



for a greener tomorrow



**MITSUBISHI
ELECTRIC**

Changes for the Better

AUTOMATION PRODUCTS AND SOLUTIONS



MEETING TOMORROW'S CHALLENGES

Automate

For more than 90 years, we have invested in tomorrow's automation technology to improve the productivity and efficiency of our customers' operations.

Innovate

By developing cutting-edge products and technologies, we empower our customers to drive their own innovative strategies and advance their operational effectiveness.

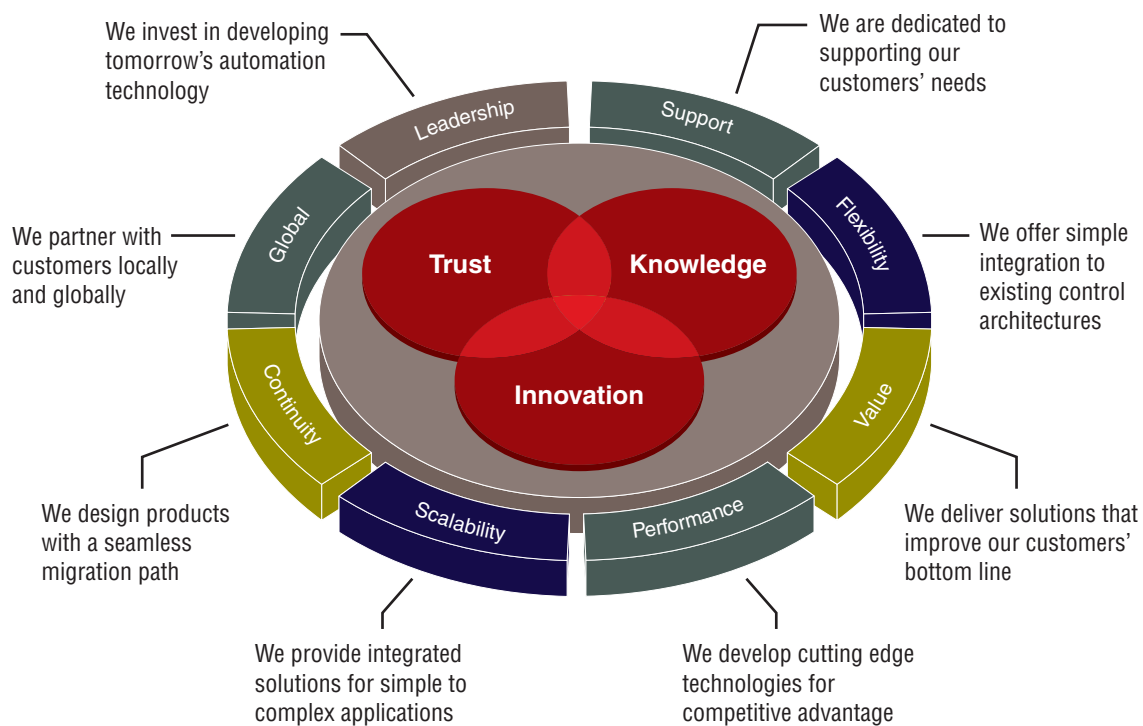
Integrate

Our integrated automation solutions are designed to improve efficiencies, reduce cost, increase overall productivity, and provide a seamless migration path.



One

By combining these strengths, we are uniquely positioned to deliver automation solutions that help our customers increase performance, improve their bottom line, and achieve a competitive advantage.



Who We Are

We are an affiliate of Mitsubishi Electric Corporation, a \$40 billion company that invests \$2 billion in R&D annually, including substantial investment in tomorrow's automation technology to deliver cutting-edge solutions that address the most demanding manufacturing and automation challenges.



What We Do

We build trust with our customers by using our extensive knowledge to help them innovate and sustain a competitive advantage.

KNOWING YOUR INDUSTRY

Automotive

Working closely with world-leading automotive manufacturers, we have developed distinctive manufacturing solutions that employ the latest technological and safety features.



HVAC

We deliver energy efficient solutions designed specifically for the HVAC environment. With heating and cooling costs continually on the rise, Mitsubishi Electric has proven variable speed technology along with the expertise to reduce energy consumption by as much as 50%.

Packaging

We understand that packaging is one of the most dynamic aspects of the manufacturing process. Consequently, we continually develop solutions that help you keep up with the ever-changing packaging landscape.



Electronics Manufacturing Services

With a history of manufacturing our own semiconductors and circuit boards, you can trust Mitsubishi Electric to deliver the optimal automation solutions for your electronics manufacturing processes.

