MARKET REPORT Q1 2026

MEMORY SHORTAGE CRISIS

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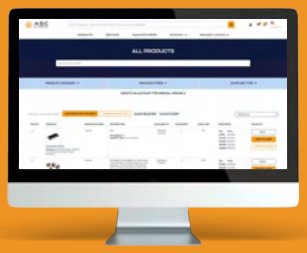

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Table of Contents

ASC Global delivers cutting-edge industry insights and trends. The following sections provide valuable information gathered from research, expert insights from our team, and reliable sources in the industry.

Lead-Time Report

The following insights stem from thorough research of ASC Global's marketing team combined with the expertise of all our departments. The information is designed to provide guidance and should be approached as such.
ASC Global excels in supply chain strategies that effectively address market volatility. For a deeper understanding, kindly reach out to your Account Manager.

↔ Stable ↑ Increasing ↓ Decreasing EOL End-of-life

Analog | Power | Logic & Digital | Passives | Electromechanical | Memory

Analog

Factory Lines					Open Market	
Product	Brand	Lead time weeks	Prognosis	Pricing Trend	Availability	Pricing Trend
Gate Drivers	Power Integrations	12-16	↔	↔	↔	↔
	ROHM	16-20	↔	↔	↔	↔
	Silergy	14-16	↓	↔	↔	↔
	Allegro MicroSystems	20-22	↔	↔	↔	↔
Switching Regulators	Diodes Incorporated	10-18	↔	↔	↔	↔
	Infineon	14-24	↔	↔	↔	↔
	Microchip	8-20	↔	↓	↔	↔
	Onsemi	10-20	↔	↔	↔	↔
Timing	Onsemi	22-32	↔	↔	↑	↔
	Microchip	7-12	↔	↔	↔	↔
	Renesas	12-18	↔	↔	↔	↔

Factory Lines					Open Market	
Product	Brand	Lead time weeks	Prognosis	Pricing Trend	Availability	Pricing Trend
Interface	NXP	16-20	↔	↔	↔	↔
	Renesas	14-18	↔	↔	↔	↔
Amplifiers and Data Converters	Microchip	4-10	↔	↔	↔	↔
	Onsemi	10-16	↔	↔	↑	↔
	Renesas	12-18	↔	↔	↔	↔
	STMicroelectronics	10-16	↔	↔	↔	↔
Analog and Power for Automotive (CAN/LIN/ Smart FET)	STMicroelectronics	18-22	↔	↔	↔	↔
	NXP	16-20	↔	↔	↔	↔
Multi-source Analog/ Power	Onsemi	10-18	↔	↔	↔	↔
	STMicroelectronics	10-18	↔	↔	↔	↔

From October to December 2025, analog component activity focused on supply management, pricing actions, and lead-time shifts. Texas Instruments ramped output at its Sherman 300 mm fab and expanded assembly capacity in Malaysia. Analog Devices signaled potential 15% price adjustments, including higher changes for military-grade lines, while Infineon faced extended lead times on power-related analog ICs.

Power

Factory Lines					Open Market	
Product	Brand	Lead time weeks	Prognosis	Pricing Trend	Availability	Pricing Trend
IGBT's	STMicroelectronics	14-20	↑	↔	↔	↔
	Littelfuse	15-60	↔	↔	↔	↔
	Microchip	14-26	↔	↔	↔	↔
	Infineon	16-44	↑	↔	↔	↔
High Voltage MOSFET's	Infineon	16-52	↑	↔	↔	↔
	Littelfuse	23-52	↔	↔	↔	↑
	Microchip	4-26	↑	↔	↔	↔
	STMicroelectronics	13-26	↑	↔	↔	↔
Low Voltage MOSFET's	Infineon	16-52	↑	↔	↔	↔
	ONSEMI	14-44	↑	↔	↔	↑
	Vishay	25-52	↑	↔	↔	↔
	STMicroelectronics	13-26	↑	↔	↔	↔
Wide Bandgap MOSFET's	Littlefuse	27-29	↔	↔	↔	↔
	Infineon	16-39	↔	↔	↔	↔
	ONSEMI	16-31	↔	↔	↔	↔
	STMicroelectronics	17-20	↔	↔	↔	↔
Rectifiers	Diodes Incorporated	8-13	↑	↑	↑	↑
	ONSEMI	20-24	↑	↑	↑	↑
	STMicroelectronics	14-16	↔	↔	↔	↔
	Vishay	8-10	↔	↔	↔	↔

Vishay Intertechnology showcased new power electronics at APEC 2025, including advanced SiC MOSFETs and enhanced inrush-current limiting solutions tailored for energy storage, EV battery systems, and automotive applications. SemiQ announced third-generation SiC MOSFETs with improved electrical characteristics and thermal performance, positioning them for high-reliability designs in automotive and industrial power conversion applications.

Passives

Factory Lines					Open Market	
Product	Brand	Lead time weeks	Prognosis	Pricing Trend	Availability	Pricing Trend
Capacitors	Kyocera	14-16	↔	↔	↑	↑
	ELNA	20-30	↔	↑	↑	↑
	EATON	10-20	↓	↔	↑	↑
	Vishay	12-14	↔	↔	↓	↑
Resistors	ROHM	8-10	↓	↔	↑	↑
	Samsung	44-46	↔	↔	↑	↑
	Panasonic	12-16	↔	↔	↑	↑
	Vishay	10-14	↔	↔	↓	↑
Inductors/Transformers	EATON	12-16	↓	↔	↔	↔
	Vishay	10-12	↔	↔	↔	↔
	Panasonic	23-25	↔	↔	↔	↔
	Murata	8-12	↔	↔	↔	↔
Surface Mount General Capacitors	TDK	16-20	↔	↔	↔	↔
	Samsung	20	↔	↔	↔	↔
	Kyocera	20	↔	↔	↔	↔
	Vishay	12-14	↔	↔	↔	↔
Aluminum Electrolytic	AiSHi	14-16	↔	↔	↔	↔
	Nichicon	22-30	↑	↔	↔	↔
	Panasonic	18-40	↔	↔	↔	↔
Filters	TDK	10-14	↔	↔	↔	↔
	Murata	12-16	↔	↔	↔	↔
	TAIYO YUDEN	15-17	↔	↔	↔	↔

Panasonic confirmed price increases for POSCAP passive components effective February 1, 2026, citing higher production costs. China's Fenghua Advanced Technology raised prices on inductors, magnetic beads, and capacitor series due to raw material cost pressures. KEMET (Yageo subsidiary) also adjusted pricing on select tantalum capacitors effective November 1, reflecting broader materials and manufacturing cost impacts.

