

DISRUPTING COUNTERFEITING WITH TRACEABILITY

Case Study

To disrupt gray-market and counterfeit channels, a manufacturer of power-management equipment adopts innovative, tamper-proof laser marking.

SUMMARY

In the commercial and industrial electronics market, the smallest misstep in manufacturing or testing can mean costly repairs, property damage, and even serious injury or death.

Aware that its reputation is on the line with every circuit breaker sold, a multinational electrical-equipment manufacturer has for years channeled substantial resources into fighting gray-market and counterfeit products, often via litigation. Recently the company adopted a preemptive strategy based on making counterfeiting more difficult and illicit supply chains easier to trace.



Powering this campaign is a close collaboration with MECCO and iTRACE Technologies. Together, the three enterprises have tailored an advanced marking-and-tracing approach that eliminates risks ranging from lost revenues to potential service and warranty liabilities.

GLOBAL CONTEXT

60% of participating OEMs reported seeing increased gray-market activity since 2008.

90% reported finding their products available outside approved channels.

Source: "Gray Markets: An Evolving Concern," KPMG, LLC, and Alliance for Gray Market and Counterfeit Abatement

CHALLENGES

SETTING PARAMETERS FOR SUCCESS

Motivating our customer—a leading manufacturer of power-management equipment—were complaints from sales team members and authorized retailers that circuit breakers were being diverted into gray-market channels, re-labeled with falsified performance information, and sold at a higher price. The products in question are high-volume items that protect devices connected to low-voltage distribution systems. The company was facing lost revenues and potential service and warranty issues.

Trend watchers in the electrical-equipment industry acknowledge the scale of the problem: A January 2017 report from Research and Markets, "Global Circuit Protection Market 2017 – 2021," notes a surge in gray-market trading that will impede industry growth in the next three to five years.

Our customer requested a solution that would meet four business conditions:

- » Reduce revenues lost to the gray market
- » Prevent losses due to false warranty or liability claims involving counterfeit products
- » Reduce legal and brand-protection costs
- » Improve distributor and retailer satisfaction

...and three technical requirements:

- » Eliminate easy-to-tamper-with or easy-to-remove labels and packaging without affecting the product's look and feel
- » Ensure quick identification of genuine, but remarked or relabeled products, even if packaging has been removed and they have been installed
- » Boost capital-equipment value and ROI by augmenting the customer's installed base of MECCO laser marking technology

According to industry experts, OEM losses due to gray-market sales hover around 15 to 20 percent of potential sales revenue, across almost all industries. Other sources, including the consumer-products giant Unilever, estimate losses to counterfeiting at 1 percent of annual turnover.

SOLUTION

A NEW DIMENSION FOR TWO SUCCESSFUL SYSTEMS

After selecting the MECCO/iTRACE team for its integrated approach and superior grasp of the challenge, our customer participated actively during the initial development period. The result was an innovative marking and traceability solution in which the iTRACE 2DMI software suite would mesh seamlessly with the proven MECCO marking technology already in place.

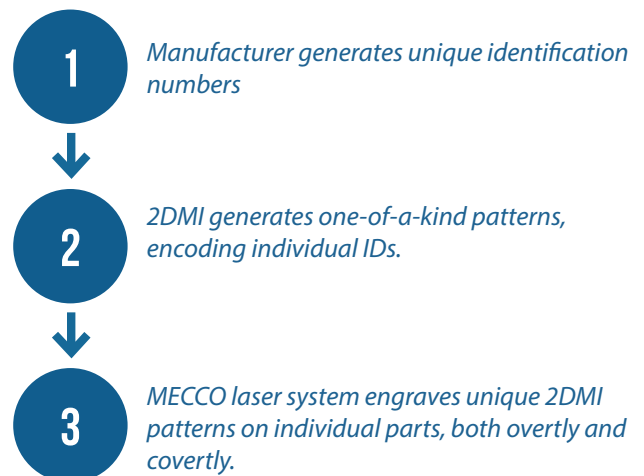
What made this solution possible was the technology integration of iTRACE Technologies, the leading provider of unique identity (UID) solutions with MECCO, the world's leader in turnkey industrial part marking and product tracking. The pairing would support the first direct integration of the iTRACE 2DMI software suite with a production-level laser marking system.

