



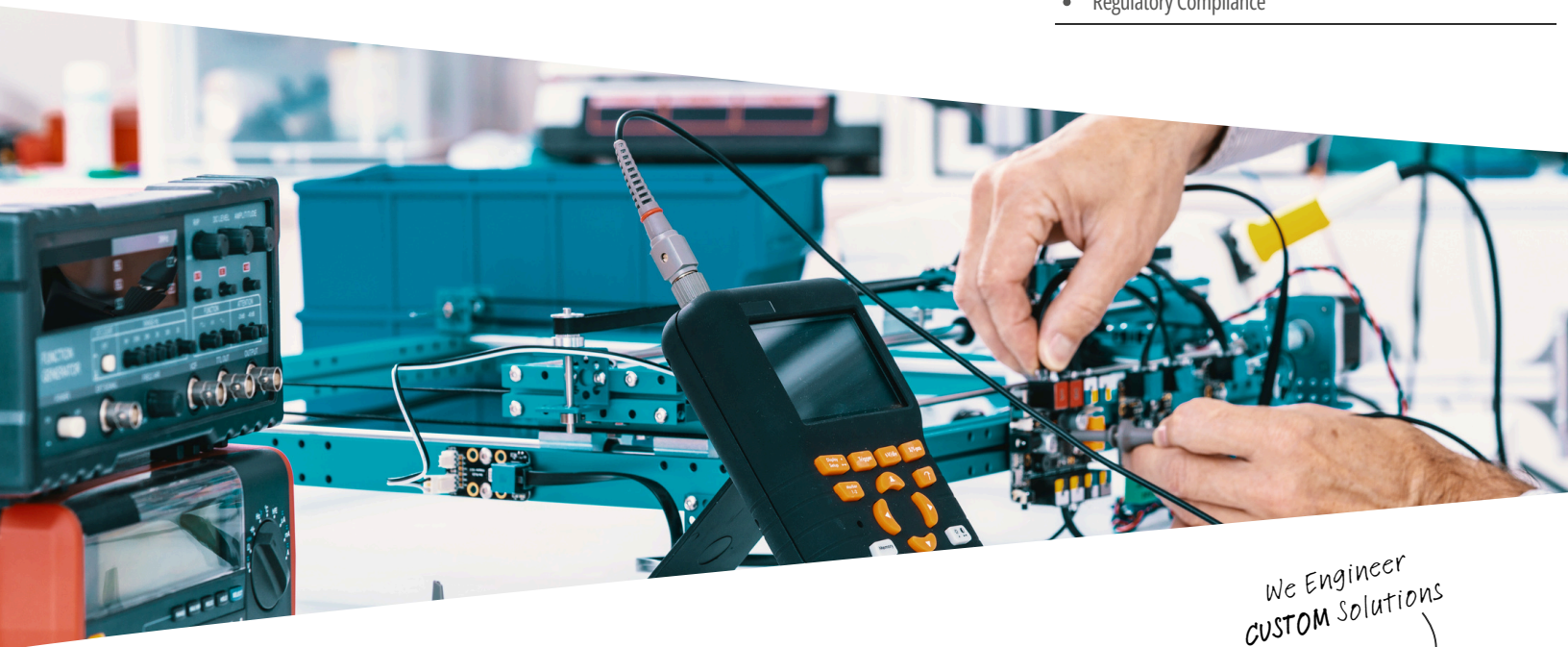
# NUMBERALL

MARKING IT ALL SINCE 1930

## Numberall Knows Electronics Components

Other Applications:

- Authenticity Verification
- Assembly Process Tracking
- Regulatory Compliance



*We Engineer  
CUSTOM Solutions*

## Precision, Stress-Free Marking for Enhanced PCB Traceability

### Challenge:

A major PCB manufacturer needed to apply permanent, visible codes without inducing stress. Their prior method risked damaging delicate boards and produced inconsistent marks lacking durability for traceability.

Requirements included:

- Applying permanent, machine-readable marks on various PCB substrates.
- Protect against counterfeiting with permanent markings.
- Marking boards accurately without introducing stress or physical damage.

### Solution:

Numberall engineers worked closely with the manufacturer's team to engineer a customized precision marking solution. This involved CNC engraved round-faced characters to apply precise, permanent indentations. The system seamlessly integrated into the automated line, eliminating stress on the delicate boards while ensuring mark readability for visual inspection and automated reading systems, perfect for quality control and traceability needs.

### Benefits:

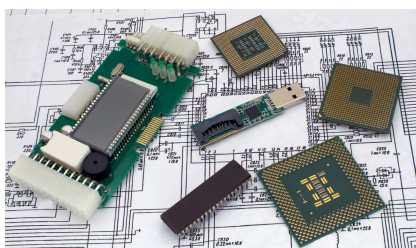
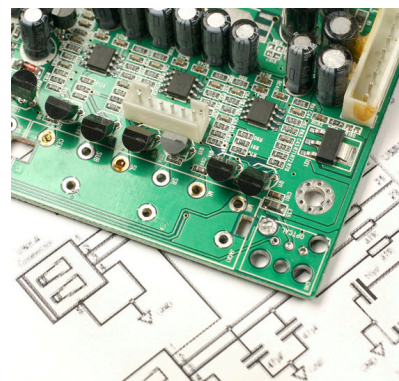
- Ensured PCB Integrity: Stress-free marking guaranteed long-term reliability and performance.
- Optimized Throughput & QC: Automated, consistent marking delivered verifiable IDs, streamlining production.
- Enhanced Product Security: Durable, permanent marks hindered alteration, protecting supply chain integrity.



### For further information:

Visit [numberall.com](http://numberall.com)  
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