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MANUFACTURING SOLUTIONS



EMC.MachineDataAcquisition

Real Machine Data at the Push of a Button. For All Systems and Model Years.

Whether a modern high-performance line, an interconnected welding cell, or a proven legacy press: The **base module EMC.MachineDataAcquisition (MDA)** brings complete transparency to your entire machine park. **Manufacturer-independent, live, and without costly equipment replacements.** Instead of inaccurate manual logs, the system **delivers reliable data** directly from the controller or sensor. Your operators are relieved of tedious manual entries, and downtime reasons are recorded at the terminal with a single click. This creates a **solid foundation** for higher equipment availability and precise production planning.

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Reliable Data Directly from the Machine

In practice, **machine times can hardly be recorded accurately by hand.** Even with the best intentions from the operator, short micro-stoppages or the exact transition from setup to production **get lost in day-to-day operations.** This is exactly where **EMC.MachineDataAcquisition** comes in. The system **captures signals automatically in real time,** relieves your staff of manual bookings, and **reveals the unvarnished reality on the shop floor.**

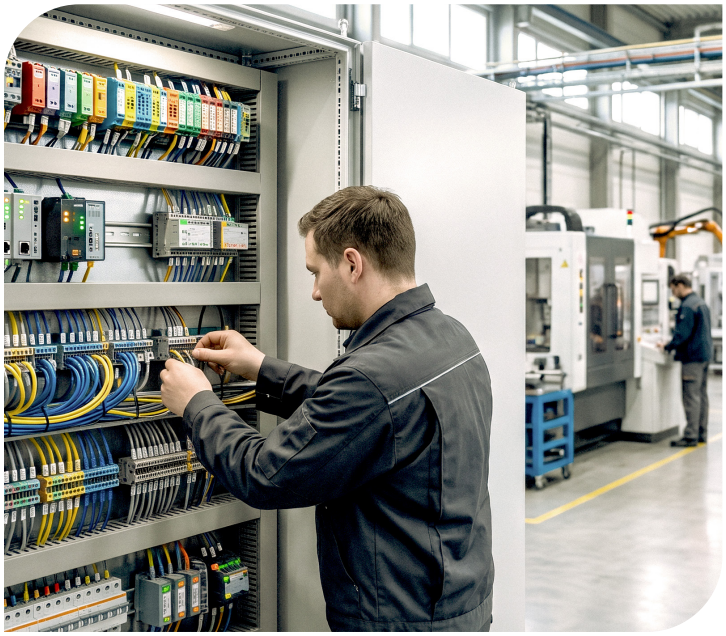
What EMC captures automatically:

→ **Machine states:**
Setup, production, interruption, and maintenance status (service, inspection, repair)

→ **Quantities and volumes:**
Good parts, scrap (including scrap classification), container counters, as well as lengths or weights

→ **Fault and error information:**
Messages directly from the controller

→ **Quality and inspection data:**
Results from connected testing devices or camera systems



Your Foundation for Further Optimization

Reliable KPIs	Immediate Response	Precise Planning
Real data as the basis for availability, performance, quality, and OEE.	Live notifications on the terminal in case of deviations or downtimes.	Current order progress in real time to detect delays early on.

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From Modern Controllers to Legacy Equipment:

How Easily You Access Your Data

Many companies shy away from machine data acquisition because they fear high costs and complex interventions in existing systems. With **EMC.MachineDataAcquisition,** you simply use the **signals and interfaces already available on your machines,** completely without complex PLC programming.

The 3 Ways to Connect



Modern Machines (OPC/UA & Modbus)

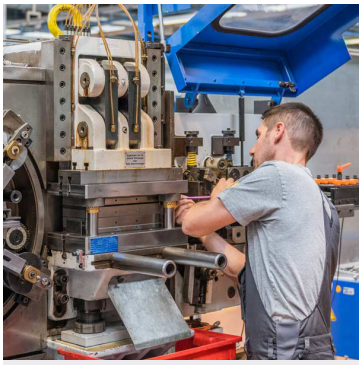
Plug in the network cable and get started.

Newer controllers such as Siemens S7 can be connected directly via common industry standards.



PLC-Controlled Systems (LAN Adapter)

Ideal for assembly lines or welding cells: A LAN adapter is simply mounted onto the existing PLC without modifying the system configuration.



Older Legacy Machines (24V Signals)

Using compact IoT gateways, you tap into existing 24V signals directly in the control cabinet or via sensors (e.g., stroke, cut signal, or part in ring sensor).

