FARobot®

ADLINK
® LEADING EDGE COMPUTING

SWARM Autonomy

Optimizing production efficiency with autonomous mobile robot



Swarm Mobile Robot Series
Swarm Core Platform

Product Brochure

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000



FARobot®

As smart manufacturing is booming and continuously evolving, ADLINK, the global leader in edge computing, together with Foxconn, the world's largest electronics manufacturer, have established a joint venture company, FARobot, to develop autonomous mobile robots.

Based in Taipei, FARobot designs, manufactures, and distributes Swarm Autonomy solutions to empower enterprise intralogistics automation.

In-house tech
Strong vertical know-how and technology independence

Custom services
end-to-end customer service capability including special design

1 factory
for high quality production

Certified AMR
CE ISO 3691-4, EN 1175) and EMC (IEC 61000-6, EN 12895)

24/7 testing
design, component, assembly stage, we run precise testing

7 Patents
in HW and SW

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

SWARM Autonomy

Intralogistics autonomy for factories and warehouses

SWARM Autonomy

Agile collaboration from one universal platform.

Combining RCS and WCS functionality into one system, it allows your team to handle peak activity, shop floor reorganization and high mix low volume operations easily and autonomously.

One platform to rule them all.

Integrate PLCs, controllers, robots, AMR and synchronize them down to the milliseconds.

Continuous optimization

Event-based dynamic rescheduling. Let Swarm Core optimize decision-making for better throughput and resource utilization.

AMR Agnostic

Cover all your needs with FARobot SMR series and specific needs with any Swarm-ready AMR brand (AMR brands controllable by Swarm Core).

CT expertise to unify OT and IT

Benefit from FARobot's expertise in robotic communication technology to simplify your system, improve its reliability and combine OT automation real-time requirements with IT business requirements.

Your challenges our solution.

Manufacturing and warehousing challenges

Production change

- High-mix low-volume
- Production ramp-up relayouting
- Process change
- Material and worker idle time

Legacy facility

- Multi-floor factory with elevators
- Existing AGV and AMR
- Workflow interlacing
- Safety and operation conflict

OEE dilemma

- Single-purpose aging AGV
- Repurposing during low season
- Mix of manual and automated
- Training needs multiplication

3 steps toward Swarm Autonomy

STEP 3

Integrate MES/WMS/ERP

- Takt time and cycle time integration
- Cross-floor, multi-robot synchronization

