



FLEETWARE

Management Suite for Mobile Robots



FEATURES

- Dynamic assignment of missions by logistic priority
- Integration with WMS/ERP systems
- Simple, modular robot missions
- Robot monitoring and analytics via EMA for Fleetware

BENEFITS



Central configuration and monitoring of the fleet of robots



Product traceability whilst being carried by robot



Identification of process bottlenecks via performance data

APPLICATIONS

- Warehouse logistics
- Part kitting / Order fulfilment
- Transport of goods throughout production stages
- Just-in-Time manufacturing
- NEW** - Fleetware is now "Shelf Aware": Shelf handling and tracking

Fleetware is a control and management suite for Autonomous Mobile Robots (AMRs) that can be easily implemented into logistics and production processes.

THE ROLE OF FLEETWARE

Multiple AMRs in advanced logistics and production environments require a set of tools over and above the standard AMR suites.

Fleetware provides this layer, coordinating up to 100 robots simultaneously to enable large-scale deployments, for example Just-in-Time sequenced manufacturing of complex parts with variable production requirements.

Fleetware's internal logic engine enables multi-mission and dynamic routes to be undertaken. This allows for **simple, modular robot missions**, with Fleetware assigning mission stages with parameterised destinations.

The software **integrates with WMS/ERP systems** to receive and supply order data and then manages the missions by logistic priority.

FLEETWARE CORE

MANAGEMENT APPLICATION

The core management applications allow for the central configuration of robots, missions and locations.

Fleetware performs the **automated routing of robots** based on robot state changes.



ROBOT MONITORING AND ANALYTICS

EMA for Fleetware tracks status events from the robot fleet:

- Waiting and charge times
- Stoppage time classification
- Overview of fleet utilisation and performance



SHELF TRACKING

Fleetware has the ability to handle and track shelves.

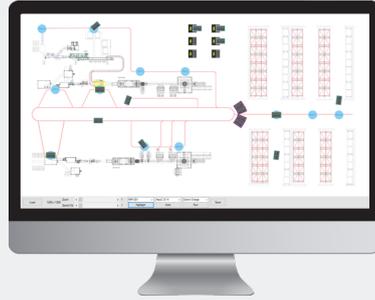
This allows for smart routing of the robots to the correct shelf type at a recorded location.



SIMULATION TOOL

The Simulation Tool allows us to test and validate your environment prior to the installation of physical robots and any changes to layout and capacity.

This helps reduce lead times and costs.



CLIENT INTERFACES

FLEETWARE CLIENT INTERFACE

The Fleetware Client Interface allows connection to OPC, SQL, barcode scanners file imports and web services.

It acts as a middleware for SAP / ERP / MRP / WMS to receive and supply order data.



WIFI BUTTON AND ANDROID CLIENT

A Client REST API exists to allow interfacing of additional client devices and 3rd party systems.

This allows for position monitoring and the assignment of orders and shelves to positions and robots.

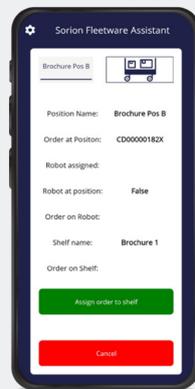
A Windows / Android client and a WiFi Push Button / IO module are available that utilise this API.

The push button has a display and lamp status that can be allocated to differing functions or positions.

The Android client allows for the management of different positions based on the logged in user.

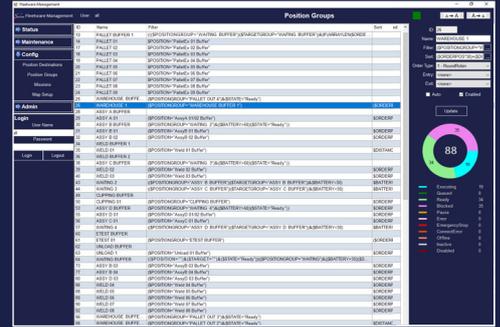


WiFi button

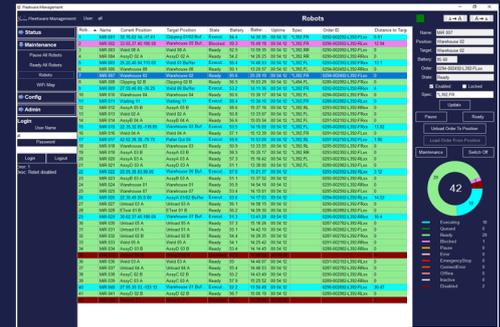


Android client

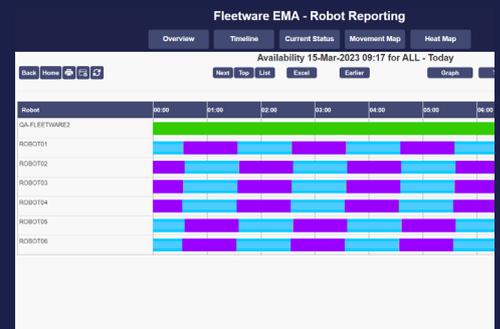
THE SORION SOLUTION



Central configuration of a fleet of robots



Robot maintenance



Event timeline - can be used to identify bottlenecks

Robot	Last Updated	Cycle	Availability	Position Group	Stop #
QA-FLEETWARE2	2023-03-15 09:19:17		P		
ROBOT01	2023-03-15 09:19:14		W	PICKING	D3
ROBOT02	2023-03-15 09:19:35		P	PICKING	A1
ROBOT03	2023-03-15 09:19:32	5	W	PICKING	E10
ROBOT04	2023-03-15 09:19:08	31	P	PICKING	D2
ROBOT05	2023-03-15 09:19:26	0	P	PICKING	C3
ROBOT06	2023-03-15 09:19:26		W	PICKING	B3

Colour coded robot status information



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