Peripherals and Root Causes Directly in View

In addition to the main machine, you can also integrate **peripheral equipment such as decoilers, tool monitoring systems, testing devices, or camera systems.** This enables EMC to automatically identify **specific causes of downtime,** such as end of strip, emergency stop at the decoiler, triggered tool protection, or reaching the target quantity for a container change.

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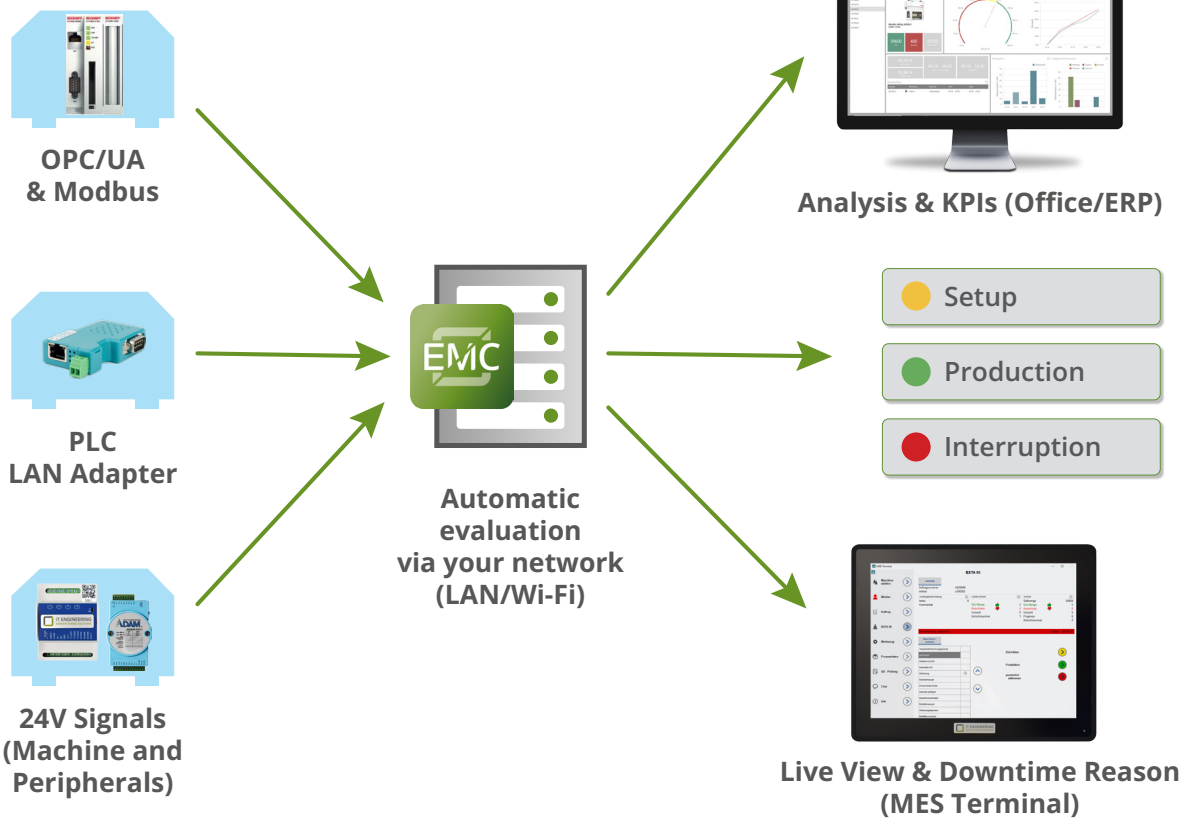
Quickly Connected, Flexibly Expandable

You don't need a months-long IT project for the connection. With our clear Quick Guide, **any in-house electrician can tap the signals themselves** and integrate the machines into the network. EMC's intelligent evaluation logic automatically converts **raw cycle and status signals into clear machine states: Setup, Production, or Interruption.**

→ **Seamless IT integration:**
Integration takes place via your existing shop floor network by cable or Wi-Fi, without any additional IT infrastructure.

→ **Direct ERP connection:**
All recorded quantities, times, and states are compatible with your existing ERP system and are available there without media disruption.