Machining

Combining solid products with strong service and support for a wide range of products and applications, we are the industrial machine tool control vendor of choice when performance matters.



Water

When thinking of water processing, you might think of municipal water treatment. However, many manufacturing processes require scalable levels of control and higher efficiencies alongside pre- and post- water treatment plans. This ensures that they can continually output the highest quality and maintain a safe environment. We have a complete portfolio to efficiently deliver fluids and solids on your next project.

Logistics

Mitsubishi Electric products deliver logistics solutions that are fast, accurate, scalable, and energy efficient. With factories and warehouses around the globe, we have the expertise to solve your most demanding logistics challenges.



BUILDING SUCCESS TOGETHER



"Compared to those offered by any other supplier we looked at, Mitsubishi HMIs are very responsive to the touch and very fast,"

*– Vance Matz,
Oliver Packaging & Equipment
Company*

"And when it comes to quality and reliability, Mitsubishi Electric robots are beyond anything I've seen in 20 years in the business. They're the only ones that come with a three year warranty standard, while everyone else just gives you one year. That really tells me something."

*– Nick Parnello,
Romtech RR Floody Company*

"The product is so flexible that people often ask us 'can it do this, can it do that,' but, honestly, a much shorter list would be what it can't do. Mitsubishi Electric has a great product and great service and they've been fantastic at helping us meet the industry needs that we were targeting with the flexible work cell."

*– John Kodzis,
IPSUMM, Inc.*





"We know that Mitsubishi Electric will be there to support our development needs five, ten or thirty years from now."

***– Bo Biel,
M&R Print***

"The Mitsubishi system definitely provides better registration and drives faster production speed than any of the many solutions we've tried before."

***– Pat Quattrocchi,
Miller Process Coating
Company***



"I don't think I've ever seen one of their VFDs go bad and force us to go back to the customer site to replace it."

***– Mike Kees,
D&E Equipment Co., Inc.***

"We were looking for a single source of supply for all the needed automation components at a good price point, and Mitsubishi Electric provided that for us. Mitsubishi Electric provided an overall control solution from a trusted supplier."

***– Kevin Lauricella,
Ice Systems & Supplies, Inc.***



SUPPORTING OUR FUTURE



Automation Solutions in Action

Our facility in Vernon Hills, Illinois, houses a showroom where you can see our latest advancements in motion, robotics, connectivity, control and visualization.

Additionally, our in-house mechatronics lab allows our engineering staff to perform proof of concept and application validation testing.

And for your convenience, our mobile showroom and our participation at industry events throughout the Americas gives you the opportunity to learn about our automation solutions at a location near you.



Education Partners

Our skills development initiatives include a commitment to training the next generation of automation professionals through a number of university engineering partnerships and school technology programs.



Environmental Vision

We place an emphasis on developing technologies that deliver both energy and cost savings. We also focus on energy and resource-saving measures during the production and shipment of products in order to contribute to a more sustainable environment.

A Society of Smiles

Through a variety of volunteer activities and support programs across the Americas, we are in touch with the unique needs of local communities and take pride in helping to make a difference.



A TOTAL SOLUTION

A Simple Concept

e-F@ctory is the Mitsubishi Electric concept for improving the performance of any manufacturing enterprise, providing three key benefits: reduced Total Cost of Ownership (TCO), Maximized Productivity, and Seamless Integration.



Connectivity

Our MES interface optimizes production by directly connecting enterprise systems with the plant floor, while our unparalleled networking technology creates seamless communication between devices.

AN INTEGRATED SOLUTION



Reduce Implementation Costs

The e-F@ctory Alliance Program is a third-party referencing program with other automation hardware and software vendors that allows customers to select solutions that best solve their automation challenges.



A Greener Factory

The e-F@ctory concept also allows visible management of power usage through the introduction of measuring equipment and technologies that support energy conservation efforts.

HUMAN MACHINE INTERFACES



Our HMI platform is a family of high performance operator terminals that combine the best in performance, graphics and functionality in a unique, ultra compact and robust package.

Key features:

- Powerful and brilliant graphics
- Intuitive multi-touch and gesture navigation
- Advanced data sharing and gateway function, including FTP, e-mail, VNC, and MES capabilities
- Flexibility of multi-vendor communications
- Remote connectivity through mobile devices such as cellular phones and tablets
- Improve productivity by monitoring the system status on the powerful maintenance platform



PROGRAMMABLE LOGIC CONTROLLERS



Our controller lineup is one of the most flexible in the industry. It is supported by one common programming software and an array of networking technologies to enable seamless connection to other products on the plant floor.

