X SMART LIGHT

Smart Material Management Systems

X-TREME SERIES
AUTO DRY CABINETS

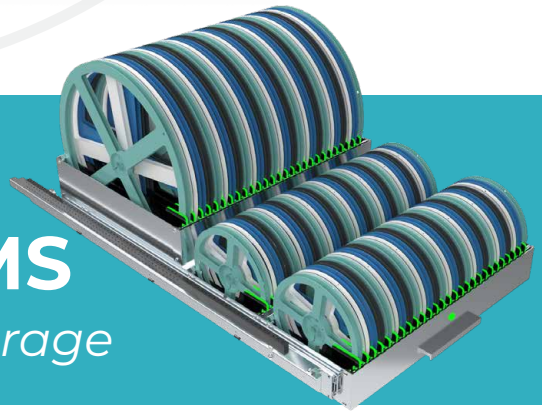
2025 GLOBAL TECHNOLOGY AWARDS

Nominated for the **productronica** Innovation Award 2025



SMART MATERIAL MANAGEMENT SYSTEMS

Maximum Efficiency With Smart Storage



made in **INNOVATION**

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X-SMART LIGHT®

Traceability and Compliance

X-Smart Light is an advanced component tracking system that digitizes material management in SMT production using Pick-by-Light technology. It automatically enforces FIFO - FEFO rules and prevents material management error.

Traceability is provided by recording every material used, every step taken, and all data related to each operation.

The system enables manufacturers to increase **operational speed, accuracy, and traceability,** while supporting lean automation, **maximizing space efficiency,** and meeting strict industry-specific quality requirements.

In electronics manufacturing, **compliance with aerospace, automotive, defence, and IPC standards** is not just a requirement — it is a key factor that provides a competitive advantage.



X-SMART LIGHT® PROVIDES A COST EFFECTIVE AND FLEXIBLE ALTERNATIVE

to complex automation systems, offering fast access, uninterrupted operation, and ease of use.

EMT ELECTRONICS

X-SMART LIGHT

Why X-Smart Light?

- Faster component selection without error.
- 100% traceability — covering components, operations, users, environment, and cabinet conditions.
- User-friendly interface with minimal training requirements.
- Lower investment cost and quick integration into existing workflows.
- Minimized cost-per-reel.
- Easy access to components even during power failures or system downtime.
- Modular and retrofit-friendly design smart shelves can be added later.
- Scalable configurations tailored to component volume and customer needs.
- Flexible layout for installation between lines and optimized space usage.