STEP 2

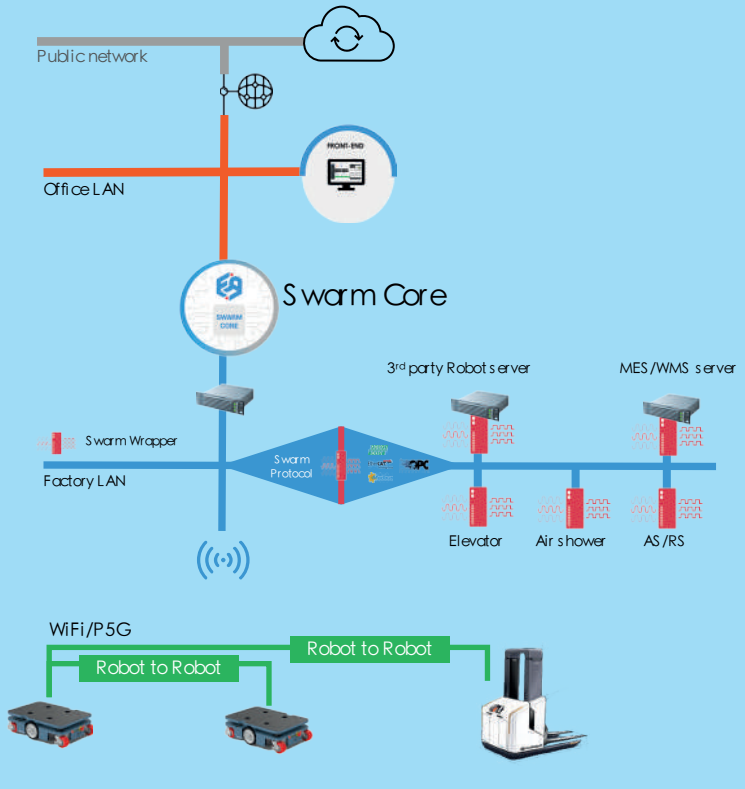
Integrate equipment

- Palletizer and conveyor integration
- Goods-to person and inventory auto-replenishment

STEP 1

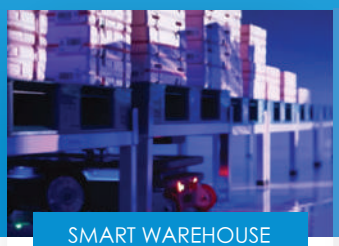
Automate A to B

- Person-to-goods kitting support
- WIP material transport manual trigger



Optimize any processes.

Running on the fields today



SMART WAREHOUSE

World leader in display manufacturing

Multi-brand fleet
Robotic arm coordination
+30% productivity



SMART PRODUCTION LINE

World leader in warning light manufacturing

High-precision navigation
Complex SW-integration
1.5 man + space saving



SMART PRODUCTION LINE

World leader in bike brakes manufacturing

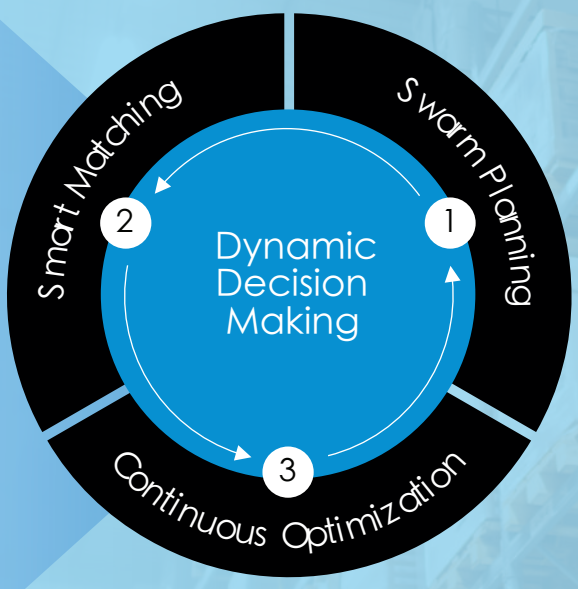
Dynamic environment navigation
PLC and Sensor integration
2 man saving



SMART FACTORY

World largest factory campus

High-precision docking
Multi-brand coordination
First hybrid large scale fleet



-40%	Integration time* *Comparing with RCS. The estimated numbers may vary by field and scale of the operation.
+25%	OEE
-50%	Robot maintenance time** **The saving includes the time spent on configurations and updates in networks, factory equipment, and control software.

SMR250 series

Compact, sturdy, and intelligent

Swarm-native AMR powered by Swarm Core for optimized intralogistics efficiency

- Full Swarm Core integration for easy configuration, operation, and monitoring
- Multi-layer operation safety ranging from sensor level to robot coordination
- Double circuit design for minimized failure rate with performance level C.
- Built-in Swarm protocol enables SMR's interoperability with 3-rd party robots and equipment
- CE（ISO 3691-4, EN 1175）and EMC（IEC 61000-6, EN 12895）certified



SMR250

- Connector for custom-top-modules with power, Ethernet & digital I/Os
- Built-in extendable E-stop



SMR250 Lift

- Low-profile design with only 272 mm height
- Built-in lift height 70 mm



Sturdy and Compact

- 1.5 m/s max speed with 250 kg full loading
- 8-hr full-load runtime in 70-min charging
- Optimized space utilization including navigation in 80 cm wide aisle



