



EPG ONE™ WAREHOUSE CONTROL SYSTEM (WCS): Real-Time Coordination Between WMS and Automation Technology

Central control for stable and efficient material flows

Modern intralogistics systems are highly interconnected and technically sophisticated. Conveyor systems, automated storage systems, automated guided vehicles, sorters, and picking solutions each perform clearly defined functions, yet they are closely interlinked during operation. In many facilities, these systems were implemented, expanded, or modernized at different times and therefore originate from different manufacturers.

As a result, the performance of an intralogistics installation depends less on individual components than on how effectively they work together. Without overarching control, no consistent view of the material flow exists. Processes are managed in isolated areas, and priorities are not coordinated across the entire system. Disruptions rarely remain localized but propagate along the process chain. At the same time, there is often no comprehensive overview of utilization, system status, or actual bottlenecks.

The EPG ONE™ Warehouse Control System (WCS) performs precisely this overarching coordination role. It forms the control layer between the WMS and the technical automation systems, consolidating status and movement data and bringing them together in a unified control logic. Material flows

are coordinated across the entire facility, dependencies are systematically managed, and movements are synchronized in real time.

Typical challenges in automated warehouses

- Heterogeneous automation systems from multiple manufacturers
- Limited transparency into material flows and system status
- Rigid control logic with limited adaptability
- High integration effort when implementing a material flow controller or warehouse control system



Flexibility for greenfield, brownfield, and retrofit projects

The WCS is equally suited for new facilities and the modernization of existing installations. In greenfield projects, it is integrated from the outset as the central control layer, coordinating all automation components within a unified architecture.

In brownfield and retrofit scenarios, the WCS is integrated into existing infrastructures. Existing control systems and technical equipment remain in place and are connected through defined interfaces. This approach allows automation environments to evolve without fundamentally changing the overall installation.

Regardless of the project type, the result is a consistent control logic that protects existing investments and enables structured future expansion.

Central coordination of automated logistics facilities

The WCS manages the facility-wide coordination of automated material flows. It controls conveyor systems, storage and shuttle systems, sorters, and automated guided vehicles within a unified control architecture. All relevant movement, status, and control data is captured and processed across systems.

Transport orders, priorities, and system states can therefore be coordinated consistently. This creates a unified view of ongoing operations and increases the stability of the overall installation. In combination with EPG ONE™ LFS or other warehouse management systems, a continuous control logic emerges between operational order management and technical execution.

Functions at a glance

1. Central system coordination

Benefit: Unified control of all automated conveyor and handling systems on a single platform.

Value: Stable operations and consistent process logic across different manufacturers.

2. Material flow routing and transport control

Benefit: Static or dynamic routing of load units across all connected systems.

Value: Higher throughput and improved system utilization.

3. Order and sequence handling

Benefit: Central management of orders, priorities, and system handovers.

Value: Reliable sequencing and stable operational process quality.

4. Transparency and status monitoring

Benefit: Real-time visibility into material flows and system status.

Value: Faster response to deviations and reduced downtime.

5. System visualization and control center

Benefit: Integrated 2D and 3D visualization of the facility.

Value: High transparency across automated material handling systems.

6. Digital twin

Benefit: Virtual model of the real facility for emulating scenarios, parameter configurations, and software implementations.

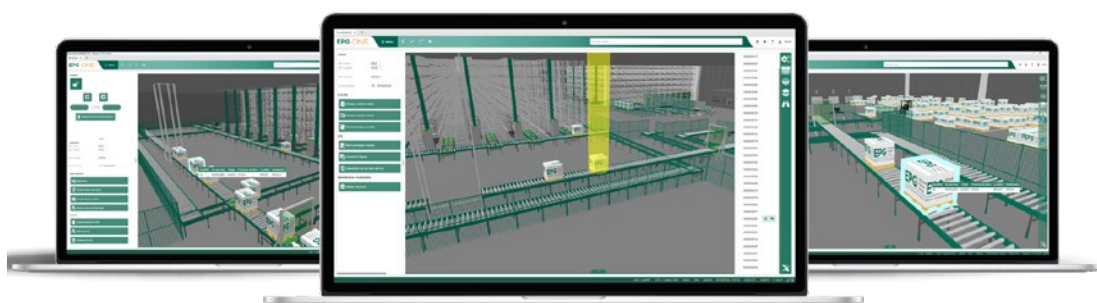
Value: Safer commissioning, validated system changes, and well-founded decisions before productive deployment.

7. Operation, scalability, and integration

Benefit: Vendor-independent integration with

EPG ONE™ LFS and other WMS solutions, available on-premises or in the cloud.

Value: Future-ready automation, scalability, and flexible integration capabilities.



Flexible architecture for long-term operation

The WCS was designed as a modular control platform for complex automation environments. It integrates seamlessly into diverse IT and facility landscapes and supports both greenfield and brownfield projects. The system can be operated either on-premises or in the cloud.

Its vendor-independent architecture allows deployment in heterogeneous automation environments and ensures long-term investment protection. Integrated visualization and emulation capabilities support transparency, secure operations, and reliable validation of changes and system extensions.

- Vendor-independent integration of automation technologies
- Integration with EPG LFS and other WMS solutions
- Flexible interfaces
- Modular expandability
- 2D and 3D visualization
- Digital twin and emulation for validated system changes
- Operation on-premises or in the cloud



Bossard

International provider of fastening technology

“WCS enables us to efficiently connect and centrally control different automation systems from various manufacturers through a single software platform, whether in a logistics center or across multiple locations.”

Added value in automated warehouses

- Central control of multi-vendor automation environments
- Unified visibility into material flows and system status
- Reduced complexity in growing system landscapes
- Stable processes across multiple sites
- Future-ready platform for expansion and modernization

Next steps: Getting started with the Warehouse Control System

With the EPG ONE™ Warehouse Control System, you establish a stable control foundation for your automated logistics facilities and gain full transparency across your material flows.

In a focused session, our experts demonstrate—using a practical facility scenario—how automated material handling systems can be centrally coordinated, material flows intelligently controlled, and disruptions systematically managed.

Schedule your appointment now »

Scan the QR code and secure your personal meeting with our expert team.

