

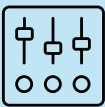
# Solutions for Automated Guided Vehicles

Automated Guided Vehicles (AGVs) are essential to warehouse and automotive manufacturing operations where continuous motion, precise navigation paths and reliable performance are required. To operate safely and efficiently, AGVs depend on uninterrupted power distribution and secure high-speed data transmission that support guidance systems, collision avoidance and multi-vehicle coordination.

Molex addresses these needs with high-current wire-to-board connectors that provide stable power delivery to drive motors and battery systems, and signal/low-power cables that deliver robust high-speed data with positive-locking features for reliable guidance, safety and fleet monitoring. Together, these solutions enable AGVs to maintain dependable operation in demanding industrial environments.



Automated guided vehicles



Main Controller



Power System



Navigation System



Safety Systems




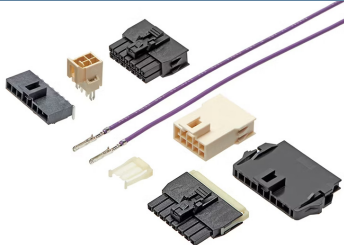


Drive System



Communication Module

## MOLEX OFFERINGS FOR AUTOMATED GUIDED VEHICLES

Circular Connectors	Signal and Low-Power Cables	Terminal Blocks	Wire-to-Board Connectors
			
Key Features			
Sealed designs	Discrete wiring options	Maintenance-free operation	Color-coded options
Locking mechanisms	Durable overmolded design	Durable construction	Positive-locking mechanism
Rugged construction	Pre-crimped leads	Lever-activated design	Enhanced contact protection
Many sizes and form factors	Customizable cable solutions	Spring termination technology	Resin enhancements

# Automated Guided Vehicle



## Communication Module

I/O connectors ([RJ45 jacks](#), [D-Sub](#))  
Cable assemblies  
([Signal/low-power cables](#),  
[RF connector cable assemblies](#))  
Wire-to-board connectors  
([Stac64](#), [stAK50h](#))

## Main Controller

Wire-to-board connectors  
([Mini-Fit Sr.](#), [Nano-Fit](#), [DuraClik](#),  
[Stac64](#), [stAK50h](#))  
Circular connectors  
([Nano-Change M8](#), [M12](#), [M23](#))  
Cable assemblies  
([Signal/low-power cables](#))

## Navigation System

Wire-to-board connectors  
([Micro-Lock Plus](#), [HSAutoLink II](#),  
[MX-DaSH](#))  
Board-to-board connectors  
([SlimStack](#))  
Cable assemblies  
([Signal/low-power cables](#),  
[FFC/FPC connectors](#),  
[High-Speed FAKRA-Mini](#))

## Power System

Wire-to-board connectors  
([Mega-Fit](#), [Stac64](#), [stAK50h](#))  
Wire-to-wire connectors  
([MX150](#), [Mizu](#))  
Cable assemblies  
([Signal/low-power cables](#))

## Drive System

Wire-to-board connectors  
([Mini-Fit](#), [KK](#), [DuraClik](#), [MX-DaSH](#))  
I/O connectors ([M12](#), [M23](#))

## Safety System

Wire-to-board connectors  
([Mini50](#), [Pico-Lock](#), [Pico-Clasp](#), [MX-DaSH](#))  
I/O connectors ([Nano-Change M8](#), [M12](#))  
Cable assemblies ([Signal/low-power cables](#),  
[High-Speed FAKRA-Mini](#))



[M12 Connectors](#)



[High-Speed FAKRA-Mini Interconnect System](#)



[Mini-Fit Connectors](#)



[Signal/Low-Power Cables](#)

## REFERENCES

### [Wire-to-Board Connectors](#)

[UL-approved](#)  
[Signal options](#)  
[Glow Wire offerings](#)  
[Fit families](#)

### [Cables](#)

[Power and signal](#)  
[Pre-crimped leads](#)  
[Custom creator](#)

### [Terminal Blocks](#)

[Product reference guide](#)

### [Circular Connectors](#)

[Nano-Change M8](#)  
[M12](#)  
[M23](#)

## SUBASSEMBLY BREAKDOWN

**Main Controller** – Central processor; manages vehicle logic and operations

**Power System** – Battery and distribution unit; supplies and regulates energy flow

**Navigation System** – Enables path following and positioning through magnetic, laser or vision guidance sensors

**Safety System** – Includes obstacle detection and emergency stop functions

**Drive System** – Motor control; manages propulsion and steering

**Communication Module** – Provides Wi-Fi and ProfiNet connectivity for fleet coordination and factory system integration