Top-Module Compatibility

- Embedded mount points stabilize top-modules and payloads
- Solid chassis and suspension ensure safe operation on uneven floors
- Pre-qualified conveyor and lift modules



Fast Deployment

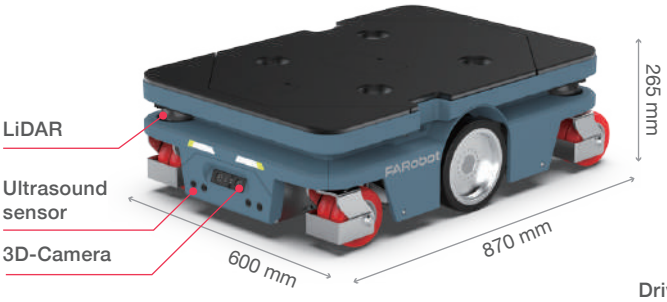
- Plug-and-play 1-hr onboarding
- Fast task points coordinates recording
- Embedded robot management tool enables task and layout adaptivity with fast parameter configuration

ADLINK
LEADING EDGE COMPUTING

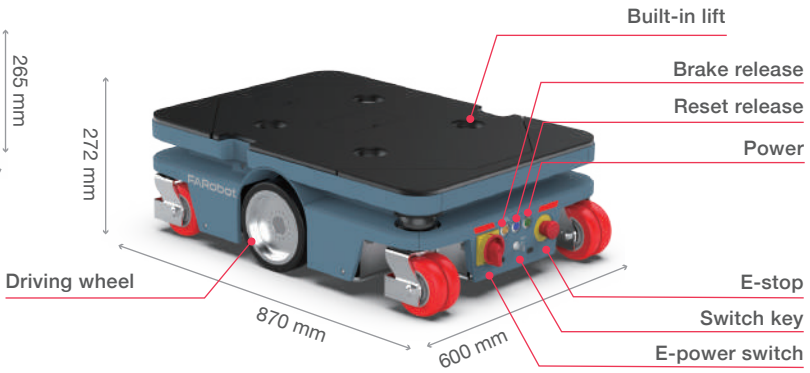
LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

SMR250 series

SMR250



SMR250 Lift



		SMR250	SMR250 Lift
	Dimension (L*W*H)	870 x 600 x 265 mm	870 x 600 x 272 mm
Color availability		Blue, Grey	
	Weight	130 kg	144 kg
Form Factor	**payload**	250 kg	
power	**Battery**	Mono-battery: 48V nominal voltage, 37.7Ah nominal capacity	
	Runtime / charge time	8-hr full-load runtime in 70-min charging	
Sensor	**Long range**	Dual SICK nanoScan3 360°View	
	Short range	Front 3D camera, 2 pairs of ultrasonic sensors and proximity sensors	
Accuracy	**Global accuracy**	+/- 30 mm *	
	Docking accuracy	+/- 5 mm with landmark *	
Mobility	**Motion**	Differential drive, forward/backward	
	Speed	Forward up to 1.5 m/s, backward up to 1.5 m/s	
	Stability	Dual suspension for payload stability	
	Slope	5% negative/positive slope	
	Traversable gap/step	Gap: 35 mm/Step: 20 mm	
	Wireless	Wi-Fi IEEE 802.11 a/b/g/n/ac, 2.4GHz and 5Ghz	
Communication & Interface	**Button**	Power button x 1	
		Reset button x 1	
		Break release button x 1	
		Switch key x 1	
		Emergency stop button x 1	
		Emergency Power switch x 1	
Physical interfaces/Lifter		Physical interfaces : Ethernet adapter (M12, support Modbus TCP/IP) Modbus TCP communication x 4DI/4DO Emergency stop & reset port x 1 48V power output (max.10A) x 1 24V power output (max. 2A) x 1	Built-in lift Payload: 250kg Lift height: 70 mm
	Standard and certificate	TUV certified CE (ISO-3691-4, EN1175) & EMC (EN61000-6, EN12895)	

* In controlled conditions.