Memory

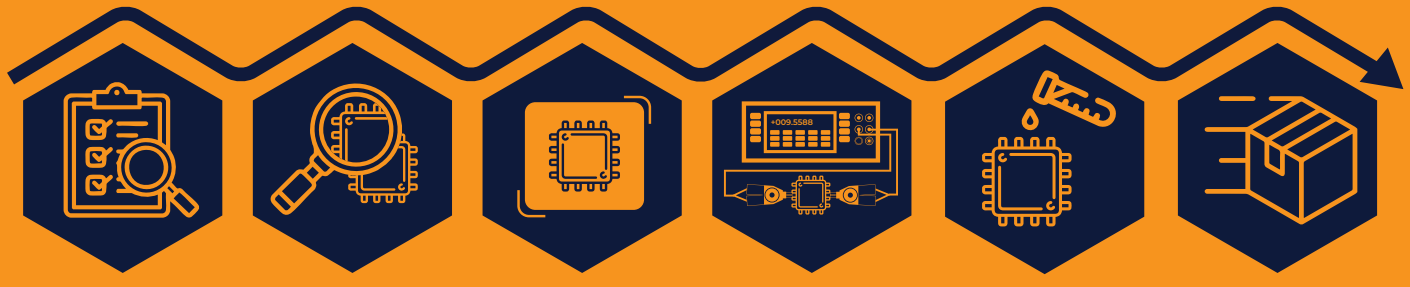
Factory Lines					Open Market	
Product	Brand	Lead time weeks	Prognosis	Pricing Trend	Availability	Pricing Trend
HBM	SK Hynix	52+	↑	↑	↓	↑
	Samsung	52+	↑	↑	↓	↑
	Micron	52+	↑	↑	↓	↑
DDR5	SK Hynix	20-28	↑	↑	↓	↑
	Samsung	24-32	↑	↑	↓	↑
	Micron	20-28	↑	↑	↓	↑
Memory Modules	Centon	26-52	↑	↑	↓	↑
	Kingston	6-12	↑	↑	↓	↑
	ADATA	26-52	↑	↑	↓	↑
	SMART Modular	18-20	↑	↑	↓	↑
SRAM	Renesas	12-14	↔	↔	↓	↑
	ONSEMI	20-40	↔	↔	↓	↑
	Microchip	4-11	↔	↔	↓	↑
	Alliance Memory	8-30	↔	↔	↓	↑
EEPROM	STMicro	12-14	↑	↑	↓	↑
	ONSEMI	12-20	↔	↔	↓	↔
	ROHM	8-12	↔	↔	↔	↔
	Microchip	4-25	↔	↔	↔	↔
NOR Flash	Microchip	4-26	↔	↔	↔	↔
	Renesas	12-14	↔	↔	↔	↔
	Infineon	12-26	↔	↔	↔	↔
	Alliance Memory	12-20	↔	↔	↓	↑

Factory Lines					Open Market	
Product	Brand	Lead time weeks	Prognosis	Pricing Trend	Availability	Pricing Trend
eMMC	ADATA	26-52	↑	↑	↓	↑
	Greenliant	20-26	↑	↑	↓	↑
	Alliance Memory	12-26	↑	↑	↓	↑
	Kingston	6-12	↑	↑	↓	↑
PC (Commodity) DRAM	Kingston	4-16	↑	↑	↓	↑
	Alliance Memory	2-20	↑	↑	↓	↑
Solid State Drives	Kingston	6-12	↑	↑	↓	↑
	Greenliant	20-26	↑	↑	↓	↑
	ADATA	26-52	↑	↑	↓	↑

Memory lead times extended markedly in Q4 2025, with Micron reporting DDR4 and DDR5 lead times exceeding 39 weeks and Samsung's DDR4 trending at 16–20 weeks. Legacy and mainstream memory supply tightened further as HBM allocation pulled capacity toward AI server production, triggering allocation-only purchasing models among major memory producers.

Counterfit Detection

- Quality Control Process for Every Order
- ISO & AS Certifications
- 2 Year Warranty on All Products
- Supply Chain Transparency



Incoming Inspection | External Visual Inspection | X-Ray / XRF | Electrical Testing | Chemical & Destructive Test | Repackaging & Shipping

Logic & Digital

Factory Lines					Open Market	
Product	Brand	Lead time weeks	Prognosis	Pricing Trend	Availability	Pricing Trend
8 Bit MCU	Renesas	14-18	↔	↔	↔	↔
	Microchip	4-12	↑	↔	↔	↔
	STMicro	13-33	↑	↔	↔	↔
	NXP	16-39	↑	↔	↔	↔
32 Bit MCU	Infineon	10-26	↔	↔	↔	↔
	Microchip	4-18	↑	↔	↔	↔
	STMicro	13-23	↔	↔	↔	↔
	NXP	16-39	↑	↔	↔	↔
FPGA	Microsemi	8-32	↔	↔	↓	↑
	Efinix	19-36	↑	↔	↔	↔
USB	Infineon	12-16	↔	↑	↔	↑
	Microchip	6-10	↔	↔	↔	↑
Automotive	STMicro	40-52	↔	↔	↔	↔
	NXP	18-52	↔	↓	↔	↔
	Renesas	24	↔	↔	↔	↔
LCD's	Sharp	28	↔	↔	↔	↔
	WiseChip	14-16	↔	↔	↔	↔
	AZ Displays	12-14	↔	↔	↔	↔
SOM	iWaveSystems	16	↔	↔	↔	↔
	TechNexion	26	↑	↑	↔	↑

Supply challenges continued for select logic families as tariff and distribution shifts increased turnover for Texas Instruments' SN74 logic lines and TPS/TLV power management ICs. Meanwhile, broader digital IC inventories tightened with elevated delivery requests as OEM design cycles accommodated extended lead times and channel stocking strategies.

