

About Expetech

Expetech combines Advantech Group's IoT expertise with ITRI's R&D capabilities to deliver smart warehousing and manufacturing solutions. We provide one-stop integration of automation equipment, software systems, and on-site workflows, helping businesses build intelligent solutions for their operational needs.



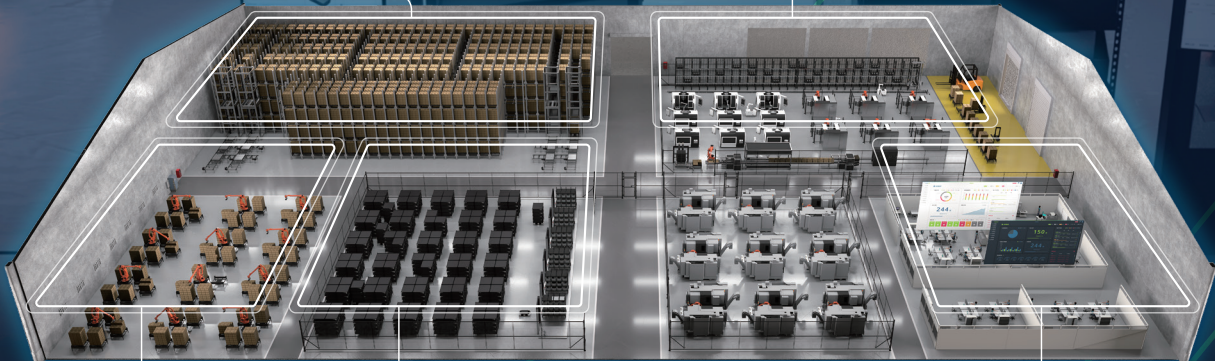
Four-Way Shuttle Storage System (AS/RS)

Flexible shuttle solution for high-density storage



Smart Manufacturing

Intelligent coordination for seamless multi-equipment production flow



Auto Picking & Stacking System

Smart item handling for stable, unmanned operations



Goods-to-Person System

Automated item delivery to station, reducing movement and increasing efficiency



Visual Management Dashboard System

Real-time data visibility for faster and smarter decision-making

One-Stop Service Process

- 01 Needs Assessment
- 02 Solution Design
- 03 Equipment Implementation
- 04 System Integration
- 05 Process Optimization
- 06 Maintenance & Support



Smart Warehousing

WES, AMR/AGV Goods-to-Person, four-way shuttle systems, and ASRS automated storage systems.



Smart Manufacturing

MES, equipment connectivity, OEE and machine utilization monitoring, work order scheduling, process management, and real-time dashboards.



