
S4-10	NVIDIA's Spectrum-X CPO Ethernet Switches Enter Mass Production, Delivering 5x Power Efficiency and AI Uptime	BigGo Finance	2026-08-14	Taiwan	Photonics & Optical Comms
S4-11	Near-Packaged Optics (NPO) Emerges as Flexible, Lower-Risk Optical Packaging Amid CPO Commercialization Challenges	36kr	2026-08-20	China	Photonics & Optical Comms
S4-12	Atomica Unveils AI Photonic Integration Platform to Resolve Optics-to-Packaging Bottlenecks in AI Hardware	The Data Center Engineer	2026-08-17	US	Photonics & Optical Comms
S4-13	1.6TbE Transition to Fundamentally Reshape Data Center Architecture, Co-Packaged Optics Key	Futurum Group	2026-08-20	US	Photonics & Optical Comms
S4-14	NTT Group Outlines All-Photonics Network Components and Phased Evolution Strategy	Techzine Global	2026-08-18	Japan	Photonics & Optical Comms
S4-15	Coherent to More Than Double 6-Inch InP Wafer Output by 2027 End Amid Accelerating 1.6T Transceiver Demand for AI Data Centers	The Motley Fool	2026-08-20	US	Photonics & Optical Comms
S4-16	NVIDIA's \$2 Billion Investment Validates Coherent's AI Optics Strategy, Driving Leadership in AI Data Center Transceiver Market	HDIN Research	2026-08-17	US	Photonics & Optical Comms
S4-17	Lumentum Reports Over \$1 Billion Revenue in FY26, Up 83.2%, Driven by Surging 1.6T Transceiver and Optical Circuit Switch Demand	Semiconductor Today	2026-08-19	US	Photonics & Optical Comms

ID	Title	Source	Date	Region	Sub-Topic
S4-18	ION Network Deploys Ciena WaveLogic 6 Extreme on Indonesia's ICS1 Subsea Cable, Enabling Up to 1.2 Tb/s Wavelengths and 24 Tb/s Capacity	Ciena Press Release	2026-08-20	US	Photonics & Optical Comms
S4-19	Applied Optoelectronics Secures First 1.6T Transceiver Volume Order; Marvell Expands 1.6T Optical DSP Portfolio for AI Data Centers	openPR.com	2026-08-13	US	Photonics & Optical Comms
S4-20	Thin-Film Lithium Niobate Michelson Interferometer Modulator Achieves Record-Low 0.48 V·cm V _π L and 120 Gbit/s PAM-4 Data Transmission	Researching.cn	2026-08-17	Unknown	Photonics & Optical Comms
S4-21	China's NOEIC Unveils Industry-First 170GHz TFLN Photonic Modulator; Domestic Firm Launches World's First TFLN PIC Wafer, Accelerating Commercialization	LINIOBATE Power Next Gen Photon	2026-08-17	China	Photonics & Optical Comms
S4-22	Max Planck Scientists Develop Hybrid Photonic Chips Combining Silicon Nitride and Quartz, Enabling Novel Light Color Conversion and Nonlinear Photonic Technologies	Max Planck Institute for the Science of Light	2026-08-19	Germany	Photonics & Optical Comms
S4-23	Solinide Photonics Lands €4M Seed to Scale Silicon Nitride Microcombs for AI Data Centers and Next-Gen Telecom	FinSMEs	2026-08-20	Sweden	Photonics & Optical Comms
S4-24	Seoul National University and Harvard SEAS Unveil Novel Light Control Methods: Developing Optical Buffers and Ultracompact MUXs on Silicon Nitride	AllAboutCircuits.com	2026-08-20	South Korea, USA, Germany	Photonics & Optical Comms
S4-25	400G ZR Coherent Pluggables Revolutionize DCI Market, Delivering Up to 70% CAPEX and Power Reduction via IPoDWDM	MapYourTech	2026-08-15	International	Photonics & Optical Comms
S4-26	Lightmatter-Led Open Compute Project Launches 'Open Silicon Photonics for AI Systems' Initiative with 19 Industry Leaders to Standardize Co-Packaged Optics Infrastructure	Lightmatter®	2026-08-13	US	Photonics & Optical Comms
S4-27	Lightmatter CEO Nicholas Harris Advocates Bidirectional DWDM as Foundation for High-Performance AI Training and Inference at Hot Interconnects 2026	Lightmatter®	2026-08-19	US	Photonics & Optical Comms
S4-28	Atomica Unveils 'AI Photonic Integration Platform' to Overcome Integration Bottlenecks in AI Infrastructure	Chiplet Marketplace	2026-08-18	US	Photonics & Optical Comms
S4-29	IMAPS Report Highlights Silicon Photonics, Co-Packaged Optics, and Advanced Packaging as Critical for Breaking AI Data Center Compute Barriers	IMAPS 3D InCites Content Platform	2026-08-20	US	Photonics & Optical Comms

ID	Title	Source	Date	Region	Sub-Topic
S4-30	Xanadu and University of Alberta Partner to Accelerate Next-Gen Cancer Photodynamic Therapy Drug Discovery with Quantum Computing	StockTitan	2026-08-13	Canada	Photonics & Optical Comms
S4-31	ORCA Computing Announces Global Rollout of PT Series Systems and Strategic Partnerships with Toyota, NVIDIA for Quantum-Accelerated AI	Distill Intelligence	2026-08-16	UK	Photonics & Optical Comms
S4-32	Sony and TSMC Forge Joint Venture to Propel Next-Generation Image Sensor Innovation	Design And Reuse	2026-08-20	Japan • Taiwan	Photonics & Optical Comms
S4-33	TSMC Reportedly Manufactures World's First Commercial Photonic Processor, Claiming 1000x Speed and 100x Energy Efficiency Improvement	Facebook	2026-08-20	Taiwan	Photonics & Optical Comms
S4-34	AXT Inc. Announces Indium Phosphide (InP) Backlog Exceeds \$100M and Plans to Double Manufacturing Capacity in Both 2026 and 2027	Facebook	2026-08-20	Taiwan	Photonics & Optical Comms
S4-35	Sivers Semiconductors Poised for Growth with Surging Pipeline and Strategic Manufacturing Partnerships for Next-Gen Communications	Facebook	2026-08-20	Sweden	Photonics & Optical Comms
S4-36	LandMark Optoelectronics Reports Significant Profit Surge Driven by Surging Silicon Photonics Demand	digitimes	2026-08-13	Taiwan	Photonics & Optical Comms

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