Electromechanical

Factory Lines					Open Market	
Product	Brand	Lead time weeks	Prognosis	Pricing Trend	Availability	Pricing Trend
Relays	TE Connectivity	12-14	↔	↔	↔	↔
	Panasonic	14-30	↔	↑	↔	↑
	Infineon	40-52	↔	↑	↔	↑
	American Zettler	16-30	↔	↔	↔	↔
Switches	Panasonic	14-30	↔	↑	↔	↑
	TE Connectivity	10-12	↔	↔	↔	↑
	ZF Electronics	18-20	↔	↔	↔	↔
	Grayhill	12-24	↔	↑	↔	↔
Timing	Microchip	12-26	↔	↑	↓	↑
	Kyocera	12-28	↔	↔	↓	↑
	Epson	12-24	↑	↔	↔	↑
	Abracon	12-30	↓	↔	↔	↔
Fans	SUNON	24-26	↓	↔	↔	↔
	Qualtek	20-24	↔	↔	↔	↔
	BOYD	12-14	↔	↔	↔	↔
	ADDA	20-24	↔	↔	↔	↔
Power Supplies (AC/DC)	CUI Inc.	14-28	↔	↔	↔	↔
	MEAN WELL	14-17	↔	↔	↔	↔
	Murata PS	14-38	↔	↔	↔	↔
	Recom	16-18	↔	↔	↔	↔
Power Supplies (DC/DC)	Murata PS	10-18	↔	↔	↔	↔
	Recom	15-17	↔	↔	↔	↔
	Wall Industries	8-10	↔	↔	↔	↔
	CUI Inc.	11-28	↔	↔	↔	↔
PCB Connector	TE Connectivity	12-16	↔	↔	↔	↔
	Amphenol	8-10	↔	↑	↔	↑
	Adam Tech	16-18	↔	↔	↔	↔
	JST	16	↔	↔	↔	↔

Factory Lines					Open Market	
Product	Brand	Lead time weeks	Prognosis	Pricing Trend	Availability	Pricing Trend
Lightning Connectors	Kyocera	10-12	↔	↔	↔	↔
	TE Connectivity	12-16	↔	↔	↔	↔
	WAGO	14	↔	↔	↔	↔
Terminal Blocks & Crimps	TE Connectivity	12-16	↔	↔	↔	↔
	METZ Connect	10-16	↔	↔	↔	↔
	Wieland Electric	16	↔	↔	↔	↔
	Major League Electronics	6-8	↔	↔	↔	↔

Electromechanical manufacturers focused on specialized solutions; Vishay introduced the high-voltage VORA1150 solid-state relay for 800 V automotive battery management systems, enhancing isolation and efficiency. Production planning emphasized robust delivery for automation and EV subsystems as channel sentiment reflected longer lead times and prioritization of high-reliability interconnect products.

Memory Shortage

Global Memory Shortage & Strategic Realignment

The semiconductor industry has entered an unprecedented "memory supercycle" in early 2026. Unlike the logistics-driven disruptions of the early 2020s, the current crisis is structural, fueled by the insatiable demand of Artificial Intelligence (AI) infrastructure.

1. The Core Driver: The AI Capacity Displacement

The global shortage is a direct result of a massive reallocation of manufacturing capacity. Major fabs have shifted focus from conventional DDR4 and DDR5 to **High Bandwidth Memory (HBM)** and high-density Enterprise SSDs.

2. The Big Three: Strategic Responses & Market Power

The "Big Three" SK Hynix, Samsung, and Micron now command the most significant pricing leverage seen in decades.

Manufacturer	2026 Strategic Focus	Market Impact
SK Hynix	Dominates HBM (62% share). Expanding DRAM output 8x, but still reports 2026 capacity is "sold out."	Primary "anchor" for AI; setting the pace for HBM4 transitions.
Samsung	Prioritizing profitability over volume. Resumed P5 fab construction but remains cautious on general supply.	Raising contract prices by 30–60% to match AI-driven margin targets.
Micron	**Complete dissolution of the Crucial brand;** reallocating 100% of retail wafer starts to HBM4 and enterprise-grade AI production.	Immediate exit from retail DIY markets; structural supply crunch for non-enterprise clients as 2026 capacity is fully pre-allocated.

3. Cross-Industry Impact & Supply Chain Risks

The ripple effects of this shortage are felt unevenly across the global supply chain, creating "winners" who secured long-term agreements and "losers" exposed to the spot market.

Consumer Electronics (PC & Smartphone)

- **Price Hikes:** Average selling prices (ASPs) for PCs are projected to jump 8% this year.
- **Market Contraction:** IDC warns the PC market could shrink by up to 9% in 2026 as manufacturers struggle to absorb a 55–60% QoQ increase in DRAM contract prices.

Automotive & Industrial

- **The "Legacy" Squeeze:** Automotive-grade memory is facing a double threat. Manufacturers are retiring older nodes (DDR4/LPDDR4) faster than the automotive sector can redesign systems.
- **Cost Volatility:** Automotive-qualified DRAM is seeing price increases of up to 70%, as these low-volume, high-reliability parts compete for the same wafer starts as high-margin AI chips.

Enterprise Infrastructure

- Hyperscalers (Meta, Google, AWS) have adopted "open-ended" procurement, essentially purchasing all available supply regardless of price. This has crowded out smaller OEMs and Tier-2 data center providers.

4. Strategic Outlook: 2026-2027

The consensus among analysts (Gartner, BofA) is that supply will remain **structurally tight through 2027.** While new fab capacity in Texas and South Korea is underway, it will not offer immediate relief for the 2026 fiscal year.

Strategic Insight: We are seeing the return of "panic buying" and "double ordering" reminiscent of the 2021 crunch. This is distorting demand signals and may lead to a future "bullwhip effect," but for the next 18 months, the priority is continuity of supply over price optimization.

CATEGORY	TYPICAL PRODUCT SERIES	DIFFICULTY TO REPLACE
DRAM Memory (Desktop/Laptop RAM)	**DDR4 SODIMM** Laptop RAM	🔴 Difficult
	High-capacity DDR4 kits	🔴 Difficult
	Ballistix DDR4 SODIMM	🔴 Difficult
Internal SSDs (Solid State Drives)	**Crucial MX500**	🔴 Difficult
	BX-series	🔴 Difficult
	P3 NVMe	🟡 Moderate

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End of Life (EOL)

Analog Devices

Product	EOL	Replacement	Impact on Operations
ADP2443	Jul 2026 (final shipment)	ADI-recommended buck regulator alternatives	Medium – power-stage validation required
ADSP-BF533	Dec 2026	ADI SHARC or ARM-based processors	High – firmware and architecture migration

Texas Instruments

Product	EOL	Replacement	Impact on Operations
TPS54560	Jan 2026	TPS54561 / newer TI buck regulators	Medium – electrical validation required
LM2675	Feb 2026	LM2596 / newer SIMPLE SWITCHER devices	Medium – layout and EMI review

Microchip

Product	EOL	Replacement	Impact on Operations
PIC18F2520	Mar 2026	PIC18F25K42 family	High – firmware porting required
ATmega16A	Jan 2026	ATmega328PB / AVR Dx family	Medium – firmware and timing adjustments

