

Software for internal logistics automation

Automated guided vehicle systems
Material flow control
Warehouse administration



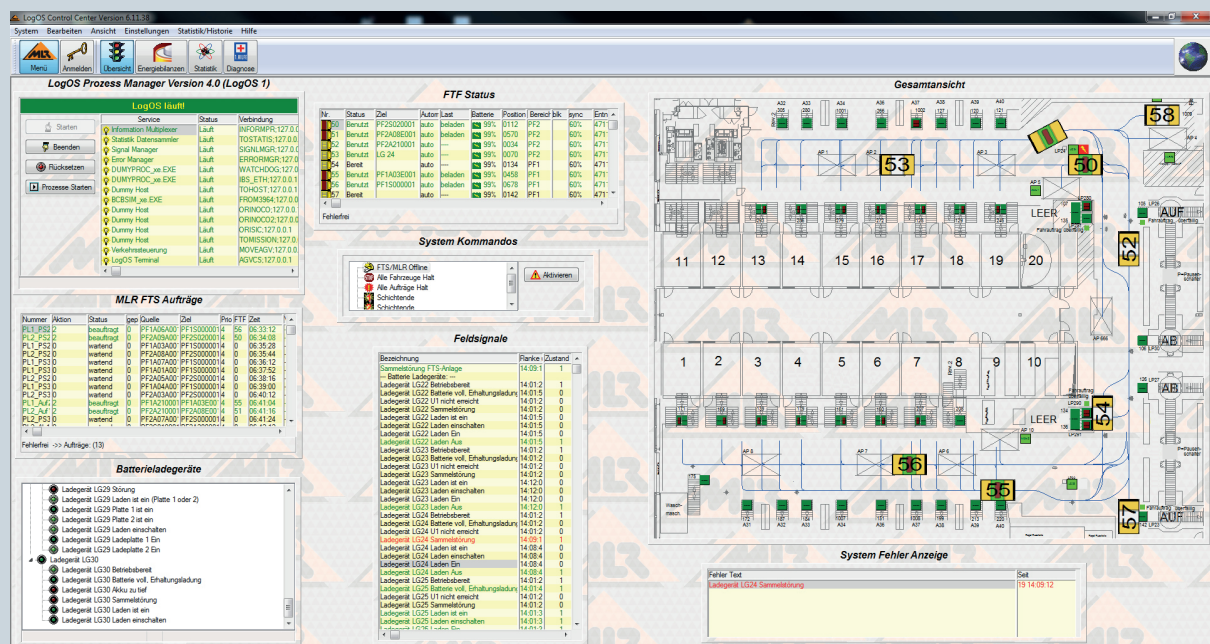
Powerful management and control software

The multifunctional Logistic Operating System LogOS has been developed by MLR as a dedicated management and control software platform that controls internal transport systems, monitors machines, coordinates material and product flows, and thereby organizes and manages all common types of warehouses.

External vehicles, such as forklifts and cranes, and materials handling systems and high-rack storage systems can also be integrated in the overall system, as well as elevators, fire protection doors, and safety devices. LogOS has standard interfaces for typical ERP and MRP systems, allowing fast and economical integration in existing IT structures. Continuous development of LogOS guarantees the customer a future-proof investment.

LogOS base system

The LogOS base system has a large number of standard modules available. The self-explanatory graphic user interface can be dynamically expanded and can be adapted by the customer. A comprehensive graphic interface allows products to be tracked through the entire transport route.



LogOS modules

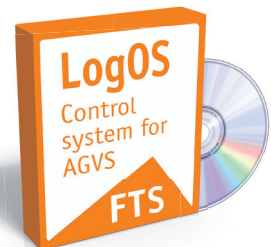
The basic LogOS system can be expanded quickly and easily using the following modules in order to meet the specific requirements of your company and your industry.

LogOS FTS

The powerful master computer software for automated guided vehicle systems (AGVS) contains all of the essential standard components for controlling automated guided vehicles. The control system administers all of the vehicles and workstations. It dispatches, controls, and monitors vehicles and order execution, production data and peripheral transport technologies.