Key features:

- Complete controller lineup supports any application
- Open network access enables seamless communication across the entire system
- Advanced range of special function modules optimizes application functionality
- Common programming software reduces development time and commissioning costs
- Multi-discipline control delivers accurate synchronization and maximizes production throughput



SERVO AND MOTION CONTROLLERS



Our family of servo amplifiers and motion controllers incorporate user friendly programming, advanced performance and energy saving parameters to give applications a cutting edge.

Key features:

- Fast and trouble-free One-Touch Auto-Tuning™
- Real-time adaptive load control reduces wear and tear on mechanical components
- 22 bit high resolution encoder for accurate positioning and 2.5 kHz speed frequency response for faster throughput speeds and increased cycle times
- STO & SS1 as standard, Category 4, PL e, SIL 3 safety level
- Energy saving capabilities through regenerative power for overall energy-conservation



VARIABLE FREQUENCY DRIVES



Since starting inverter production in the early 1980's, we have mastered the art of volume production to the point where we manufacture and sell over 1.2 million variable frequency drives per year, every year, worldwide. Our recipe for success is simple: continuous innovation for not only our products but the manufacturing process itself, all while maintaining exceptional product reliability through better design and manufacturing techniques.

Key features:

- Comprehensive lineup of capacities and voltage classes
- Numerous configurations from stand-alone to fully integrated
- Application specific functionality that includes fan and pumps, winders, cranes and conveyors
- Control modes covering the needs from V/F to vector, induction to permanent magnet motors
- Efficient performance, highly reliable and maintenance free



COMPUTERIZED NUMERICAL CONTROLLERS



We have produced high-performance CNC systems since 1973 and are the largest supplier of customized CNC systems for machine tool builders worldwide. Today, we have more than 95,000 CNC systems in operation.

Key features:

- 3D graphic tracing for visual confirmation and program check
- High-speed, high-accuracy mode for complex and highly precise 3D mold work
- Icon based navigation and tablet gesturing for intuitive operation
- Nano control system for precise and accurate operation
- 5-axis simultaneous control for complex part programs
- Customizable controls to add end user screens
- Long term life cycle support



ROBOTICS



Our robotic line focuses on high repeatability, high-speed applications with small to medium payloads as well as specialized applications. In addition, performance is excellent, as our robots are among the fastest and most accurate in their class.

Key features:

- Open control architecture and multiple protection ratings to support every application
- Three year on-site parts and labor warranty
- Multiple CPU capability allows industry exclusive system performance and flexibility
- Advanced features such as force sensing, conveyor tracking, vision, and 3D vision
- Extremely reliable with an outstanding Mean Time Before Failure (MTBF)
- Fast and easy integration with Mitsubishi Electric automation products and extensive connectivity to third party devices



ENGINEERED SOLUTIONS



We have a proven track record of delivering solutions that are not only well engineered, but maintain a high level of reliability, durability and quality. We offer a wide range of engineering services including consultation, design and manufacturing.

Key features:

- Expertise to deliver anything from a simple stand-alone cabinet to a fully integrated turnkey motor control center
- Engineered and manufactured to your precise specification and budget requirements
- Consultation services to help define and interpret project specifications
- Certified to meet a wide array of standards including UL, cUL, CSA and CE



ENERGY MANAGEMENT PRODUCTS



Today, with energy management becoming more critical than ever, we produce a suite of solutions that help you monitor and control your energy usage.

Key features:

- PLC based energy meter
- Panel power meter with basic to advanced metering with multiple network options
- DIN rail power meter
- Plant layer energy kiosk with WAGES metering
- Easy configuration and web based energy system
- Building block energy intelligence architecture
- Enterprise layer energy dashboard and reporting