STMicroelectronics

Product	EOL	Replacement	Impact on Operations
STM32F103C8	Feb 2026	STM32G0 / STM32F4 families	High – firmware and peripheral migration
STM8S105K4	Mar 2026	STM32G0 or STM8 newer series	High – architecture transition

NXP

Product	EOL	Replacement	Impact on Operations
PCA9555	Jan 2026	PCA9535 / newer GPIO expanders	Low – pin-compatible replacement
LPC1768	Jun 2026	LPC55Sxx or i.MX RT series	High – software and tooling changes

End of Life (EOL)

Infineon

Product	EOL	Replacement	Impact on Operations
IR2110	Feb 2026	IRS2110S / newer gate drivers	Medium – timing and drive strength validation
FF300R12KT4	Jun 2026	Latest EconoDUAL™ IGBT modules	High – power system requalification

Maxim Integrated (ADI)

Product	EOL	Replacement	Impact on Operations
MAX3232	Jan 2026	ADI low-power RS-232 transceivers	Low – drop-in replacement
MAX6675	Mar 2026	MAX31855 / newer temp sensors	Medium – firmware and interface changes

Renesas

Product	EOL	Replacement	Impact on Operations
R5F100LGAFB	Feb 2026	RL78/G23 MCU family	High – firmware migration
ISL9122	Jan 2026	Renesas PMIC successors	Medium – power validation

ON Semiconductor

Product	EOL	Replacement	Impact on Operations
NCP1117	Mar 2026	NCP176 / newer LDO families	Low – pin-compatible in most cases
MC74HC04	Jun 2026	NC7HC04 / modern HC logic	Low – minimal electrical impact

Vishay

Product	EOL	Replacement	Impact on Operations
BC327	Jan 2026	BC807 / newer small-signal BJTs	Low – footprint and rating check
CPF0603 Resistor	Feb 2026	Newer thin-film resistor arrays	Low – drop-in replacement

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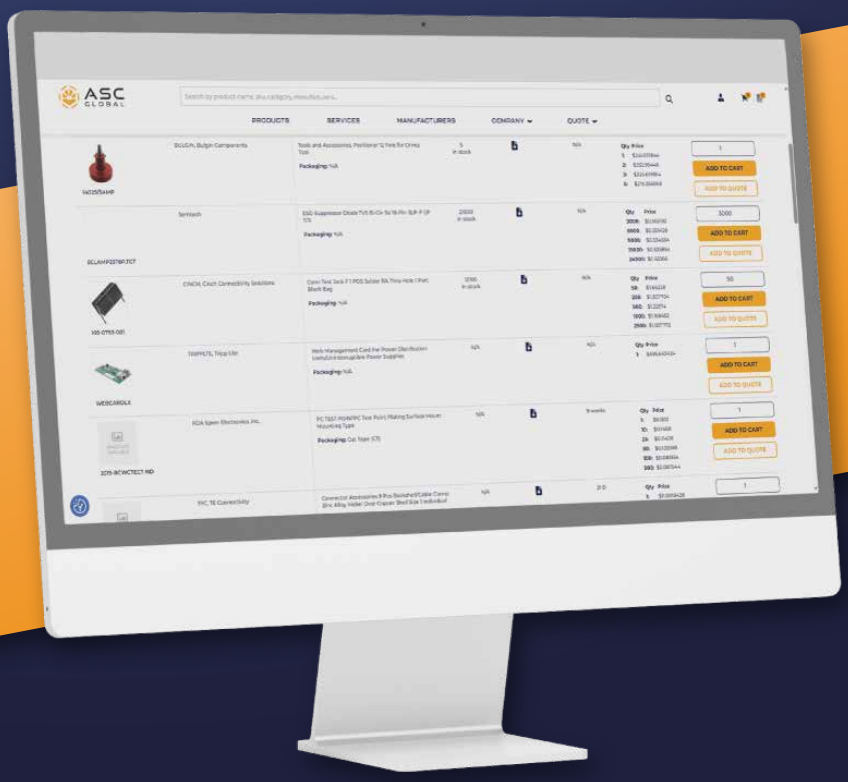

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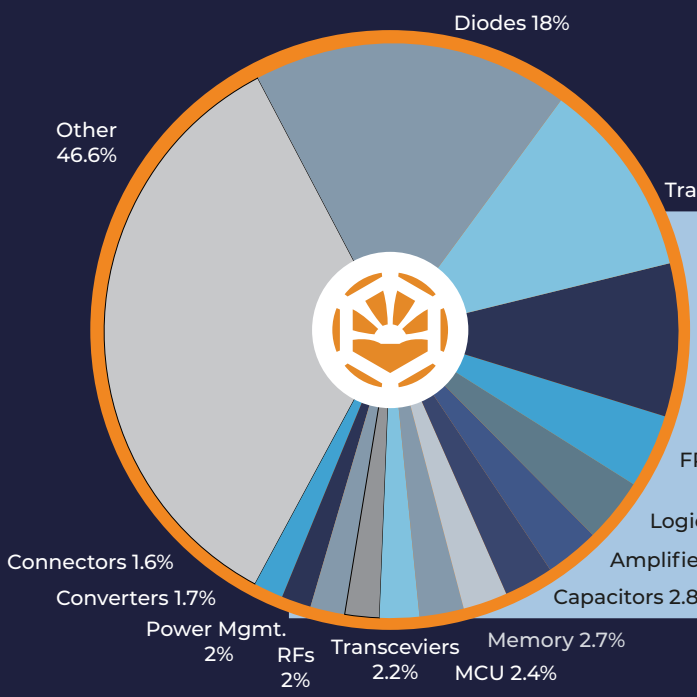
Test & Failure Rates

Test Rates by Device Type



In Q4 2025, diodes and transistors showed the highest failure rates, indicating stress in power and signal paths. MOSFETs followed, while FPGAs and logic ICs required ongoing validation. Memory, MCUs, RF, and power management devices recorded lower but persistent test exposure across industrial and communications systems.