SMR1000 series

Compact, sturdy, and intelligent

Swarm-native AMR powered by Swarm Core for optimized intralogistics efficiency

- Full Swarm Core integration for easy configuration, operation, and monitoring
- Multi-layer operation safety ranging from sensor level to robot coordination
- Double circuit design for minimized failure rate with performance level C.
- Built-in Swarm protocol enables SMR's interoperability with 3-rd party robots and equipment
- CE（ISO 3691-4, EN 1175）and EMC（IEC 61000-6, EN 12895）certified



SMR1000

- Connector for custom-top-modules with power, Ethernet & digital I/Os
- Built-in extendable E-stop

SMR1000 Lift

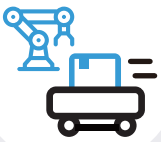
- Low-profile design with only 285 mm height
- Built-in lift height 70 mm





Sturdy and Compact

- 1.5 m/s top speed, with dual-battery system
- 8-hr full-load runtime in 90-min charging
- Optimized space utilization including navigation in 103 cm wide aisle



Top-Module Compatibility

- Embedded mount points stabilize top-modules and payloads
- Solid chassis and suspension ensure safe operation on uneven floors
- Pre-qualified conveyor and lift modules



Fast Deployment

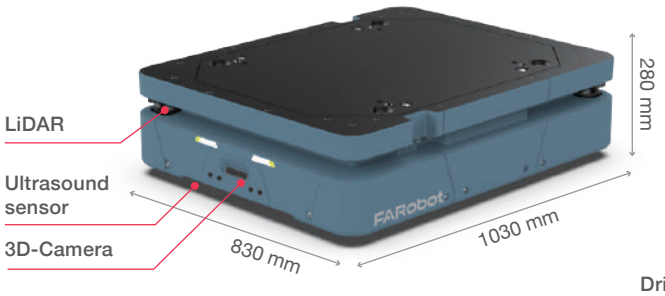
- Plug-and-play 1-hr onboarding
- Fast task points coordinates recording
- Embedded robot management tool enables task and layout adaptivity with fast parameter configuration

ADLINK
LEADING EDGE COMPUTING

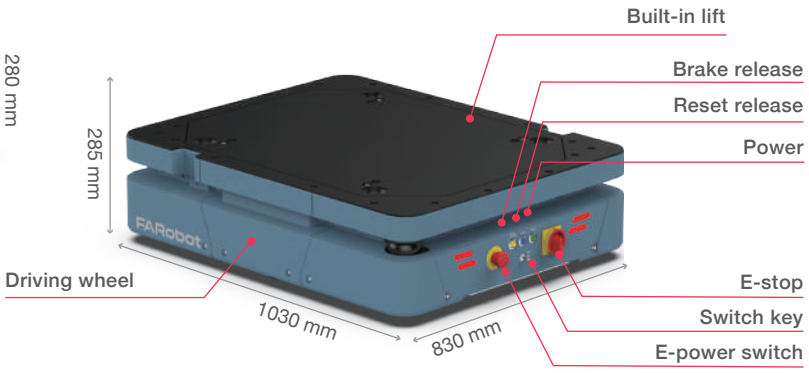
LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