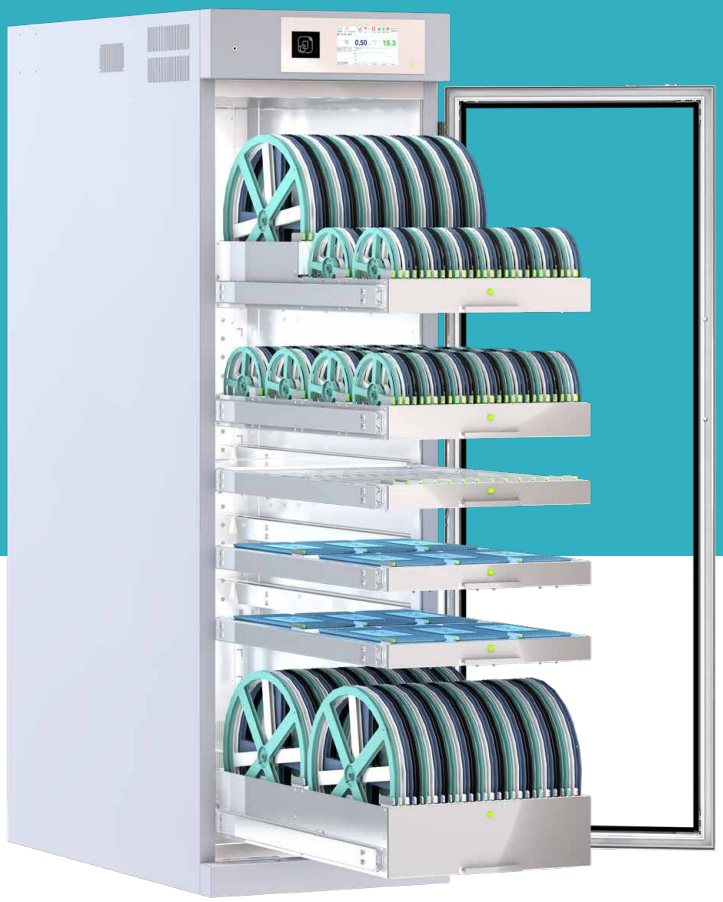
X-SMART LIGHT

Smart Features at a Glance

- Adjustable width control in slot up to 68 mm.
- Supports random dynamic location inventory systems.
- Maximum capacity with minimal footprint (1,728 reel in just 1.26 M2 of floor space).
- Barcode/QR code support for fast loading and unloading.
- Supports up to 50 users with role based access control.

Intelligent Light Guidance

The system utilizes LED lights for efficient inventory management. The green light indicates the correct shelf position and selection of the material from the correct address on the shelves. The blue light confirms the selection, while the red light indicates errors. Warnings are communicated to operators through auditory, visual, and email notifications to ensure efficient material management.



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X-SMART LIGHT

SCALABLE, HIGH CAPACITY TAILORED FOR PERFORMANCE

Maximize your storage efficiency with our high capacity, modular inventory solutions engineered to support demanding production environments. X-Smart Light cabinets support mixed-format storage and allow full customization of the internal layout according to the user's inventory profile.

- Various reel diameters and widths.
- Tray shelves for matrix/tray components.
- Holders for stick / tube components.

Reel Capacity for 7" Reels:

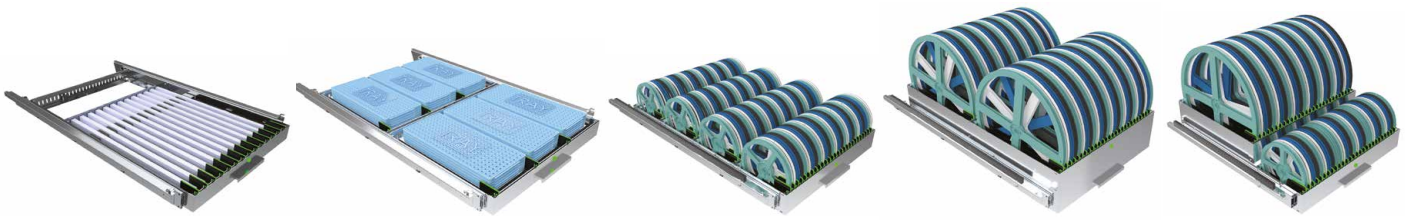
Cabinets	7" Reel Capacity (Shelf x Holder x Slot)
XS-300	3 x 3 x 27 = 243
XS-600	8 x 3 x 27 = 648
XS-900	8 x 4 x 27 = 864
XT-1250	16 x 3 x 27 = 1296
XL-1800	16 x 4 x 27 = 1728

1296

= **1728**

Maximum Efficiency

Shelf: Maximum shelf count per cabinet.
Holder: Reel holders per shelf (horizontal plane).
Slot: Individual reel positions within each holder.
For customer specific reel dimensions or storage demands, our team is ready to deliver tailored configurations to fit your exact needs.
Capacities are calculated based on cabinet configurations without middle bar.



X-TREME SERIES
CABINETS

External Alarm Bar

Datalogger and RMS (Remote Monitoring)

Reeltime Power Consumption



N^2 Auto Flow

X-Smart Ready

Outside Sensor

O^2 Sensor

0.5%Rh Humidity

Automatic Door Lock

Stainless Steel Shelves

Temp. up to 60°C

Cooling down to 2°C

Enhance Your Cabinets

Configure, optimize, and personalize your material management system.

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C-LINE

Cool. Controlled. Compliant.

Designed specifically for the safe and efficient storage of solder paste, the C-Line cabinets provide a stable low-temperature environment at 2 °C, ensuring material integrity and extended shelf life.

When integrated with MSD Track software, this solution enables real-time tracking, inventory transparency, and enforces FIFO or FEFO inventory management, meeting the strictest manufacturing and regulatory requirements.



SMART STORAGE SOLUTIONS FOR VARIOUS SOLDER PASTE PACKAGES

From jar to cartridge, each product is stored under ideal, monitored conditions.