LOW VOLTAGE SWITCHGEAR



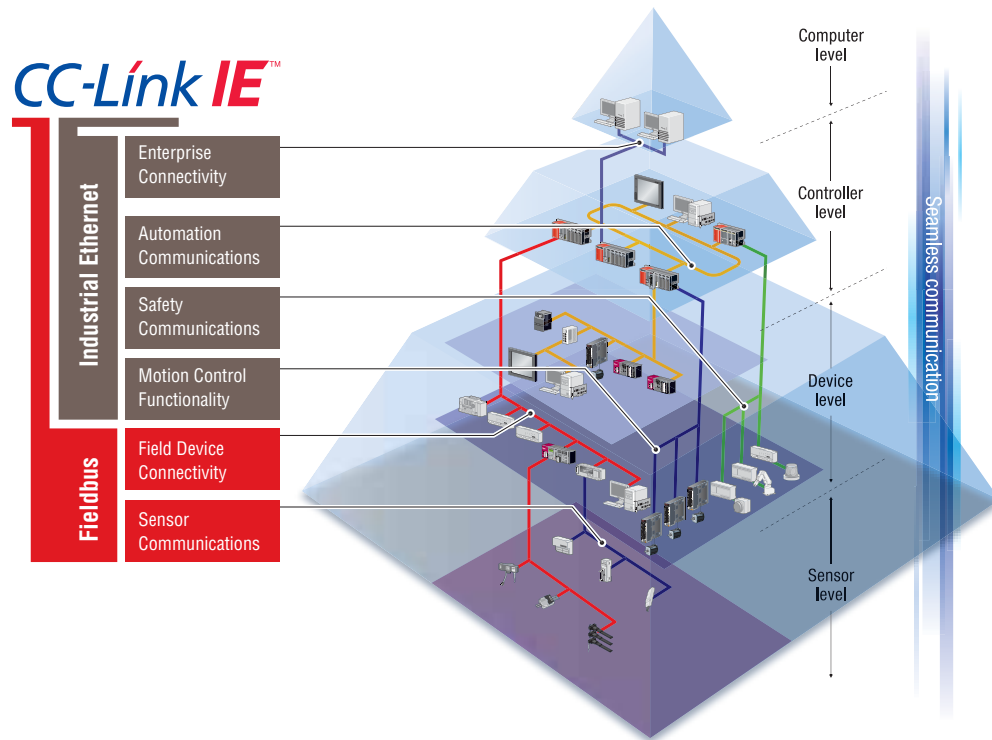
We offer a complete range of switchgear products, including everything from air circuit breakers and compact molded case circuit breakers to magnetic contactors and thermal overload relays.

Key features:

- Compliant with most global standards (IEC, UL, CSA, CCC)
- Full range of circuit protection ranging from fractional amps up to 6300 amps
- Magnetic contactors and (open type) motor starters up to 600 amps
- Manual motor starters up to 32 amps



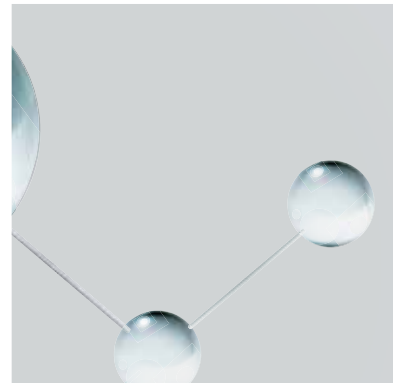
INTEGRATED NETWORKING



We offer a variety of industrial network options to suit your connectivity needs. Whether you prefer one integrated network, or rather have the flexibility to connect to third party networks, we can help you build the most effective architecture.

Key features:

- Communicate to hundreds of devices at distances up to 10 km
- Maintain network determinism without expensive managed switches
- Comprehensive software-based diagnostics
- One industrial Ethernet network for control, motion, and safety
- Communicate directly to enterprise-level systems
- Flexible topology options for Ethernet and Fieldbus networks



SOFTWARE



Our software suite is easy to use and allows users to reduce total cost of ownership. It offers full functionality including programming, simulation, diagnostics, and maintenance tools.

Key features:

- Solutions for both process and discrete machine control
- Flexibility allowing rapid network and module setup of any automated system
- Central “launch pad” for all project titles
- PLC programming compatibility with the IEC61131-3 standard and PLC Open
- Engineering support and full documentation access
- Advanced MC Works64 SCADA solutions, OPC communication with controllers