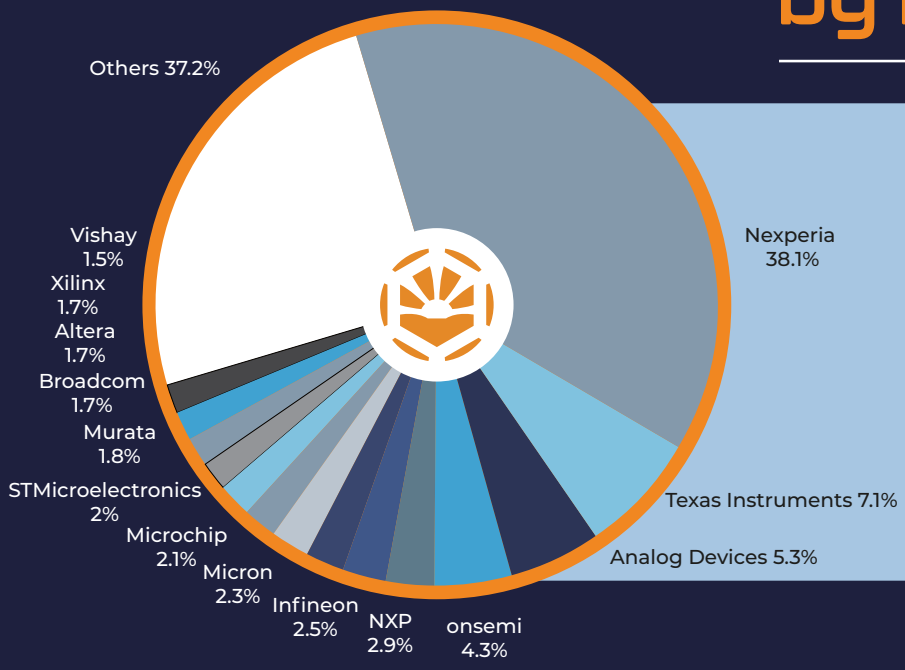
Top 10 Component Types by Failure Rate

Here's a list of the top 10 device types most likely to fail our quality tests in December.

1. System on a Chip (SoC)
2. CPU
3. Module
4. Regulator
5. Synthesizer
6. Inductor
7. Relay
8. Converter
9. Bus
10. Clock Generator

This ranking is determined by the proportion of failed results compared to the total units tested in each category. While some failures stem from aging or mishandling, others could indicate more serious quality issues or potential counterfeit threats.

Test Rates by Manufacturer



In Q4 2025, Nexperia (38.1%) dominated testing volume, largely driven by a dispute between Nexperia's China operations and its Dutch headquarters. Higher failure probabilities appeared among manufacturers supplying complex, mission-critical devices, where advanced testing reveals more potential failure modes, reinforcing the need for batch-level validation over brand-based assumptions.

Top 10 Manufacturers by Failure Probability

Regarding manufacturer origin, these ten brands recorded the highest test failure rates in December.

1. Xilinx
2. Cirrus Logic
3. TE Connectivity
4. Intersil
5. Monolithic Power Systems (MPS)
6. TDK Corporation
7. Samsung Electro-Mechanics
8. Vishay
9. Altera
10. AMD

This does not indicate widespread issues but suggests areas that may benefit from further supplier verification or risk mitigation measures.

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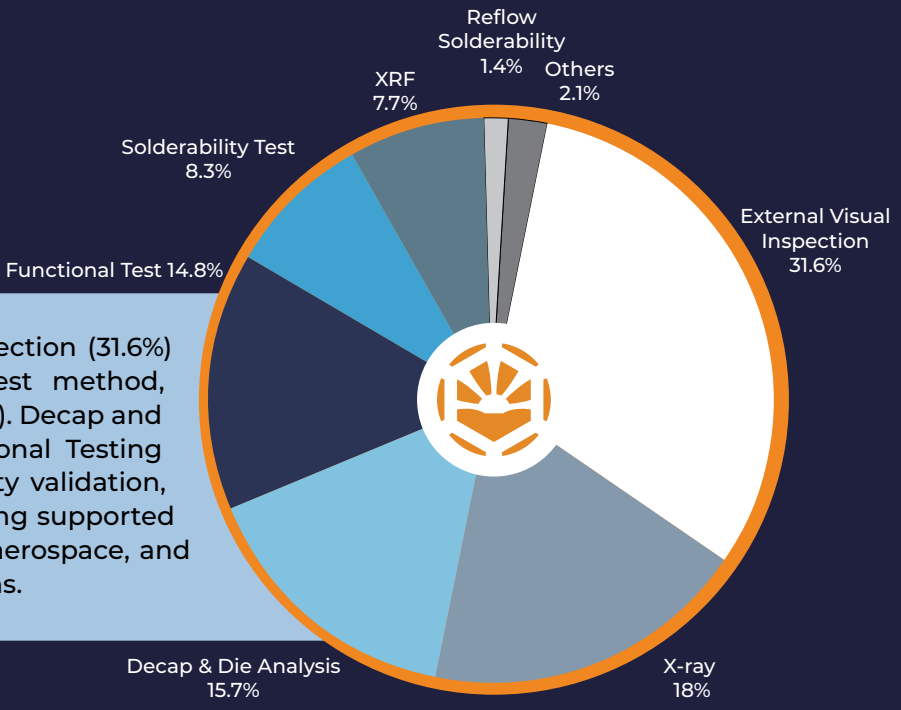
Driving Electronic Sustainability

- Energy-efficient operations
- Sustainable shipping practices
- Supply chain transparency
- Green sourcing

Test Types & Results

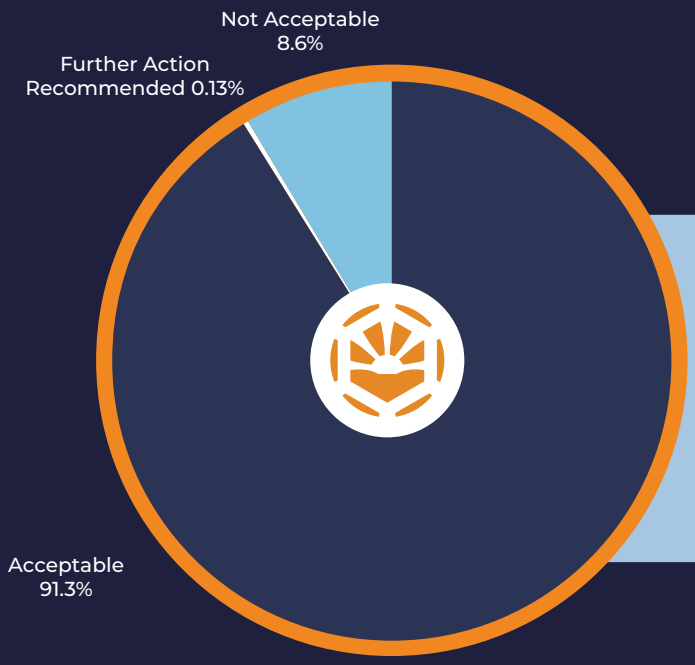
Test Types

In Q4 2025, External Visual Inspection (31.6%) remained the most applied test method, followed by X-ray inspection (18%). Decap and Die Analysis (15.7%) and Functional Testing (14.8%) reflected deeper reliability validation, while solderability and XRF testing supported compliance across automotive, aerospace, and advanced computing applications.