- Optimal capacity and efficiency.
- Different shelf types for different solder paste packages (jars or cartridges).
- Mixed-format storage.

Cabinets	XSL-S1	XSL-SEP-3
CS-300	4	120
CS-600	11	330

Jar-Type Solder Paste Storage.

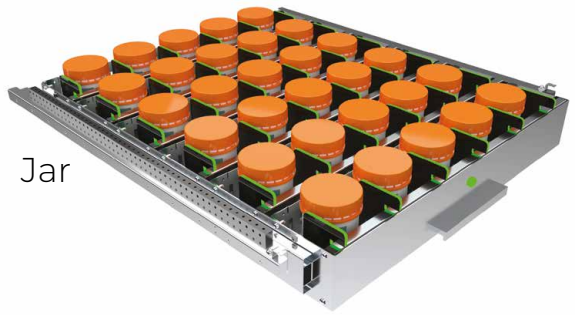
Cabinets	XSL-S2	XSL-SEP-3
CS-300	2	72
CS-600	6	216

Cartridge-Type Solder Paste Storage

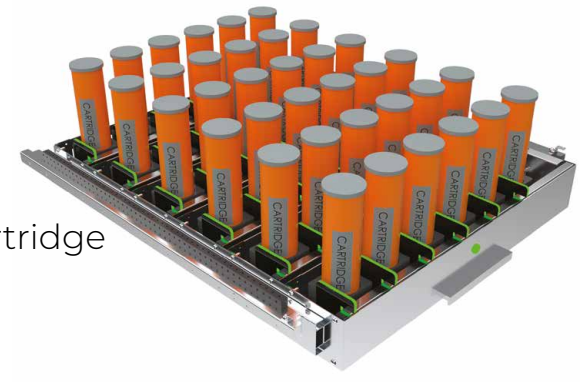
Capacities are calculated based on cabinet configurations without middle bar.

Capacities may vary depending on product dimensions.

Jar



Cartridge



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MSDTrack® COMPONENT & MSDs TRACEABILITY SYSTEM

Advanced Process Control

Floor Life Management | Alert Automation | Mobile Optimization

MSD Track is the smart software solution that takes your material management to the next level. It tracks everything from stock codes to cabinet serial numbers, from production floor dwell times to expiration dates, ensuring error-free management with alarms and custom configuration options.

Provides real time status (remaining floor life) and physical location of all MSDs in and out of the dry cabinet.

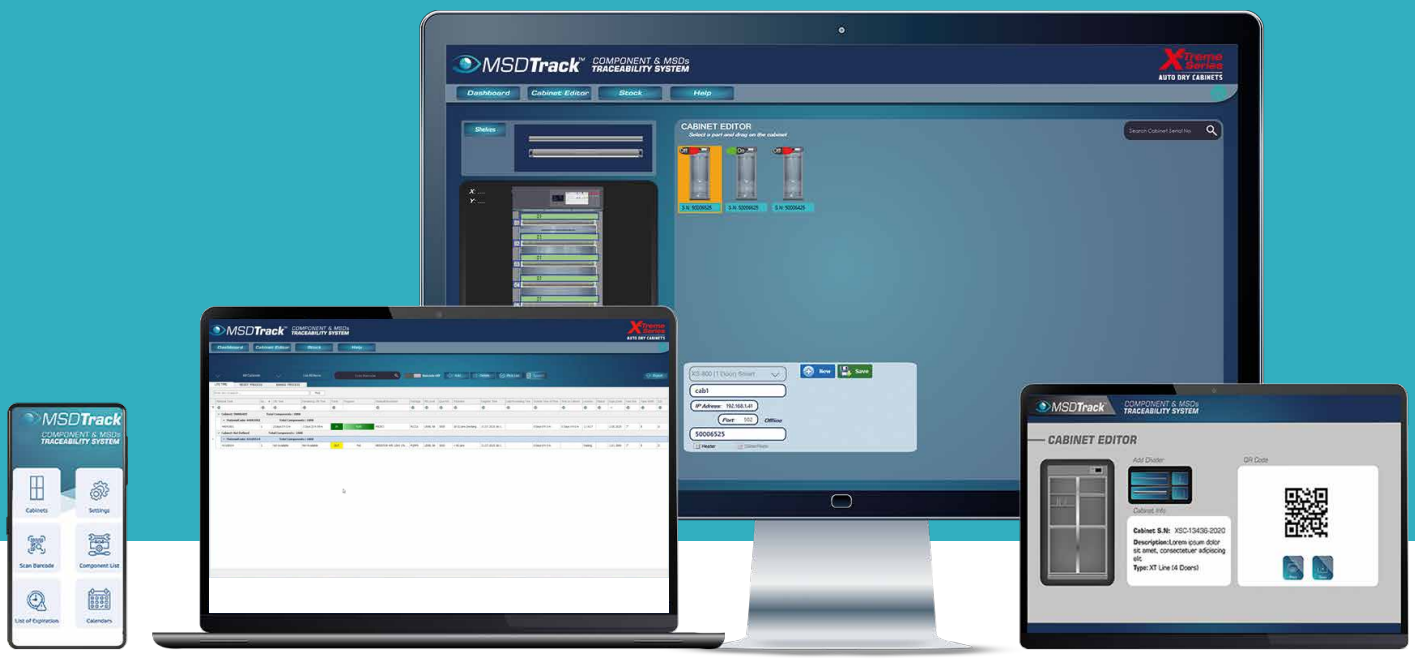
Dynamic calculation of remaining floor life time according to IPC-JSTD- 033D standards. Real-time alarm messages for expired or soon to expire components to authorized users via e-mail.