Energy Management

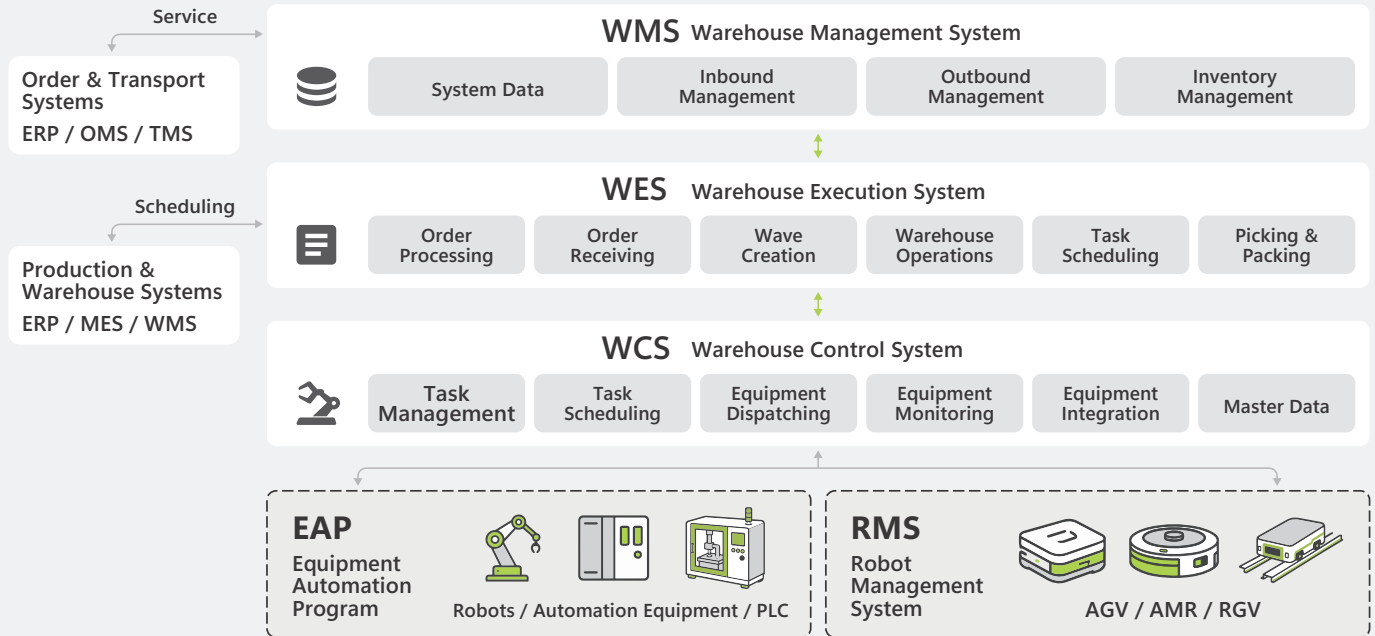
EMS, energy consumption monitoring, usage analysis, demand management, and ESG reporting support.

SMART WAREHOUSING SOLUTION

From orders to equipment dispatch, build a faster, more accurate, and scalable warehouse.

Powered by WES / WCS / RMS, the solution connects ERP, WMS, MES, ASRS, robots, and AMR / AGV to streamline receiving, dispatching, inbound/outbound operations, picking, location management, and inventory control with real-time visibility.

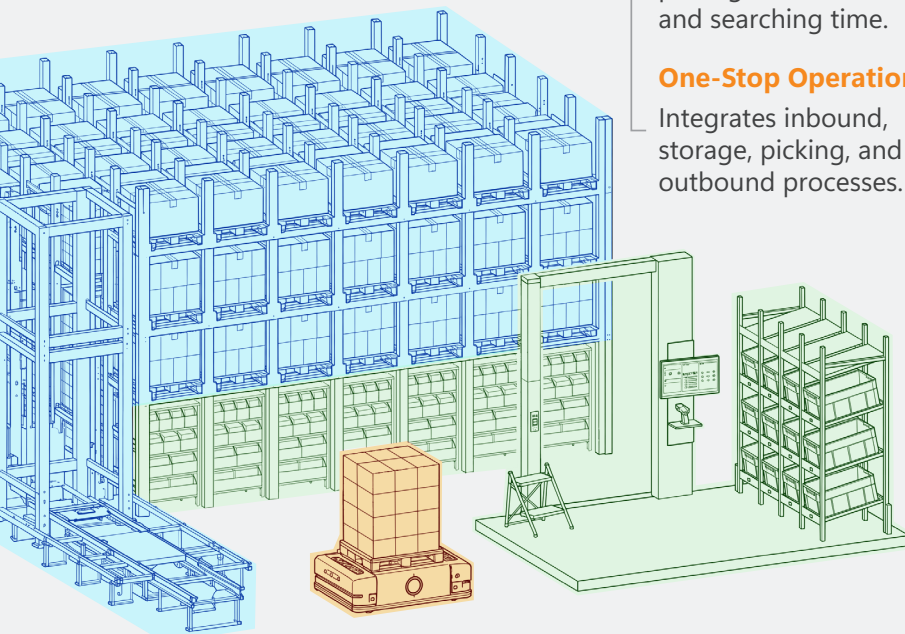
System Architecture



Four-Way Shuttle × Goods-to-Person (GTP)

UPPER STORAGE & LOWER PICKING

- Upper Level : Four-Way Shuttle / ASRS
- Lower Level : GTP Workstation
- Connection : AMR / AGV Transport



High-Density Storage

Maximize vertical space and improve storage utilization.