Test Results

In Q4 2025, 91.3% of tested components were deemed acceptable, while 8.6% failed to meet quality standards and 0.13% required further action. Despite strong pass rates, remaining failures continue to highlight ongoing reliability risks within critical and high-reliability supply chains.



Nexperia Crisis

Governance Fracture at Nexperia Triggers Quality Risks

The stability of the industrial and automotive semiconductor supply chain has been severely compromised by a deepening internal schism between **Nexperia's Dutch headquarters** and its **Chinese operating unit.**

1. The Breakdown: Wafer Blockade & Governance Breach

In late 2025, Nexperia B.V. (Netherlands) took the unprecedented step of **halting all wafer shipments** to its primary assembly and test facility in Dongguan, China. This total cessation of supply stems from a collapse in corporate governance:

- **Payment Conflict:** The Chinese unit reportedly refused to settle outstanding payments for wafers shipped from Nexperia's Hamburg fab, claiming a dispute over a 1-billion-yuan ($137M) debt.
- **Administrative Seizure:** Reports indicate that local management in China has misappropriated corporate seals and established unauthorized bank accounts, effectively operating as a "rogue" entity independent of Dutch HQ oversight.

2. The Rise of "Non-Authentic" Wafers

Deprived of authentic European silicon, the Chinese unit has pivoted to local domestic foundries to maintain operations.

Risk Alert: Nexperia HQ has officially warned global customers that it **cannot guarantee the authenticity, intellectual property, or quality standards** of any components processed in China after mid-October 2025.

The use of unauthorized local wafers, often lacking the rigorous automotive-grade qualifications (AEC-Q101) of the original German silicon, poses a significant reliability threat. There are growing reports of **"pseudo-Nexperia" parts** entering the spot market, where domestic Chinese wafers are packaged in Nexperia-branded housings without HQ validation.

3. Supply Chain Impact

The disruption has forced a massive realignment for OEMs who rely on Nexperia's discrete semiconductors and logic devices.

Current Risk	Industry Response
Quality Degradation	Tier-1 automotive suppliers (Bosch, Continental) are halting intake of China-originated Nexperia lots pending lab verification.
Pricing Volatility	Spot market prices for "Western-validated" Nexperia stock have surged 400% as buyers flee China-sourced inventory.
Geographic Pivot	Nexperia is fast-tracking a $300M expansion in **Malaysia**, aiming to move 90% of its global capacity out of China by mid-2026 to restore supply integrity.

4. Strategic Recommendation for Procurement

1. Verify Country of Origin (COO): Mandate that all Nexperia shipments include wafer-fab traceability documentation. Favor parts with a "Hamburg/Manchester" wafer origin and "Malaysia/Philippines" assembly.

2. Suspend China-Sourced Buys: Until governance is restored, avoid Nexperia lots packaged in Dongguan or Guangdong to mitigate the risk of non-authentic silicon.

3. Accelerate Second-Sourcing: Transition high-reliability designs to onsemi, STMicroelectronics, or Infineon equivalents immediately.

NO AUTHENTICITY / QUALITY GUARANTEE

CATEGORY	TYPICAL SERIES	DIFFICULTY TO REPLACE
LFPAK / CCPAK MOSFETs	PSMN, BUK7, NXH60	Very High
Ideal Diodes	NID5000-5200	Very High
Small-Signal Discretes	BAV99, PMBT3904	High
Logic ICs	74HC/LVC Families	High
ESD/TVS	PESD series	Moderate
SiC / GaN	NSF, GANOxx	Very High

Hot Commodities

Compiled from diverse sources, this data provides guidance. Treat it accordingly. ASC Global offers premier supply chain programs to mitigate market volatility. Contact your Account Manager for details.

- Analog
- Memory
- Power Products
- Logic & Digital
- Passives
- Electromechanical

ASC's Picks

Type	Product #	Manufacturer	Lead Time weeks	Pricing Trend	Prognosis
	MT40A1G16TB062EF	Micron	39-40	↔	↔
	FT230XSR	FTDI	27–34	↔	↔
	KLM8G1GETFB041	Samsung	20	↔	↔
	MT40A1G16TB062EITF	Micron	39-40	↔	↔
	FT230XQR	FTDI	32	↔	↔
	MT41K256M16TW107P	Micron	26-53	↔	↔
	MT40A512M16TB062ER	Micron	20	↔	↔
	ICM42688P	TDK	20-26	↔	↔
	MT40A512M16LY062EITE	Micron	39-40	↔	↔
	MT41K256M16TW107ITP	Micron	26	↔	↔
	KSZ8999I	Microchip	18-20	↔	↔
	MT53D512M32D2DS05 WTD	Micron	20	↔	↔

Product Updates

Integrated Circuits

ICs from **STMicroelectronics, Infineon,** and **TI** face extended lead-times as production prioritizes AI and automotive segments; manufacturers are investing in capacity and advanced packaging to manage allocation and logistical pressures.

Legacy logic and MCU devices from **NXP** and **Microchip** are being reallocated to strategic customers, forcing distributors to secure longer delivery windows and prioritize forecasted orders.

FPGA

AMD/Xilinx FPGAs, especially automotive-grade and high-end devices, show severe allocation constraints with lead times of 40–52+ weeks; OEMs urged to secure inventory or design alternatives due to slow supply normalization.

Intel (Altera) FPGA availability remains constrained as foundry backlogs persist; sourcing strategies emphasize diversified channels and early forecasts for delivery commitments through mid-2026.

Passives

MLCC and tantalum capacitors from **Panasonic, Murata,** and **Kemet** are under allocation pressure with lead-times stretching over 20+ weeks in key profiles, leading OEMs to pre-order and secure slots.

Panasonic tantalum and specialty capacitors see 16–18 week waits, with upstream shortages of HVLP copper foil and fiberglass impacting broader PCB assembly timelines.

eMMC

Kioxia and **SanDisk** eMMC SKU quotations are scarce, with authorized channels reporting halted pricing and constrained deliveries on 8 Gb and common capacities.

OEM Allocation Dominates Quotes, OEMs with large volume agreements consume most eMMC output; distribution/spot inventory remains minimal as suppliers tighten shipment policies.

RDIMM

Samsung and **SK Hynix** RDIMM allocations are tightly controlled with constrained availability for 128GB+ modules; quotes often require strict acceptance terms and 30-day PO commitments.