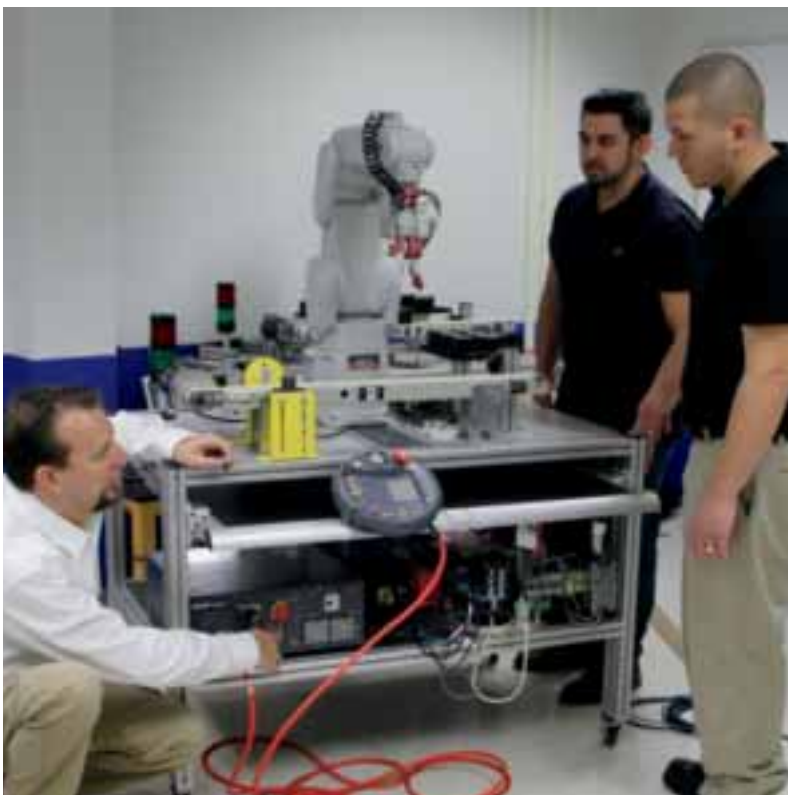


TRAINING



We offer comprehensive training on our products enabling users to design solutions and maintain equipment at peak operation levels and troubleshoot and resolve many problems independently.

We offer both in-house and on-site training courses. A number of online courses are also featured along with quick-tip videos that will assist you in understanding our products and their functionality.



In addition to standard classes, your organization can choose customized training courses tailored to your requirements. We utilize simulation equipment to boost the educational experience by providing a hands-on learning environment.

SUPPORT



Trust

We pride ourselves in creating enduring relationships with our customers built on trust. We believe we earn that trust by delivering high quality products that exceed your expectations, are reliable and easy to use, and help meet your energy reduction initiatives. We also make every effort to provide compatible replacement parts and repair services for our legacy products, so you receive long-term return from your investment in our automation solutions.

Service

Our network of more than 400 engineers provide local sales and support services with seamless integration to our vast array of products and solutions.

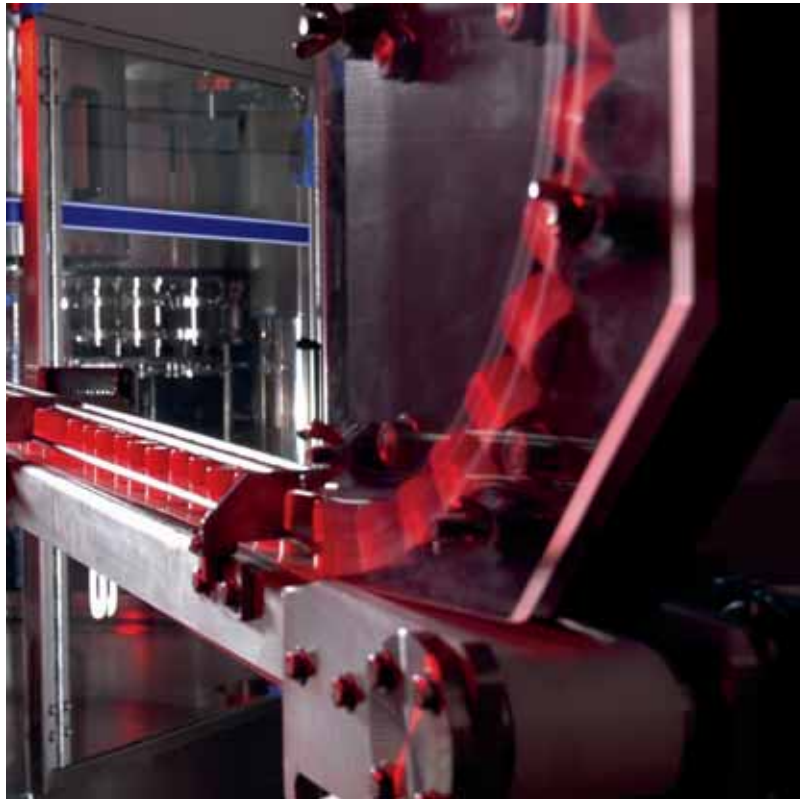
Uptime

Our goal is to deliver world-class products and tools, with the expertise to help you strengthen your profitability, optimize production uptime, and reduce total cost of ownership.