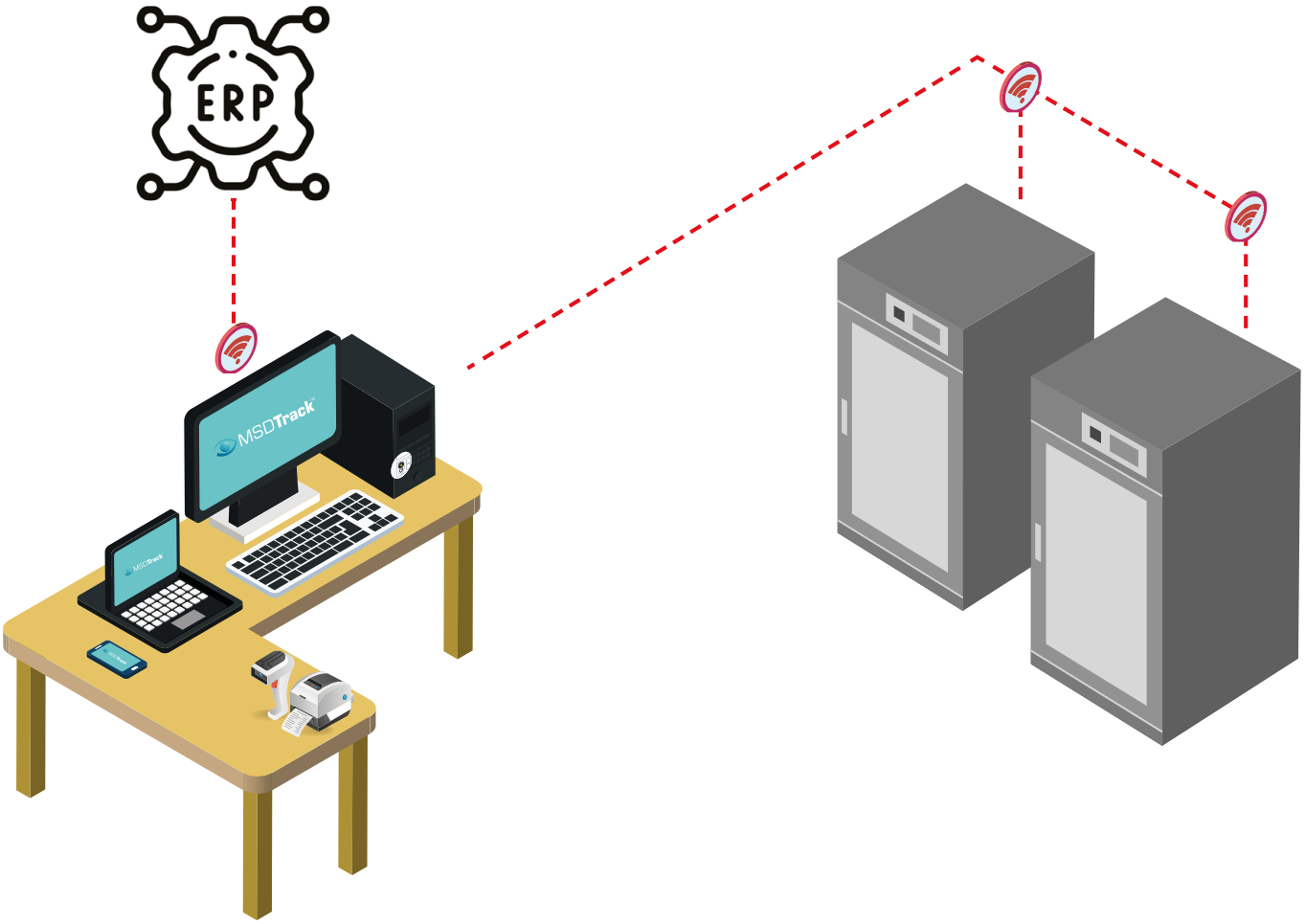
Baking notifications for floor life exceeding components.

