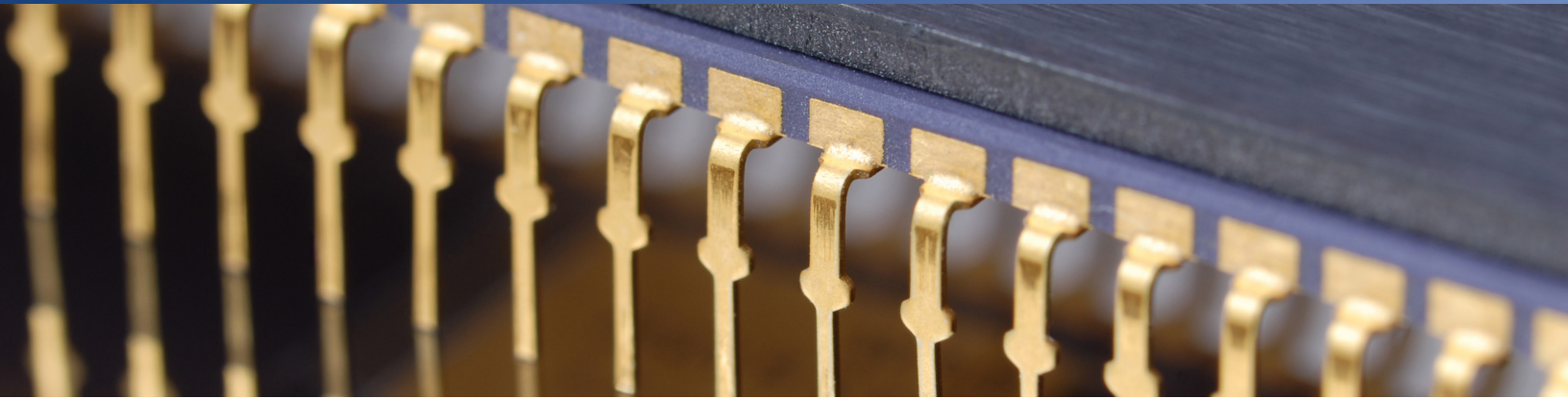




XTRONIC® PM

Optimized for Gold Reduction

XTRONIC® is engineered to be a superior barrier layer for electronic connectors, enabling manufacturers to use less gold while maintaining the same high level of reliability and corrosion protection. Traditional nickel sulfamate requires thick layers of gold to protect against corrosion and wear. XTRONIC's nanostructured design provides a stronger barrier, meaning less gold is needed on top.

XTRONIC Advantage

Industry performance standards rely on a thick gold layer (0.75 μm) over nickel sulfamate (1.75+ μm) to provide corrosion protection. This approach is costly and highly dependent on volatile gold prices. XTRONIC replaces nickel sulfamate with a nanostructured Ni-W alloy barrier layer. Because XTRONIC delivers superior corrosion resistance and durability, only 0.25 μm of gold is required, causing a 67% reduction on gold usage for the same level of performance.

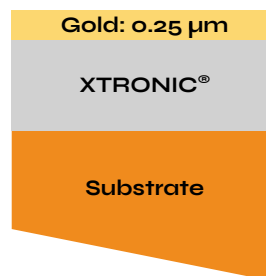
Benefits

Up to 67% reduction in gold usage

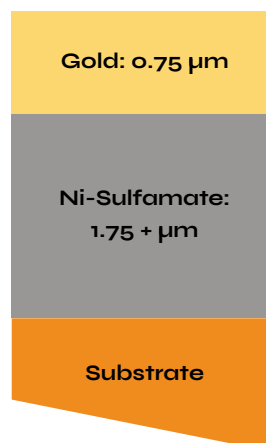
Up to 5x improved wear durability compared to traditional coatings

Proven scalability, with tens of billions of units deployed globally

XTRONIC®



Industry Standard



Nanostructured nickel tungsten composition for engineered grain stability

Hardness of 680 HV for high wear resistance

Low and stable contact resistance (<10 mΩ) over time

Superior corrosion resistance, including powered immersion corrosion environments

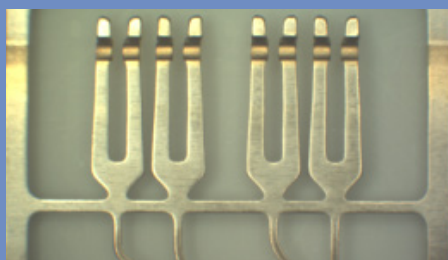
Compatible with high-speed reel-to-reel, rack, and barrel plating lines

Wide operating temperature tolerance — up to 700°C

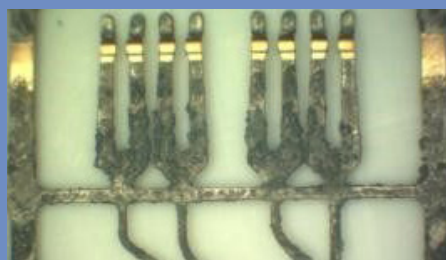
For Enterprise Servers and Networking Hardware

XTRONIC has enabled over 3.5 metric tons (\$485 million) in gold savings, reducing gold usage by two-thirds without sacrificing performance. This is made possible by XTRONIC's superior nickel

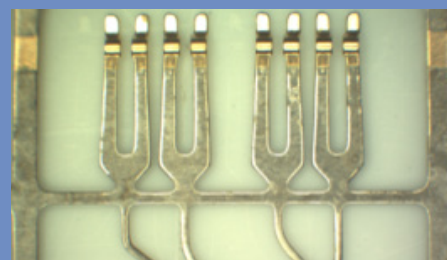
tungsten barrier properties: when tested against the industry-standard nickel sulfamate, traditional coatings corroded after environmental exposure, while XTRONIC remained intact.



A standard plated part using 3x the required gold that Xtalic connectors use.



In corrosion testing thick gold protects the contact area but exposed nickel sulfamate is entirely corroded.



With an XTRONIC barrier layer, gold thickness is reduced by two-thirds and electrical components do not corrode as compared to conventional nickel sulfamate.

Manufacturing Capabilities

XTRONIC is produced using Xtalic's advanced pulse reverse electroplating technology, ensuring uniform nanostructures and consistent performance. The alloy is suitable for plating thicknesses from 0.1 to 20 microns and can be applied using:

- High-speed reel-to-reel plating
- Rack and barrel plating
- Selective spot plating

Applications

- Connectors designed for gold or precious metal reduction
- Data communication and network infrastructure (Ethernet, routers, switches)
- CPU/GPU sockets and other high-performance computing interfaces
- Industrial and military/aerospace connectors

Environmental Benefits

- Over 3.5 metric tons (\$485 million) of gold saved across deployments
- Significant CO₂ reductions linked to gold mining avoidance
- Tungsten sourced from ethical and recycled supply chains
- Supports ESG goals while lowering total cost of ownership