Global Support

Within our 25 factory automation centers around the world, we are committed to fully supporting our product offerings with local engineers who are at the ready to meet your needs.



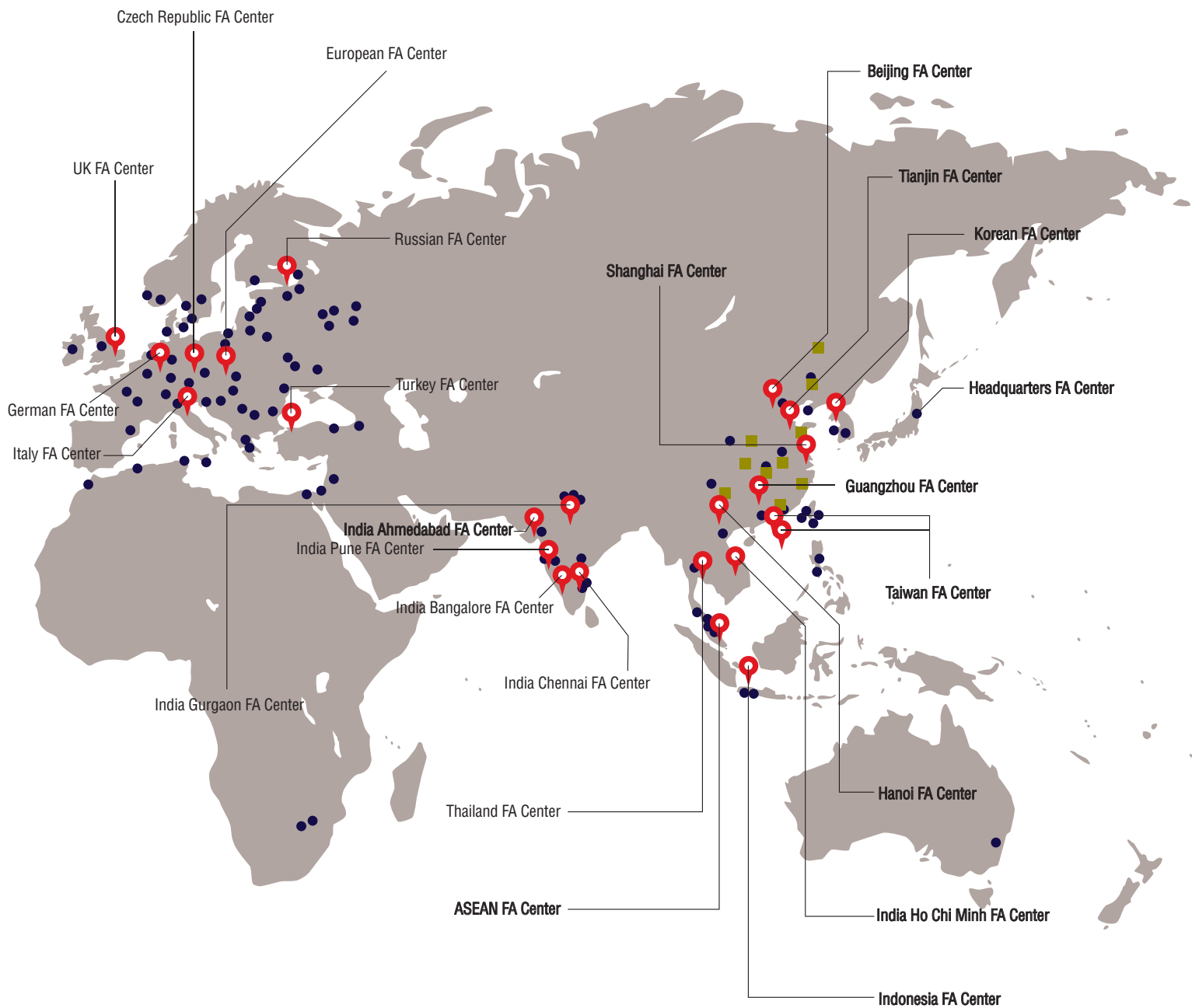
Support Center

Our technical support centers deliver quick and accurate problem resolution expected of a world-class leader in factory automation. Whether it's through our online manuals, email, telephone, or on-site field service calls, we are ready to provide the right solution to address your automation challenges.



FACILITIES





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