Colour coded warnings and alarms for expired or soon to expire components.

Data management of multiple drying cabinets. The data of all devices can be viewed from a single page.

Supports android device and hand terminal.





Smart Software, Smarter Operations

Traceable Paramaters

- Product Stock Code (Barcode)
- Product Description
- Cabinet Serial Number
- Shelf
- Reel
- Slot
- Quantity
- Status (In / Out)
- Expiration Date (FIFO & FEFO Support)
- Time on Production Floor (MSL Exposure Time)
- Location Tracking
- Alarm Mode Monitoring

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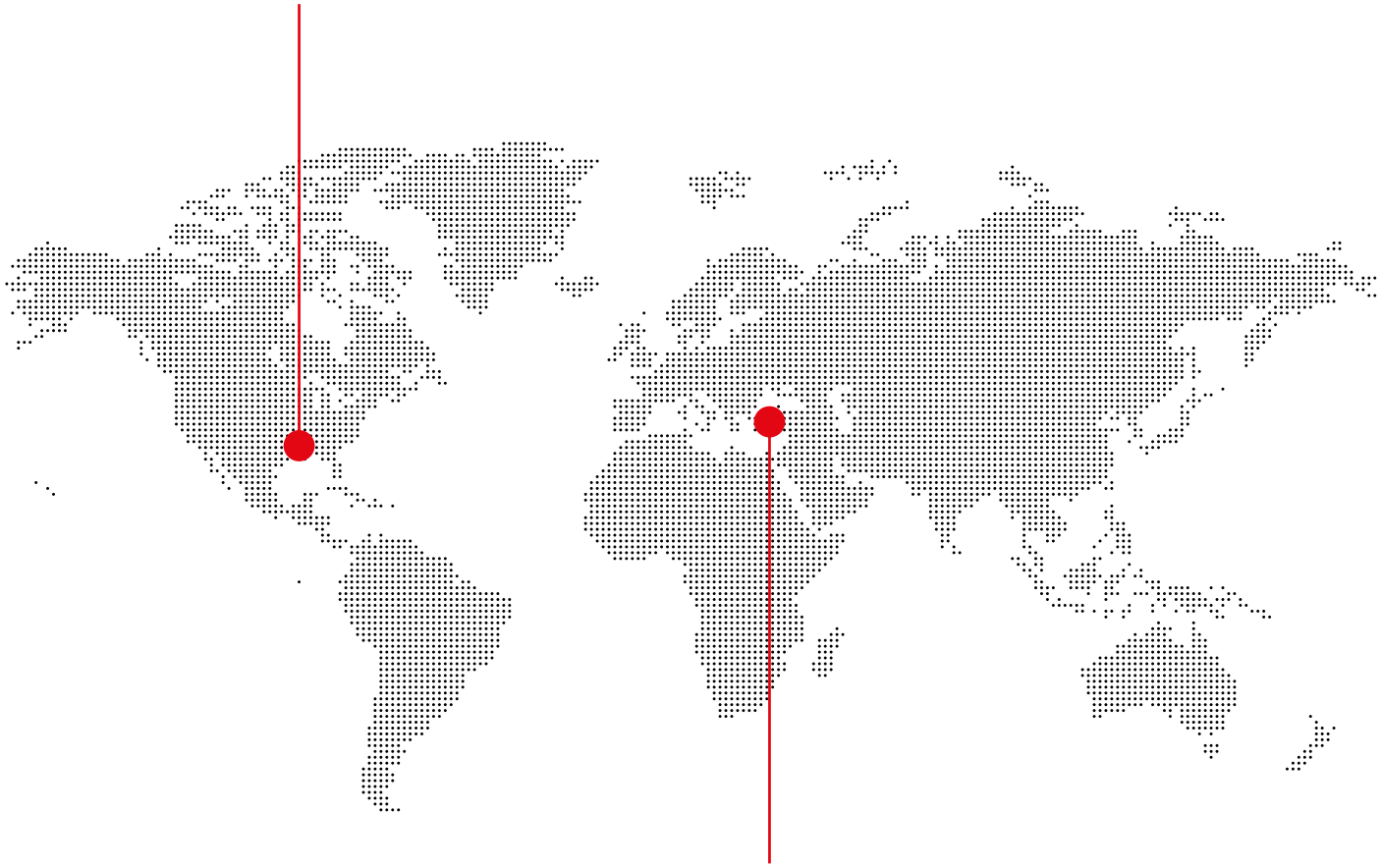
REFERENCES