Functions

- | | |
|-------------------------------------|--|
| - Dynamic route selection | - Material flow and transport optimization |
| - Dynamic route selection | - Hot standby systems |
| - Flexible changes to travel routes | - Assistance with fault analysis |
| - Two-stage disposition | - Extensive statistical modules |



LogOS SLS

The stacker control system is designed for use with human-operated transporters, such as forklifts. The module organizes all order and transport dispatches and integrates them into the material flow system.

Functions

- | | |
|--|--|
| - Minimize waiting times and empty trips | - Combination orders |
| - Administer various types of loads | - Optimized route planning |
| - Assign stacker classes | - Statistical evaluations |
| - Lock out and enable load transfer points | - Transporter administration |
| - Variable order capture | - Transport order administration |
| | - Order processing according to priorities |



LogOS MFS

The LogOS material flow system controls and coordinates the entire internal material flow. The module administers vehicles and workstations, monitors order execution and production data, and controls peripheral transport technologies.



LogOS LVS

The LogOS warehouse management system is a powerful software package with all of the functions that a modern, powerful system for administering and controlling complex warehouse structures. LogOS LVS can manage any type of storage and simultaneously controls the cost-oriented use of transport equipment. It also controls material flow in production, spare parts supply, and shipping.

Functions

- | | |
|------------------------------|------------------------------|
| - Warehouse management | - Commissioning |
| - Order administration | - Master data administration |
| - Check-in and check-out | - Creation of lists |
| - Inventory level management | - Statistics and evaluations |
| - Storage space management | - Inventory |



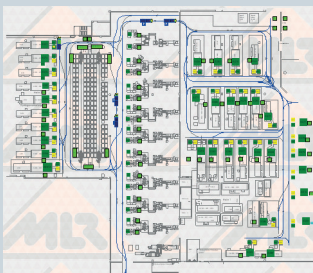
LogOS CM

The LogOS Communication Manager forwards status and faults to technicians on standby via in-house telephone interfaces, or by email and cellular communications. This eliminates the need for continuous monitoring. The responsible employees are informed only in case of an incident. Highly secure data lines allow fast, low-cost remote maintenance. Web app optional for smartphones and tablets.

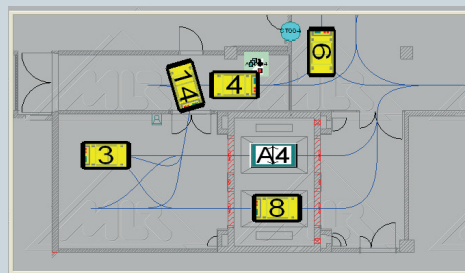


References

Automotive | BMW, Daimler, Ford, Porsche, Volkswagen, Bilstein, Continental-Teves, Deutz, Dräxelmeyer, Notox, ZF | **Pharma** | Bayer, Novartis, Pfizer, Jenapharm, Rose, Sanofi-Aventis, Salutas | **Paper, Printing, Packaging** | Gruner & Jahr, Ball Packaging, Glatfelter, Küster Druck, Leopold Verpackungen, Mitsubishi Paper, Weidenhammer | **Production** | 3B (Owens Corning), AC Folien, Aero Pump, Baumgartner, Bellheimer Metallwerke, Braun, Dieffenbacher, Teller, Walter Hartmetall | **Food** | Berglandmilch, Bosch Tiernahrung, Haya, Heinecken, Käsereibellen, Merba, Milcafe, Obersteirische Molkerei, Podrávka, Rila Feinkost, Teekanne, Unilever Bestfoods, Wernsing | **Hospitals** | Sidra Medical Center, Karolinska University Hospital, Akershus Universitetssykehus, Ostfold Hospital, Fiona Stanley Hospital, Tan Tock Seng Hospital, Khoo Teck Puat Hospital, Robert-Bosch-Krankenhaus Stuttgart, Klinikum Offenbach, Klinikum Bremen-Mitte, Leopoldina-Krankenhaus Schweinfurt, Universitätskliniken Jena, Gießen, Marburg, Magdeburg, Düsseldorf