The most conspicuous outcome would be overt and covert marks, indelibly laser-etched into every circuit breaker's molded case. MECCO's SMARTmark Fiber Laser Marking System features rotary indexing and integrated vision, which identifies each part by bar code. SMARTmark pulls the appropriate marking information from the manufacturer's enterprise resource planning (ERP) database, then applies it to as many as four sides of the part.

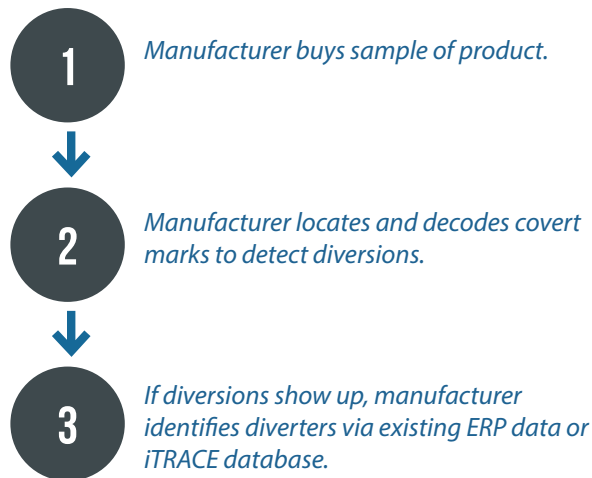
But marking is only as good as the information it carries. Secure, proprietary, encrypted 2DMI data would add:

- » Integration with existing database, software, and marking system
- » Simplified logistics, thanks to coupling with standard 1D and 2D codes
- » An extremely compact individual-mark footprint (<0.25mm with standard lasers)
- » High-speed marking capabilities

HOW IT WORKS: PRODUCT SECURITY



HOW IT WORKS: PRODUCT AUTHENTICATION



RESULTS

As expected, the new system is:

- » **Fast**—It can be deployed throughout the production line within hours.
- » **Seamless**—It integrates fully with the customer's systems.
- » **Flexible**—Even operating at high speed, it can handle a variety of products.
- » **Affordable**—It scales readily with the brand.
- » **Economical**—By eliminating conventional paper labels, it reduces unit cost.

Security marks, applied either covertly or overtly, allow the manufacturer to protect the product as well as the package. The system integrates iTRACE Write-a-Mark and Read-a-Mark software development kits with a custom MECCO marking automation controller.

While conventional laser security solutions rely on open-source technologies that counterfeiters can defeat, the MECCO/iTRACE 2DMI integration cannot be reproduced illicitly. As the system engraves individual products with unique, proprietary track-and-trace numbers, it prevents mass replication by using specifically designed proprietary codes.

Our customer maintains full production control over the solution without the need for additional cloud-based services. The manufacturer can activate brand protection and product security with the flick of a switch. Razor-sharp markings, highly resistant to removal or replacement, enable purchasers to spot reconditioned products quickly. The technology is so advanced that counterfeiters will find it impossible to match for years to come.

According to our customer, the solution already has demonstrated results against:

- » **Gray-market diversion**
- » **Production overruns**
- » **Warranty-return fraud**
- » **Counterfeit liability**

CONCLUSION

A PRE-EMPTIVE, TECHNOLOGY-BASED APPROACH

Not long ago our customer's primary strategy was to seek legal remedies after gray-market sales or counterfeiting offenses came to light. By taking a preemptive stance, supported by advanced, integrated technology, this manufacturer has made a giant step toward protecting revenues and reducing exposure to service and warranty liabilities.

The key to this initiative's success was a three-way collaboration shared by the OEM and by MECCO and iTRACE Technologies, whose integrated, innovative approach to product marking and tracing struck a new balance of flexibility and control.



MECCO, the leader in OEM-to-turnkey marking systems, enables the world's leading manufacturers to achieve higher efficiencies, reduce manufacturing costs, and increase quality by implementing full serialization and traceability solutions.

iTRACE Technologies, Inc., is the leading provider of fingerprint and Unique Identity (UID) solutions for cost-effectively guaranteeing the authenticity and integrity of products with track-and-trace security.

For more information, visit www.mecco.com.

For more information, visit www.itracetech.com.