

# RZ Ecosystem Partner Solution

## eSOL Industrial Network Solution



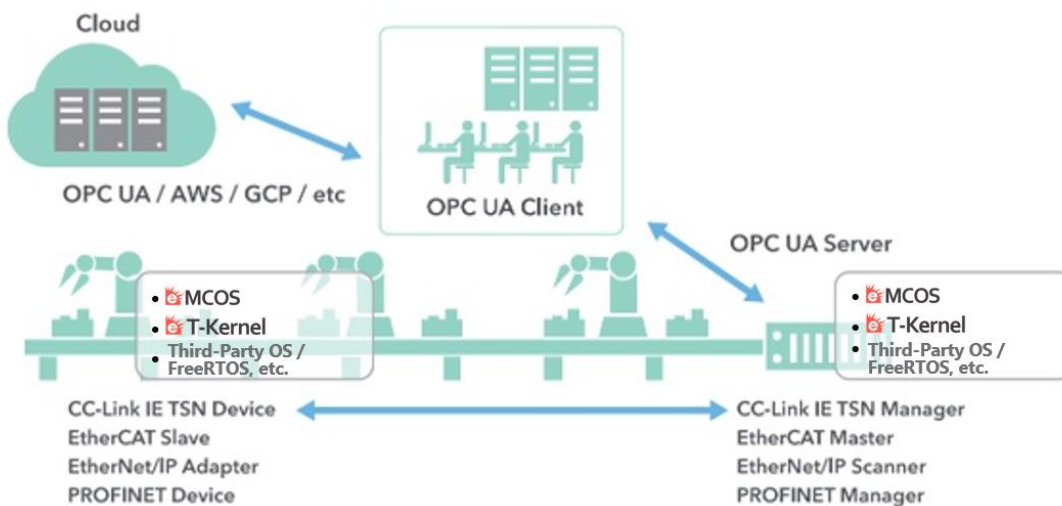
### Solution Summary

Industrial Network Solutions provide a wide range of engineering services, including porting and development of protocol stacks for customers, certification support, and consulting for the introduction of industrial networks using our own protocol stacks and SDKs. In addition, we provide a single contact window of those protocol partners, enabling multi-protocols and technical support—customers can proceed smoothly with the development of industrial network applications and accelerate time-to-market. Supported on Renesas [RZ/T series](#) and [RZ/N series](#) family MPUs.

### Features/Benefits

- Engineering services leveraging protocol development expertise
- Supported protocols: CC-Link IE TSN, EtherCAT, EtherNet/IP, PROFINET, Modbus TCP, IO-Link, DeviceNet, FSoE, CIP Safety, OPC UA
- Support for sample code provided by CPU vendors
- Certification support for various protocol organizations (pre-conformance checks, bug analysis, certification testing)

### Diagrams/Graphics



### Target Markets and Applications

- Industrial equipment
- Consumer and office automation equipment
- Scientific instruments
- Medical devices
- Research and academic applications
- Audio equipment



## Industrial Engineering Services

Leveraging our expertise as an OS vendor, we provide a wide range of engineering services for industrial software.

- **Embedded Platform Development:** BSP/Driver development for embedded platforms
- **Industrial Networks:** Stack sales, porting development, certification support, and consulting

	Network	Manager/Device	SDK/Stack Provider
Non-Safety	CC-Link IE TSN	Manager	eSOL CC-Link IE TSN SDK (Manager)
		Device	CC-Link Association (eSOL Engineering Services)
	EtherCAT	Master	acontis technologies, Koeniq-pa(KPA), RADIC
		Slave	Softing, Beckhoff Automation
	EtherNet/IP	Scanner	Real Time Automation(RTA), Pyramid Solutions
		Adaptor	Softing, Real Time Automation(RTA), TMG, Pyramid Solutions
	PROFINET	Controller	Commercial Stack (eSOL Engineering Services)
		Device	Softing, TMG
	Modbus TCP	Slave	Softing
	IO-Link	Master	TEConcept GmbH
Device		TEConcept GmbH, TMG	
DeviceNet	-	Warwick Control Technologies	
Safety	CC-Link IE TSN Safety	Device	eSOL CC-Link IE TSN safety SDK
	Safety over EtherCAT (FSoE)	Master	HMS
		Slave	HMS
	CIP Safety	Scanner	HMS
Adaptor		HMS	
Other	OPC UA	Client	Analyzer-ware
		Server	Softing
※ We can also provide engineering services for various fieldbuses and industrial network protocols not listed above, so please feel free to contact us.			

- **ROS/ROS 2 :** PoC development, Prototype development, Mass production development
- **Cybersecurity development and consulting:** Support for IEC62443 and compliance with regulations such as the EU CRA

## About eSOL

eSOL is a global leader in embedded systems and edge computing, dedicated to contributing to the realization of a safe and advanced connected society through innovative computer technologies. eSOL has developed and provided software platform products with real-time OS technology at its core. Our strength lies in our advanced technological expertise in the field of OS, including eSOL's unique multi-kernel based technology (patented) implemented in the real-time OS. Our high-performance, scalable software platform products, along with engineering services that leverage knowledge cultivated through decades of product development and various projects in collaboration with customer, are used globally in a wide range of embedded applications, including automotive, which require stringent quality, safety, and security standards – as well as factory automation, satellites, medical and digital consumer electronics. As a leading top-class technology company, we constantly seek to go beyond the status quo of the technologies and market, engaging in research and development of our own products to incorporate cutting-edge technology, and in joint research projects with major manufacturers and universities. In addition, we actively participate in industrial standards like AUTOSAR and multi-core and multi-many-core standardization efforts.

\* Autoware is open-source software built on ROS/ROS 2 for autonomous driving.

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**Contact:** <https://lp.esol.com/inquiry/contact-us>