Efficient Picking

Goods-to-Person picking reduces walking and searching time.

One-Stop Operation

Integrates inbound, storage, picking, and outbound processes.

Operation Flow

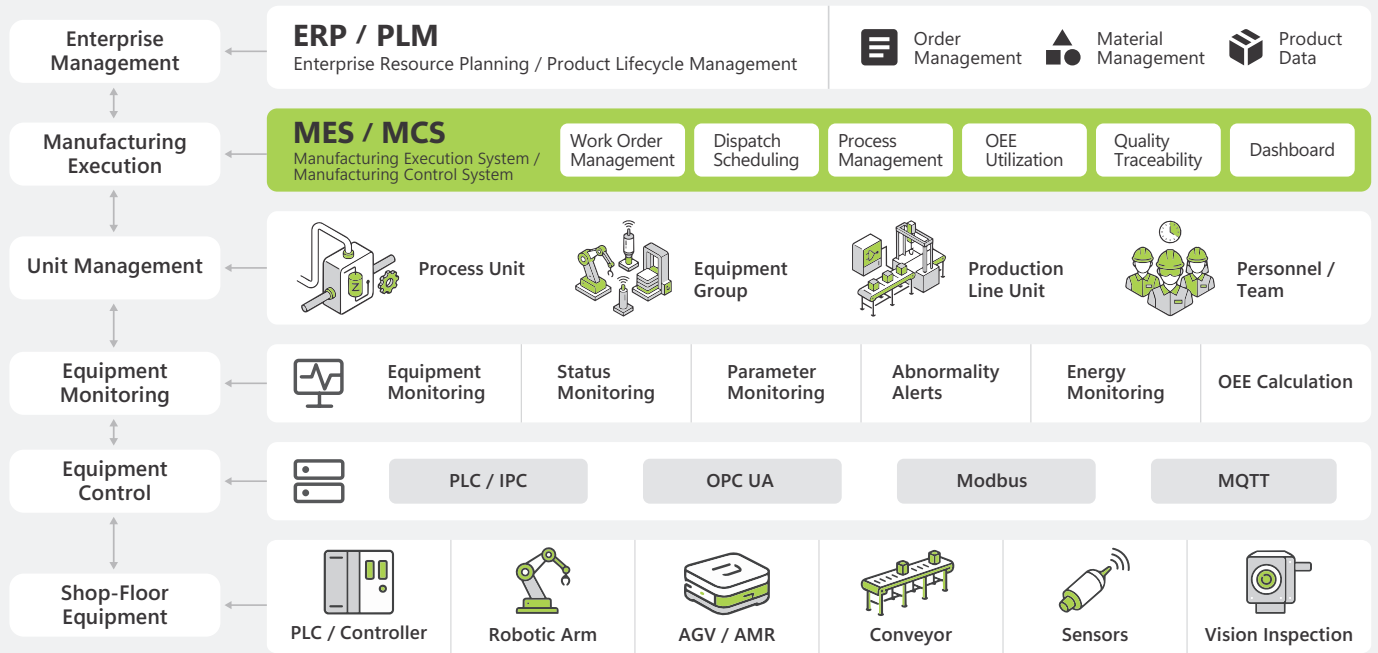
- Inbound / Replenishment**
Order & inventory intake
- Upper-Level Storage**
Automated shuttle storage
- Task Dispatching**
WES / WCS / RMS assignment
- Lower-Level Picking**
Goods-to-Person picking
- Outbound Sync**
Packing, shipping & inventory sync

SMART MANUFACTURING SOLUTION



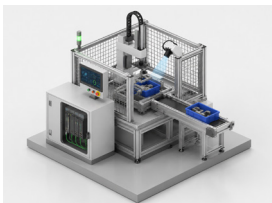
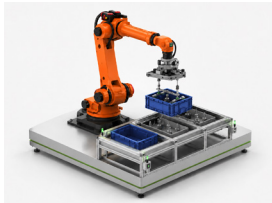

Connect equipment and processes to build a visible, efficient, and traceable manufacturing site.