and many more...

OUR OFFICES

EMT Electronics INC.
AMERICA
5900 Balcones Dr #19876
Austin, TX 78731 USA
Phone: +1 (512) 704 7309
E-mail: info@x-tremeseries.com



EMT Elektronik Mühendislik A.Ş.
EMEA ve APAC
Anadolu Bulvarı 16
Regnum Ticaret Merkezi B Blok No: 5
Yenimahalle, Ankara, TÜRKİYE
Phone: +90 (312) 472 206
E-mail: info@x-tremeseries.com

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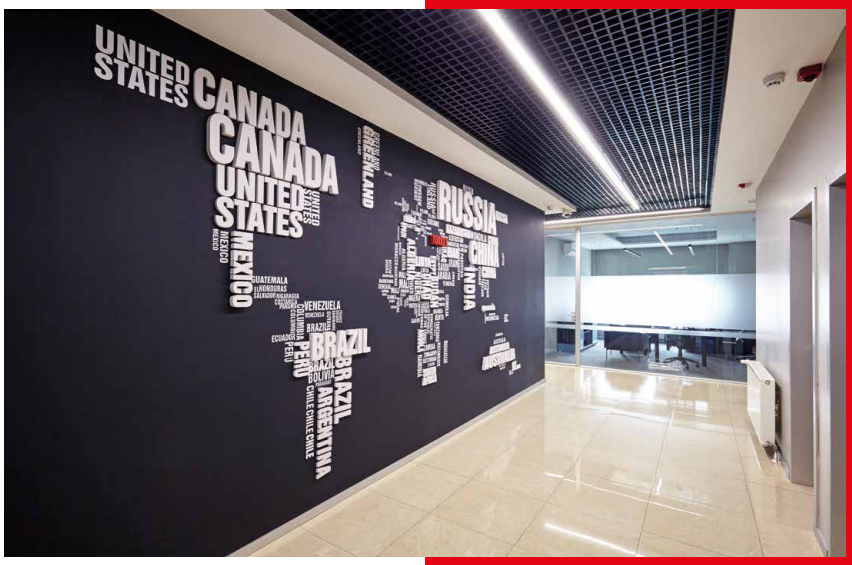
EMT Electronics® is a specialized technology group with over three decades of experience driving innovation across critical industries. With proven expertise in design, engineering, manufacturing, and R&D, EMT Electronics delivers state-of-the-art solutions in forensic laboratory technologies, ballistic testing systems, and industrial dry storage cabinets.





Today, EMT Electronics solutions are trusted in more than 60 countries, empowering organizations worldwide with unmatched precision, reliability, and performance. From electronics manufacturing to defense and medical technologies, our high-performance dehumidification and storage systems safeguard processes where failure is not an option.

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Our products are manufactured in compliance with **CE** standards.

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