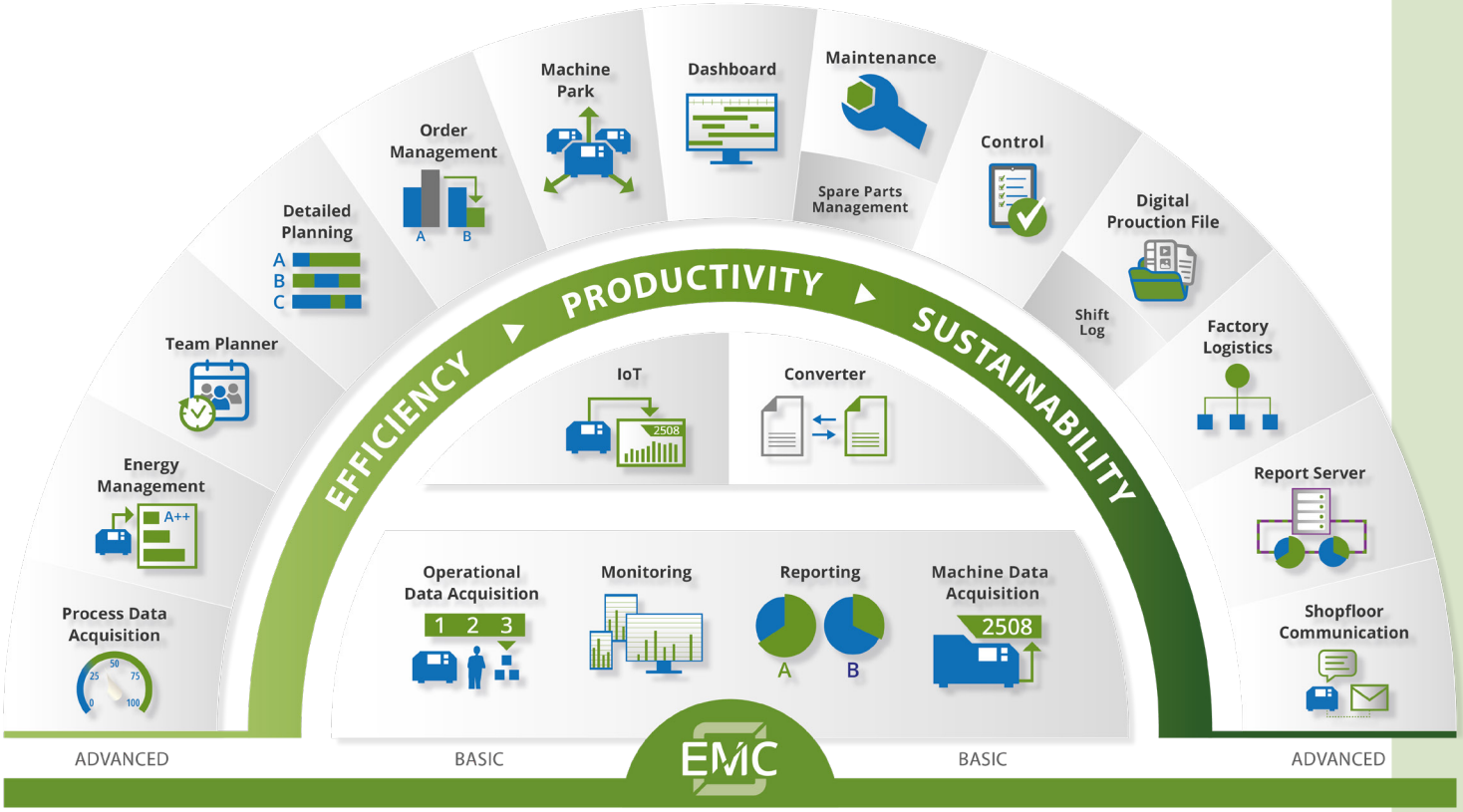
→ **Grow step by step:**
Start with a single pilot line or connect your entire machine park right away. Any number of machines can be added flexibly at any time by department or machine group.



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MES Software EMC: Modular Design for Your Production

The MES Software EMC **connects your machines, employees, and orders on the shop floor.** From machine data acquisition to detailed scheduling and quality assurance right through to maintenance, **all information converges in a central database.** The system **integrates seamlessly into your existing IT landscape** and merges data streams from ERP and production without media disruption.



Thanks to its modular architecture, you start with the exact functions that deliver the **greatest immediate benefit.** Whether you begin with a single base module or implement a comprehensive solution right away: **EMC grows step by step with your requirements.** This ensures you maintain a **complete overview of your production at every expansion stage and systematically increase productivity and equipment availability.**



iT Engineering Manufacturing Solutions GmbH develops EMC, a field-proven MES software for manufacturing management.

As a specialist in metal forming and wire processing, we know the workflows in production halls firsthand. Through our close network of machine manufacturers, technology partners, and industry associations (including VDFI and netzwerkdraht e.V.), we know exactly how to extract crucial data even from demanding legacy equipment and turn it into lean processes.

EMC acts as the central information hub between your ERP system and the shop floor. We support you personally from the initial inventory right through to live operation, ensuring your production becomes transparent and cost-effective step by step.

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