Kingston and similar memory vendors raise pricing on key RDIMM tiers with extended waits, as high-memory server configurations absorb available production.

Product Updates

SSD

Samsung, Micron, and **Solidigm** enterprise SSD capacity is largely pre-allocated to AI cloud giants, reducing open-market supply and extending standard OEM lead times beyond six weeks.

Lower-Capacity Supply Tightness, Lower-capacity (240–480 GB) SSD production tightened as manufacturers allocate NAND toward higher-margin, high-density enterprise segments.

HDD

High-Capacity Delivery Delays, Seagate and Western Digital require long forecasts for 20 TB+ drives, with many orders pushing delivery into 2026 due to constraint and prioritization of larger models.

Low-Capacity SKU Cuts & EOL, 1 TB and 2 TB HDD orders are being phased out, with >22-week lead times for remaining low-capacity stock amid allocation focus on high-cap segments.

Server CPU

AMD Genoa/Turin Lead Times, AMD server CPUs (Genoa/Turin) are reporting 20–24+ week lead times; reference quota remains strict with limited open-market availability.

Intel 10 nm Allocation Tightness, Intel's 12th–14th Gen server CPUs from 10 nm are constrained, with carriers indicating delayed ETAs and prioritization shifting to advanced nodes.

GPU

Nvidia Blackwell/Later Series Delays, Nvidia Blackwell workstation and related GPUs show extended lead times into Q1–Q2 2026, with priority given to Blackwell B-series and high-margin AI models.

RTX 5090 & Ada SKU Allocation Limits, RTX 5090 production is limited until April 2026, with Ada-series PRO SKUs facing multi-week delivery pushes as Nvidia tightly manages capacity.

Motherboards

OEM Platform Focus Reduces Discrete Supply Server OEMs (e.g., Supermicro) emphasize integrated platforms, making standalone motherboard allocation and ETAs less predictable as memory/storages constraints tighten scheduling.

Lead-Time Variability with Memory Dependencies, Motherboard delivery windows fluctuate significantly depending on paired memory availability, especially DDR5 and server RDIMM allocations.

Manufacturer Updates

SK Hynix

SK Hynix is heavily prioritizing high-bandwidth memory production, allocating most advanced capacity to AI applications, effectively limiting availability for consumer memory and reinforcing supply tightness across PCs, smartphones, and storage devices.

Samsung

Samsung is redirecting wafer capacity toward premium HBM and enterprise DDR5, emphasizing profitability over volume, which constrains consumer memory supply and contributes to higher pricing pressure across global electronics markets.

Micron

Micron is focusing production on AI-optimized memory, selling out HBM capacity and leveraging strong margins, while reduced output of mainstream DRAM and NAND intensifies shortages for consumer and enterprise hardware manufacturers.

Intel

Intel is deploying advanced logic (Meteor Lake/Nova Lake) and expanding foundry services, with reported constraints in some legacy CPU nodes while responding to data-center logic demand.

Nvidia

Nvidia continues its leadership in AI GPUs and networking chips (Blackwell, ConnectX) with allocation constraints pushing lead times into early 2026 for premium compute silicon.

STMicroelectronics

STMicroelectronics is prioritizing MEMS sensors and MCUs with stabilized inventory and typical lead times 12–18 weeks, while automotive and industrial portfolios underpin demand resilience.

Microchip Technology

Microchip raises output of analog semiconductors for automotive, industrial and consumer electronics, reducing inventory and improving production utilization as bookings strengthen.

Infineon

Infineon is developing GaN power semiconductors and automotive/AI power solutions, balancing automotive caution with growth in AI data-center power management; automotive lead times moderate near 20-30 weeks per supply chain

NXP

NXP emphasizes automotive MCUs, i.MX application processors, and hybrid manufacturing strategies, with extended lead times (12–20 weeks) on high-demand automotive/industrial lines.

Texas Instruments

Texas Instruments drives analog ICs, power management and isolators with production upgrades impacting supply; extended lead times (20 weeks) in select automotive and AI segments.

Manufacturer Updates

AMD

AMD expands server CPUs and GPUs (Turin/Genoa) facing extended 20+ week lead times; focus remains on AI-optimized compute and data-center architectures.

TSMC

TSMC leads advanced foundry (2 nm/3 nm GAA) capacity with mass production booked into late 2026; logic and specialized nodes are allocation constrained with premium customer demand.

Lattice

Lattice emphasizes low-power FPGAs / programmable logic with industry guidance suggesting 9–12 month lead-time planning for customers in constrained supply environments.

Amphenol

Amphenol is focused on passive components and interconnects for broadband, data center, and automotive; passive lead times vary widely, often driven by OSAT and substrate supply cadence.

Skyworks

Skyworks emphasizes RF front-end modules for mobile and connectivity, with RF lead times extending with supply tightness in 2025, particularly in advanced handset components.

Qualcomm

Qualcomm prioritizes 5G/compute SoCs for mobile and networking, benefitting from normalized inventory and recovering channel demand, with typical lead time pressures easing.

Onsemi

Onsemi focuses on power and sensor ICs for automotive/industrial markets; supply remains stable but some lines domestic-oriented with constrained allocation.

Renesas

Renesas targets automotive MCUs and power ICs with extended lead times (20–45 weeks) due to continued fab-light and outsourcing mix adjustments.

Vishay

Vishay emphasizes discretes and passives (resistors, capacitors, power MOSFETs) with broad lead-time variance based on packaged passives and discrete demand cycles.

GlobalFoundries

GlobalFoundries focuses on specialty processes including analog, RF, silicon photonics, and automotive nodes, expanding U.S. and European capacity; specialty technologies face tighter allocations, with lead times typically 16–26 weeks.

Earnings Recap

Automotive

General Motors
- Revenue: $48.59 B (-0.3% YoY)
- Net income: $1.33 B
- Net Profit Margin: 2.7%

Ford Motor Company
- Revenue: $50.5 B (+9% YoY)
- Net income: $2.4 B
- Net Profit Margin: 4.8%

Toyota
- Revenue: $93.1 B (+2.9% YoY)
- Net income: $16.5 B
- Net Profit Margin: 17.7%

Global automotive production and sales ended 2025 on a strong note with Mexico's industry posting its best annual output since 2017 at 1.524 million vehicles, despite November production dips and export headwinds. Investment flows remain pressured by chip shortages and tariff uncertainty, while software and AI-enabled systems are reshaping mobility product lines.