MES / MCS connects ERP / PLM with shop-floor equipment, integrating work orders, task dispatching, process control, utilization, traceability, and real-time dashboards for smarter manufacturing.

System Architecture



SMART FACTORY INTEGRATED APPLICATIONS

MES / MCS Manufacturing Management	Equipment & OEE Monitoring	Automated Workstation Integration	Robotic Loading & Unloading	Visualization Dashboard
 <ul style="list-style-type: none"> Order Dispatch Progress Tracking Quality & OEE 	 <ul style="list-style-type: none"> Equipment monitoring Utilization & energy tracking Real-time alerts 	 <ul style="list-style-type: none"> PLC / IPC integration Sensor & vision connection Collaborative control 	 <ul style="list-style-type: none"> Loading & handling Screwing & assembly Flexible deployment 	 <ul style="list-style-type: none"> Production visibility Equipment management Rapid abnormality response

OPERATION FLOW



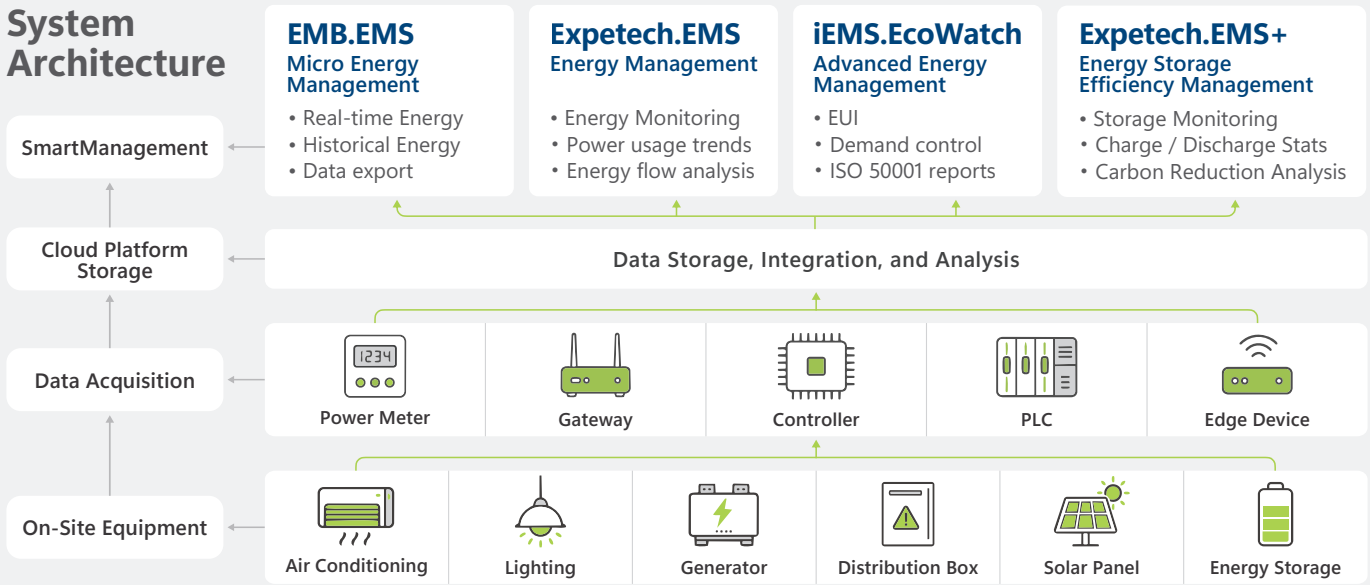
IMPLEMENTATION BENEFITS

<p>Real-Time Production Progress Visibility</p> <p>Real-time dashboards show production data and line status at a glance.</p>	<p>Improved Equipment Utilization and Efficiency</p> <p>OEE monitoring improves utilization and reduces downtime.</p>	<p>Less Manual Work, Greater Transparency</p> <p>Data automation and traceability reduce manual work and improve transparency.</p>
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SMART ENERGY MANAGEMENT SOLUTION