SMR1000 series

SMR1000



SMR1000 Lift



		SMR1000	SMR1000 Lift
	Dimension (L*W*H)	1030 x 830 x 280 mm	1030 x 830 x 285 mm
Color availability		Blue, Grey	
	Weight	281 kg	327 kg
Form Factor	payload	1000 kg	
power	Battery	Dual-battery: 48V nominal voltage, 65.4Ah nominal capacity	
	Runtime / charge time	8-hr full-load runtime in 90-min charging	
Sensor	Long range	Dual SICK nanoScan3 360°View	
	Short range	Front 3D camera, 2 pairs of ultrasonic sensors and proximity sensors	
Accuracy	Global accuracy	+/- 30 mm *	
	Docking accuracy	+/- 5 mm with landmark *	
Mobility	Motion	Differential drive, forward/backward	
	Speed	Up to 1.5 m/s, full load up to 1 m/s	
	Stability	Triple suspension for payload stability	
	Slope	5% negative/positive slope	
	Traversable gap/step	Gap: 35 mm/Step: 20 mm	
	Wireless	Wi-Fi IEEE 802.11 a/b/g/n/ac, 2.4GHz and 5Ghz	
Communication & Interface	Button	Power button x 1	
		Reset button x 1	
		Break release button x 1	
		Switch key x 1	
		Emergency stop button x 1	
		Emergency Power switch x 1	
Physical interfaces/Lifter		Physical interfaces : Ethernet adapter (M12, support Modbus TCP/IP) Modbus TCP communication x 4DI/4DO Emergency stop & reset port x 1 48V power output (max.10A) x 1 24V power output (max. 2A) x 1	Built-in lift Payload: 1000kg Lift height: 70 mm
	Standard and certificate	TUV certified CE (ISO-3691-4, EN1175) & EMC (EN61000-6, EN12895)	

* In controlled conditions.

SWARM Core





1000 robots

Up to 10 fleets and 100 robots per fleet

RCS + WCS orchestration

All in one RCS and WCS for end-to-end decision making

2 license types

Perpetual license or yearly license

Any Connect

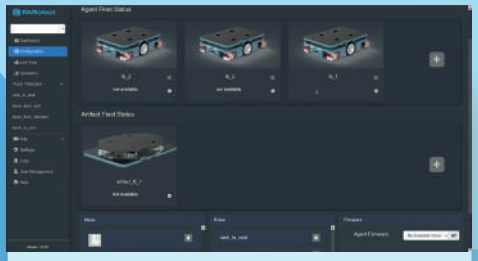
Easily connect equipment and robots

PLC/Gateway

3rd party AMR

Machines

Agile Integration.



Easier integration and control

- Integration toolkit for equipment
- One interface for SI, manager, operator
- Cycle time integration through MES/ERP



Easy workflow integration

- Workflow template approach
- Precise event integration interface
- Task execution failure design

Integration tools.

Swarm Wrapper



- Integrate any devices and their protocols

Swarm SDK

Equipment connector templates



- Low-code application programming

Limitless scalability

PLCs, motors, conveyors, doors, elevators and alarm systems.

Agile logic design

Definable event trigger, workflow integration, fail-safe mechanism and protocols handshakes.

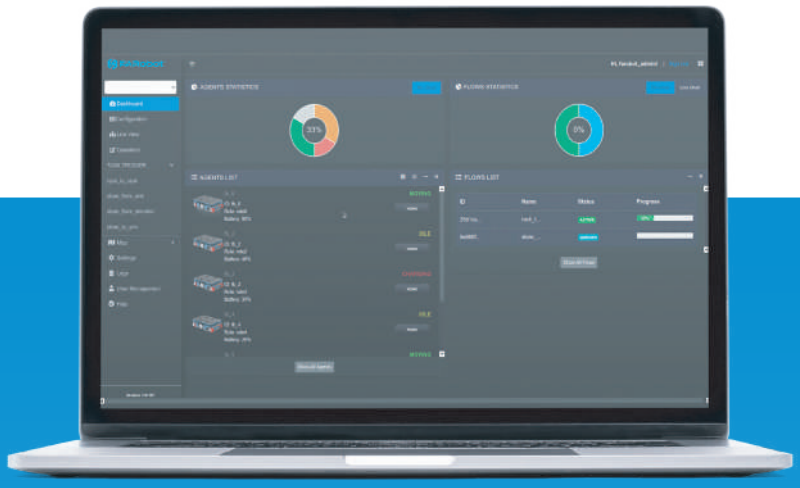
Agile integration

Simple I/O integration

Integrated industrial protocol

Agile Operations.