AI and Data Center

Microsoft
- Revenue: $76.4 B (+18% YoY)
- Net Income: $27.2 B (+24% YoY)
- Net Profit Margin: 35.6%

NVIDIA
- Revenue: $39.33 B (+78% YoY)
- Net Income: $22.09 B (+80% YoY)
- Net Profit Margin: 56.2%

Micron
- Revenue: $11.32 B (+46% YoY)
- Net Income: $3.20 B (+261% YoY)
- Net Profit Margin: 28.3%

AI infrastructure demand continues to power record earnings, with major players reporting $57 billion quarterly revenue and data center revenue exceeding $50 billion, up well over 60 percent year-over-year. Cloud and enterprise adoption of accelerated computing remains the dominant driver, supporting future product launches and expanded compute platforms.

Earnings Recap

Automation Industry

Rockwell Automation

- Revenue: $2.3 B (+14% YoY)
- Net Income: $138 M
- Net Profit Margin: 5.96%

ABB

- Revenue: $8.59 B (+4% YoY)
- Net Income: $1.43 B
- Net Profit Margin: 16.7%

Emerson

- Revenue: $4.5 B (+4% YoY)
- Net Income: $586 M
- Net Profit Margin: 12.9%

Industrial automation investment remains solid as manufacturers implement more AI-enabled automation platforms to boost throughput and flexibility. Robotics and sensor demand are supported by industry 4.0 spending, while firms integrate intelligent process controls and predictive systems to optimize supply chain and production performance. Market expansion continues amid workforce and technology shifts.

Consumer and Personal Computing

Apple

- Revenue: $102.5 B (+8% YoY)
- Net Income: $27.5 B (+87% YoY)
- Net Profit Margin: 26.8%

HP

- Revenue: $14.6 B (+4.2% YoY)
- Net Income: $0.8 B (-12% YoY)
- Net Profit Margin: 5.5%

Dell

- Revenue: $23.9 B (+7% YoY)
- Net Income: $1.9 B (+15% YoY)
- Net Profit Margin: 8%

Consumer computing markets display mixed performance: PC makers report resilient demand for AI-capable notebooks and edge devices while sell-through varies by region. Component suppliers tied to premium AI PC growth and IoT segments have recorded solid revenue expansions, reflecting shifting consumer preferences toward intelligent hardware.

Industry Updates

Great Memory Pivot

AI demand is splitting memory markets in 2026, with infrastructure booming while consumer electronics face shortages and rising prices. Wafer capacity is being redirected from smartphones and PCs toward HBM and server DRAM supporting AI accelerators across global foundry networks.

AI Memory Supercycle

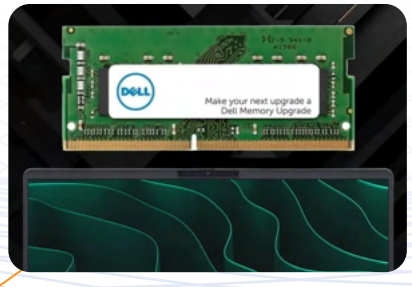
SK Hynix, Samsung, and Micron are prioritizing value over volume, shifting output toward HBM and enterprise DDR5. Sold-out HBM capacity, triple wafer usage, and margins near 70% reinforce reduced availability for mainstream PC and mobile memory throughout 2026 supply cycles.

Nexperia Dispute Triggers Market Quality Risks

Nexperia's Dutch headquarters halted wafer supplies amid a governance and payment conflict with its Chinese unit, prompting China's unit to seek local not authentic wafers. This has disrupted production, raising quality concerns and reports of potential fake parts entering the market and industry supply chains.

Consumer Memory Cost Surge

PC and device makers face escalating costs as memory prices rise sharply. Dell and Lenovo are stockpiling components, amplifying shortages. Analysts project DRAM prices up 50% and consumer electronics costs rising up to 20% as manufacturers pass increases downstream broadly.



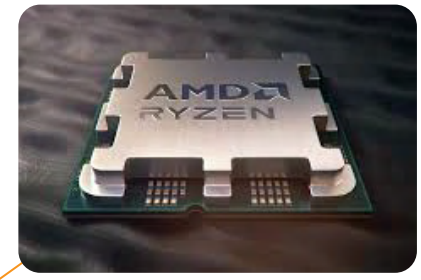
Industry Updates

Geopolitical Memory Supply Shift

To secure supply, Micron is exploring external fabs, while China's CXMT expands capacity targeting legacy DRAM. Meanwhile, hyperscalers and Chinese tech firms are stockpiling AI chips, intensifying shortages and embedding a lasting AI-driven cost premium across global semiconductor supply chains.

AMD Revives AM4 Amid Rising Costs

Amid rising memory and platform upgrade costs, AMD is considering reviving AM4 products, including Ryzen 5000 CPUs, to serve cost-conscious gamers. Strong demand for CPU-only upgrades reflects persistent reliance on older platforms and growing consumer price sensitivity.



TI Expands Automotive Centralized Computing Portfolio

Texas Instruments expanded its automotive chip lineup to support centralized vehicle computing, introducing TDA5 SoCs, advanced radar, and in-vehicle networking. The portfolio targets ADAS, software-defined vehicles, and scalable AI performance up to SAE Level 3 autonomy.

Japan Boosts Long-Term Chip, AI Funding

Japan plans a major 2026 budget increase, allocating over $7.6 billion to semiconductors and AI. METI aims to provide stable, long-term funding for Rapidus, advanced logic, AI development, supply-chain security, and energy infrastructure.

ASC GLOBAL

MANUFACTURING CAPABILITES

Benefits

- **Cost Savings:** Enjoy competitive prices on all your supply chain needs and additional rebates on bulk purchases.
- **Reduced risk:** Improve your supply chain resilience by increasing the sources for your vital components.
- **Better service:** Better technical support, faster turnaround times, or more flexible ordering options.

Products

Passive

- LED Components
- Fuses
- Circuit Breakers
- Switches
- Capacitors
- EMI Filters
- Photo Controls
- Relays
- Resistor
- Thermistor

Semiconductors

- Coin Batteries
- Cylindrical Batteries (Acoustic and Haptic technology)
- Sensor components
- Diodes
- Regulator

Drop-In Replacements

Kingbright | Cree LED | AMS | OSRAM | Lite-On | Broadcom Limited | Lumileds | Ledil | Luminus Devices | Mersen | Littelfuse | Eaton/Bussmann

Industry Applications

- Automotive
- Industrial
- Medical Devices
- Consumer Electronics
- Aviation
- Marine
- Power Supply
- Lighting
- New Energy
- Telecommunication
- Home Appliances
- Security Protection
- Power Trip
- Networking

MARKET REPORT

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