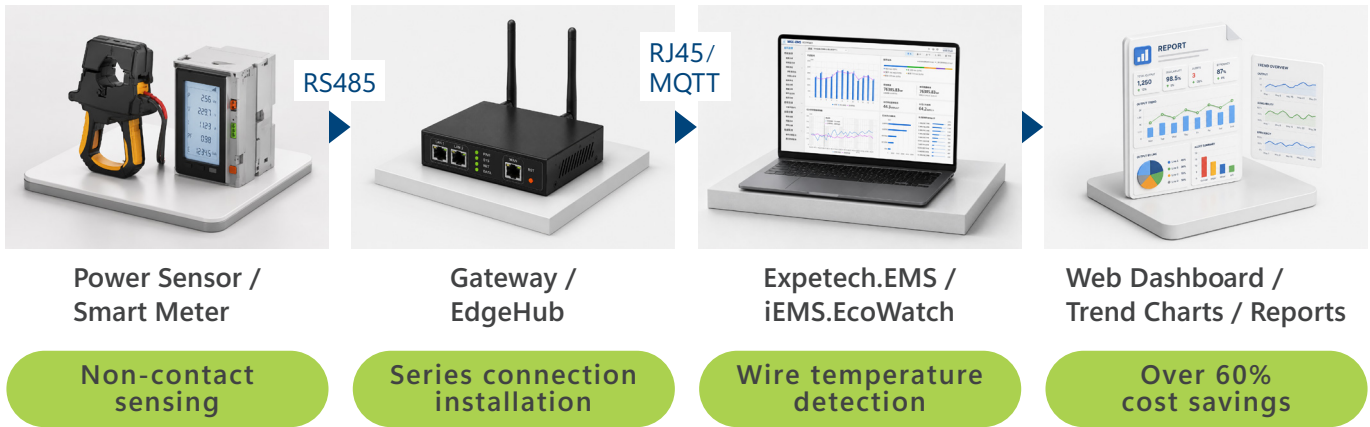
From data collection to energy analysis, build a visible, traceable, and optimizable smart energy site.

Expotech.EMS, iEMS.EcoWatch, and EMB.EMS connect energy devices and systems to support monitoring, demand management, energy analysis, reporting, and energy-saving optimization.

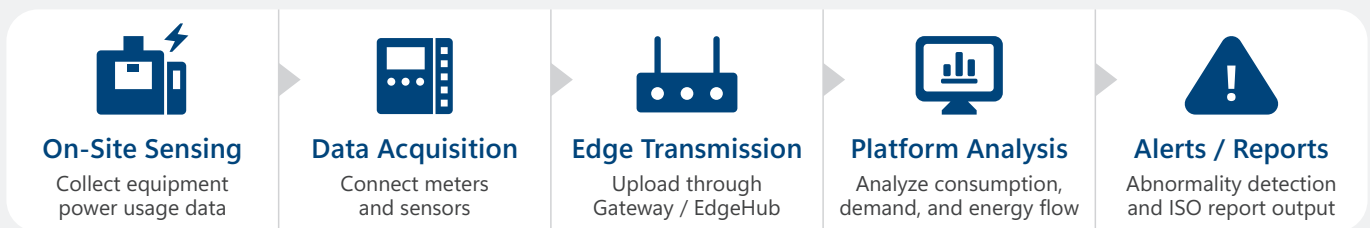


DATA FLOW AND INSTALLATION APPLICATIONS

Power sensors and smart meters connect via RS485. Data is collected through a gateway, uploaded to the cloud, and displayed on a web platform with real-time data, dashboards, and reports.



OPERATION FLOW



IMPLEMENTATION BENEFITS

- Real-Time Monitoring:** Monitor area energy use, peak demand, and equipment status in real time.
- Energy Efficiency Analysis:** Analyze usage trends, EUI, energy flow, and energy-saving performance.
- Energy Optimization:** Manage peak demand, detect abnormalities, and generate reports.