Visualization



Detailed image of graphic interface

LogOS Prozess Manager Version 4.0

LogOS Interface

Service	Status	Verbindung	Reaktion
LogOS Terminal	Lauf	AGVCS.127.0.0.1	8443 us
Information Multiplexer	Lauf	INFOINPR.127.0.0.1	9733 us
Statistics Data Collector	Lauf	TOSTATG.127.0.0.1	11273 us
Signal Manager	Lauf	SIGNALMR.127.0.0.1	13689 us
Core Manager	Lauf	SPROPMGR.127.0.0.1	12972 us
DUMYPROC.EXE	Lauf	WATCHDOG.127.0.0.1	14984 us
DUMYPROC.EXE	Lauf	BS_ETH.127.0.0.1	16586 us
BSWMSV.EXE	Lauf	FROMSBA.127.0.0.1	19302 us
TCP/IP Multiplexer AGVs	Lauf	ORINDOC.127.0.0.1	16979 us
TCP/IP Multiplexer Fek LVR	Lauf	ORINDOC.127.0.0.1	19529 us
ZSP Host Process	Lauf	COMMISSION.127.0.0.1	17744 us
Traffic Control	Lauf	MOVEAGV.127.0.0.1	16594 us

Service started successfully

FTS Aufträge

Adress	Nummer	Aktion	Status	Urgent	Quelle	Ziel	Pho	FTF	Ziel
IDL	E2	parken	beauftrag	0	---	P1	D	1	03.15.04
IDL	E3	parken	beauftrag	0	---	P2	D	2	03.15.04
IDL	E4	parken	beauftrag	0	---	P3	D	3	03.15.04
IDL	E5	parken	beauftrag	0	---	P4	D	4	03.15.04
IDL	E6	parken	beauftrag	0	---	P5	D	5	03.15.04
IDL	E7	parken	beauftrag	0	---	PD01	D	11	03.15.04
IDL	E8	parken	beauftrag	0	---	PD02	D	12	03.15.04
IDL	E9	parken	beauftrag	0	---	PD03	D	13	03.15.04
DMV	0	0	wartend	14	W0552	LEER3	D	0	03.16.04
DMV	1	0	wartend	0	W0552	LEER3	D	0	03.16.04
DMV	2	0	wartend	0	W0552	LEER3	D	0	03.16.04
DMV	3	0	wartend	0	W0552	LEER3	D	0	03.16.04
DMV	4	0	wartend	0	W0552	LEER3	D	0	03.16.04
DMV	5	0	wartend	0	W0552	LEER3	D	0	03.16.04
DMV	6	0	wartend	0	W0552	LEER3	D	0	03.16.08
DMV	7	0	wartend	0	W0552	LEER3	D	0	03.16.08
DMV	8	0	wartend	0	W0552	LEER3	D	0	03.16.08
DMV	9	0	wartend	0	W0552	LEER3	D	0	03.16.08
DMV	10	0	wartend	0	W0552	LEER3	D	0	03.16.08
DMV	11	0	wartend	0	W0552	LEER3	D	0	03.16.12
DMV	12	0	wartend	0	W0552	LEER3	D	0	03.16.12
DMV	13	0	wartend	0	W0552	LEER3	D	0	03.16.12

Fehlertitel: >> Aufgabe: (10)

FTF Status

Nr.	Status	Ziel	Autom.	Lauf	Batterie	Position	Besetz	Entw.	Kap. Modus
10	BEFREIT	auto	----	beenden	99%	0001	B	4711	Normal
11	BEFREIT	auto	----	----	99%	0448	D	4711	Normal
12	BEFREIT	auto	----	----	99%	0404	D	4711	Normal
13	BEFREIT	auto	----	----	99%	0417	C	4711	Normal
14	BEFREIT	auto	----	----	99%	0416	C	4711	Normal
15	BEFREIT	auto	----	----	99%	0395	D	4711	Normal

Fehlertitel:

Status and order overview in tabular form

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