Easier monitoring and decision making



Comprehensive monitoring

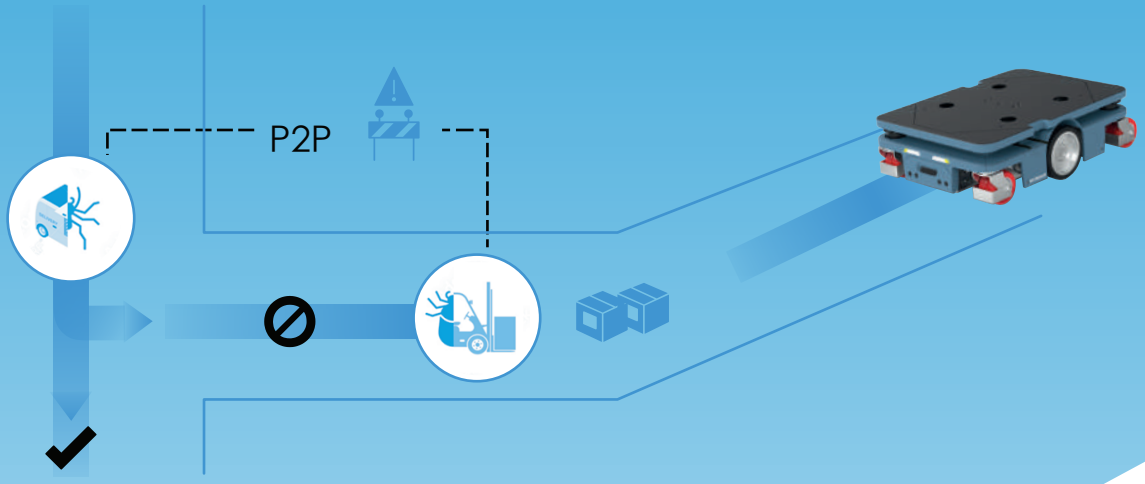
- AMR and Equipment real-time monitoring
- Useful productivity analytics

Capability & Workflow operation

- Universal workflow logic or trigger
- Robot capability based auto take-over

Traffic management

- Easily customizable rule engine: specific zone, robot speed, robot path, robot audible warning



Agile Optimization.

