MODULAR CONNECTIVITY

Rather than static assembly lines, the smart manufacturing world of the not-so-distant future will most likely run on a modularized system of work stations and production cells.

In fact, for many manufacturers, the revolution has already begun. Witness the increase in mobile robots: automated guided vehicles (AGVs) and autonomous mobile robots (AMRs).

No longer stuck in place

Driven by consumer and business demand favoring customization over mass production, manufacturers are turning to flexible and adaptable AGVs and AMRs to optimize their modular-based manufacturing stations. Built to cope with multiple application needs and tasks, and made to move across the factory floor, AGVs and AMRs can pivot between and among work stations in a way that is impossible for stationary robots. And when paired with cobots, mobile robots can substantially improve production efficiency. With AGVs, AMRs, and cobots working alongside each other, a production line can have different tasks taking place within different cells or allow robots to pivot between work stations as needed. Or the mobile robots can "read the room" and go to other applications or tasks where their help is needed most.

What makes this adaptability possible? Interconnectivity between devices. **In a modular manufacturing environment, maintaining a reliable stream of real-time communication becomes a business requirement.** By definition, a modular design is flexible, therefore the connectivity solutions must be as transposable as the manufacturing system itself.

Fortunately, today's modular connectors are engineered to make secure and reliable input/output connections. Many offer a convenient locking system that prevents both mis-mating and accidental unplugging resulting from shock and vibration; and the best offer compact, one-piece construction with preloaded contacts, providing a space-saving, quick-to-install solution that gives engineers increased design flexibility. ▸

GLOBAL AMR MARKET

$8.3B USD

+19.6% CAGR

By the year 2027, the global AMR market is expected to reach $8.3 billion USD, representing a 19.6% CAGR since 2020.

2020 market size value: $2.4B USD

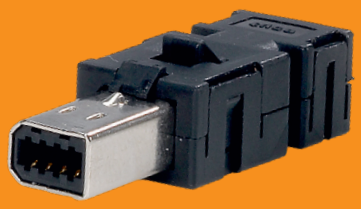
Source: Grand View Research, Inc.; Autonomous Mobile Robots Market Size, Share & Trends Analysis; Jan. 2021

FLEXIBLE CONNECTIONS

Small in size, big in reliability, these connectors help make modular manufacturing possible.

Industrial Mini I/O Connector

- Small size provides more flexibility on the printed-circuit board (PCB)
- Reliable terminal contact built to withstand high-vibration environment
- Compact latching feature provides high retention force that helps protect the plug from accidental unmating
- Smart lock designed for easy insertion and removal



We are here to help

From industrial mini I/O connectors that can efficiently transfer data across the network with reduced accidental unplugging, to modular jacks and plugs that improve electromagnetic interference (EMI) performance and expand system bandwidth capabilities, TE Connectivity designs solutions to help manufacturers build more flexibility into their systems and make the leap to Industry 4.0.

Are you interested in learning more about TE Connectivity's expertise in industrial robotics connectivity?

Connect with us today.

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