

Milwaukee Electronics Supply Chain News

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Raw Materials Markets Tighten as AI Demand Increases

By Gary DeGrave, Corporate Materials Director

The printed circuit board assembly (PCBA) supply chain continues to experience elevated pricing, extended lead times, and ongoing material constraints. While many component categories remain available, the market has fundamentally shifted from the oversupply conditions experienced in 2023–2024 to a forecast-driven environment characterized by structural capacity constraints.

The primary drivers behind today's market include explosive AI infrastructure investments, higher raw material costs, increasing energy prices, geopolitical uncertainty, and manufacturing capacity reallocations throughout the semiconductor and PCB ecosystem. Multiple suppliers have an-

nounced price increases during the first half of 2026, signaling that these condi-

tions are expected to continue throughout the remainder of the year.

Market Status: Elevated Risk

Category	Current Status Trend	
Semiconductor Pricing	▲ Increasing	Expected to continue
PCB Material Costs	▲ Increasing	Structural
Lead Times	▲ Extended	Stable to Increasing
Memory Availability	● Constrained	Allocation
AI Infrastructure Demand	▲ Very Strong	Accelerating
Copper & Precious Metals	▲ High	Volatile

Semiconductor Market Outlook

The semiconductor market has entered another pricing cycle as manufacturers respond to increasing costs associated with raw materials, energy, labor, transportation, and expanded manufacturing capacity.

Several leading semiconductor manufacturers—including Texas Instruments, STMicroelectronics, Infineon, NXP, On-semi, Diodes, and others—have an-

nounced pricing actions during 2026, with most increases ranging from **5% to 25%**, depending on product family. These actions are largely consistent across the industry and indicate broad inflationary pressure rather than isolated supplier events.

Manufacturers consistently cite:

- Rising raw material costs

- Increased energy expenses
- Transportation inflation
- Foundry and assembly capacity investments
- AI-driven demand growth
- Supply chain resiliency investments.

Milwaukee Electronics Supply Chain Perspective

Our global supply chain organization continues to actively monitor market developments, negotiate with suppliers, qualify alternate sources where

appropriate, and work closely with customers to minimize disruptions. We remain committed to providing timely market intelligence, maintaining supply

continuity, and helping customers navigate this evolving market environment through proactive planning and transparent communication.

AI is Reshaping Electronics Supply Chains

Artificial Intelligence continues to be the single largest influence on today's electronics market. Demand for AI servers, hyperscale data centers, and advanced computing platforms is consuming manufacturing capacity across multiple technologies including:

- High Bandwidth Memory (HBM)
- Enterprise DRAM

- Power semiconductors
 - Copper foil
 - PCB laminates
 - Tantalum capacitors
 - High-performance substrates
- Memory manufacturers including Sam-

sung, Micron, and SK Hynix have largely shifted to allocation-based supply models for AI customers, reducing available capacity for traditional industrial and commercial markets. Memory pricing has risen dramatically, while suppliers increasingly require longer forecasting horizons and inventory commitments.

PCB Fab Material Market Outlook

Raw materials used in PCB fabrication continue to experience significant cost inflation.

Key market developments include:

- Copper-clad laminate (CCL) costs have increased substantially since late 2025.
- Copper foil availability remains con-

strained as production shifts toward AI packaging applications.

- Glass cloth and resin shortages continue to impact laminate production.
- Heavy copper materials remain on allocation.
- FR-4 materials are beginning to

experience shortages alongside advanced laminates.

- Material allocation is increasingly replacing open-market purchasing.

Industry forecasts suggest these conditions could persist for **18–24 months or longer**, making long-term planning increasingly important.

Commodity Market Update

Raw material inflation continues to affect nearly every stage of PCB manufacturing.

Recent market movements include:

- Tin prices have increased approximately **84% year-over-year**, significantly impacting solder pricing.
- Silver prices have nearly tripled,

driving substantial increases in SAC305 solder paste costs.

- Copper remains elevated and continues to pressure laminate and PCB costs.
- Gold prices have risen roughly **40%** since mid-2025.

- Nickel and petroleum prices continue to trend upward, increasing plating and laminate manufacturing costs.

These commodity increases are flowing directly into component pricing, PCB fabrication, connectors, solder materials, and finished electronic assemblies.

Lead Time Trends

Lead times remain elevated across several product categories.

Current areas of concern include:

- Memory devices under allocation
- Power semiconductors
- MOSFETs

- Tantalum capacitors
- FPGA products
- Certain analog IC families
- High-performance PCB materials

Many passive components have stabi-

lized between **12–30 weeks**, while specialized products continue extending beyond historical norms. Manufacturers continue encouraging customers to provide longer forecasts and maintain inventory buffers to secure production capacity.

Supplier Spotlight

Recent pricing notifications have been received from numerous suppliers including:

- Texas Instruments
- NXP
- Infineon
- STMicroelectronics
- Onsemi
- Diodes
- Honeywell
- Omron
- TE Connectivity
- JST
- Molex
- Panasonic
- Harting
- Hubbell
- 3M
- Volex
- NKK Switches

While the magnitude varies by product family, nearly every supplier cites the same underlying drivers: raw material inflation, energy costs, manufacturing investments, and continued supply chain constraints.

Recommendations for Customers

To minimize risk and maintain continuity of supply, we recommend customers:

- Share rolling forecasts whenever possible.
- Place orders earlier than historical planning cycles.
- Consider blanket purchase orders for long lead-time materials.
- Evaluate approved alternate components where appropriate.
- Lock pricing and material availability early on critical programs.
- Communicate anticipated demand changes as early as possible.

Early collaboration remains the most effective strategy for mitigating supply chain risk in today's market.

Overall Outlook

While overall semiconductor availability has improved compared to the peak shortages experienced in 2021–2022, the market has entered a new phase defined by structural cost inflation rather than widespread shortages.

We expect:

- Continued semiconductor price increases through 2026.
- Elevated PCB raw material pricing.
- Stable but longer-than-historical lead times.
- Forecast-driven allocation models becoming more common.
- Continued investment in AI infrastructure driving demand for electronic materials.
- Ongoing volatility in precious metals and copper pricing.

Organizations that proactively forecast demand, collaborate closely with supply chain partners, and secure materials earlier in the product lifecycle will be best positioned to maintain production continuity.

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