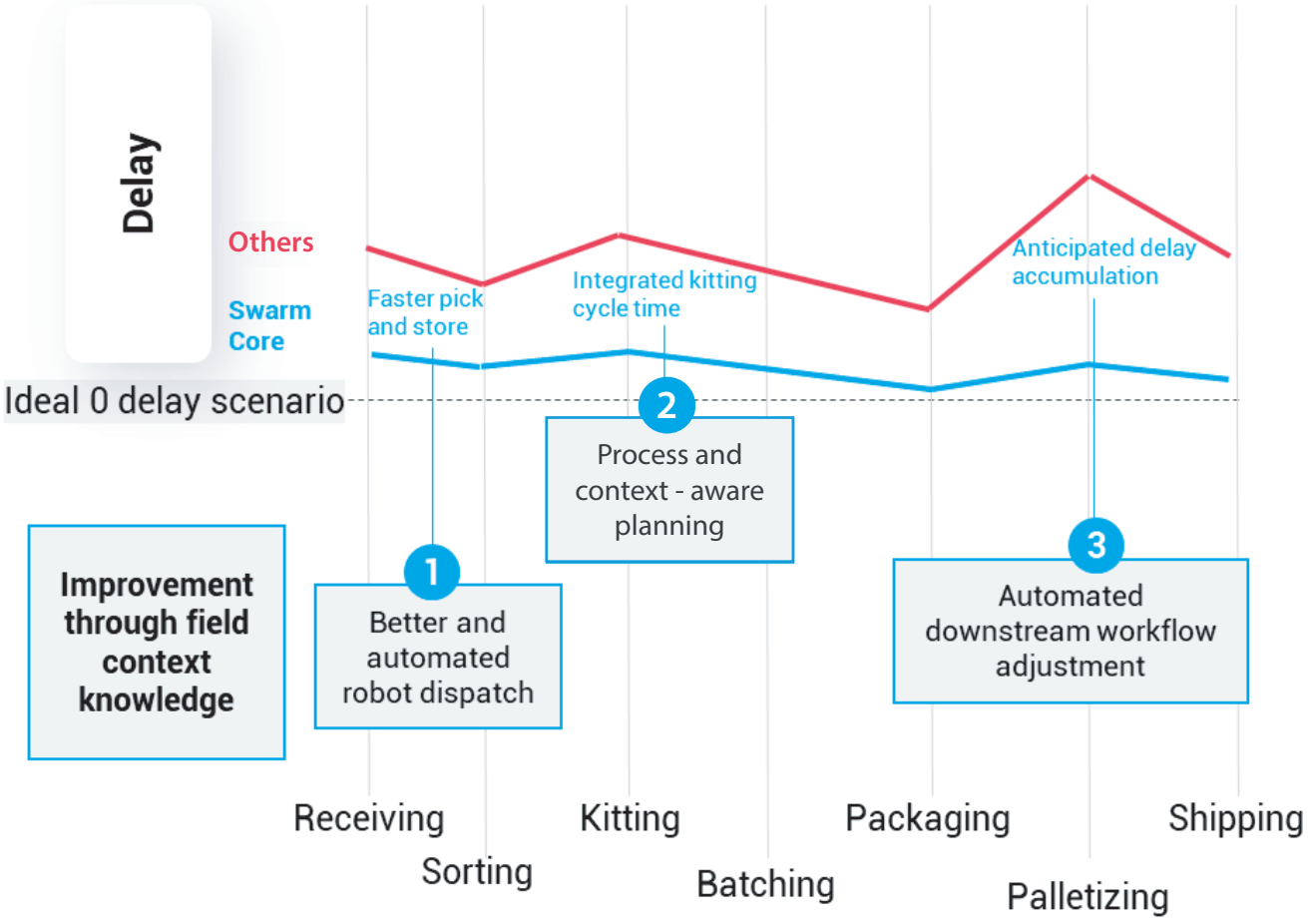
Autonomous execution

Swarm Core end-to-end task sequencing takes over logistic equipment control to reduce delays and idle time.

Thanks to its dynamic rescheduling capability, the fleet is reorganized and reassigned to the most needed area.

- ✔ Less material waiting time
- ✔ Less fleet supervision

Guaranteed minimum delay and maximum OEE.





MicroRAN

All-in-one 5G private network solution

A slim ,secure and universal turn-key solution for small and medium-sized enterprises

Designed for Small-Mid Enterprise

Secured Data

Reliable Mobility

Low TCO & High ROI

Why 5G for AMR

5G		Wi-Fi 6
Secured by SIM	Security	Non-Secured
Seamless	Handover	Not Smooth
eMBB: 4 ms uRLLC: 0.5 ms	Latency	Average 20 ms





AMR, AGV Swarm Autonomy

Real-Time AI Vision Analysis : pallet pick up

Use Case

Note

ADLINK
LEADING EDGE COMPUTING

ADLINK Technology, Inc.
No. 66, Huaya 1st Rd., Guishan Dist.,
Taoyuan City 333411, Taiwan
Tel : +886-3-216-5088
Fax: +886-3-328-5706

www.adlinktech.com

All products and company names listed are trademarks or trade names of their respective companies. ©2023 ADLINK Technology, Inc.
All Rights Reserved. All pricing and specifications are subject to change without further notice.

Allow your factory and logistic warehouse to onboard

any robot any time.



LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000