

## Our Client is One of The Largest Supplier of Industrial Automation Products and Solutions

Headquartered in China with a globally renowned reputation, our Client is a leading supplier of inplant process automation products and solutions, supplying to a wide spectrum of industries.

The integration of their cutting-edge industrial automation systems and software helps to control and manage the entire plant operation through process flow optimization in large scale projects, to scale towards higher production capacities, production efficiency and ensuring safety in harsh industry environments such as oil & gas, petrochemical, power, and chemical industries.

**The need of a miniature size yet robust and reliable connector to transmit high signal integrity at a specific board-to-board distance were extremely crucial to our Client for their industrial use and it was challenging for them to source for the connector with the given requirements.**

For confidentiality reasons, we are unable to disclose our Client's name in this success story.



# ERNI MINIATURE CONNECTORS FOR PLC SYSTEMS



## Our Client's Application: Programmable Logic Controller (PLC)

The PLC functions as an industrial computer control system with modular components that use to automate customized control production processes. It has three main categories such as inputs, outputs, and the CPU. The PLC will collect information from the connected input devices, process and monitoring the information and outputs based on the pre-programmed commands. It is a safe and reliable application for the production process.

The application is a medium-sized modular design consist of a CPU module, I/O module, function module, and communication module. The application is installed with a guide rail that the user can increase and decrease the quantity and type of I/O modules depending on the production process requirement.

The **key requirements** from our client:

- Miniature connectors that fit into the modular design and provide a high signal reliability.
- The flexible design for extending the board-to-board connector of height between 24 - 25mm.

## Our Solution

The ERNI SMC connector series exceeded the Client's expectation with its 1.27mm small grid miniature size that fits well in tightly space areas of application. It is available in a wide range of pin counts from 12 to 80 and data transmission rates of up to 3 Gbit/s.

The SMC connectors allow a board-to-board adapter height of 20 - 40mm. It enables the mating and release of two boards on a specified side and the board-to-board interface could increase accordingly to the board space.



Other key features include:

- Polarization prevents mismating and incorrect connections. The insertion chamfers in the capture range ensure secure mating.
- The retention forces on the circuit board and soldering brackets absorb mechanical stress. Thus, able to withstand high shock and vibration loads.
- SMC male connector is ideal for press-fit technology printed on circuit boards.

For more information on SMC connectors at [www.erni.com/smc](http://www.erni.com/smc)

At ERNI, we support our clients through their entire developmental journey - from the prototype design to their finished product. Our class-leading experience and vast knowledge in the automation industry gives us a competitive edge over other manufacturers. It is no coincidence that our clients hold ERNI in high regard as an innovative leader and supplier of high-quality electronic connectors worldwide.

Contact us today at [info.eah@erni.com](mailto:info.eah@erni.com) if you wish to learn how ERNI can help you!