YASKAWA

i³ CONTROL

As individual as your needs

www.yaskawa.eu.com

„Why have multiple solutions when there is one that combines everything?“

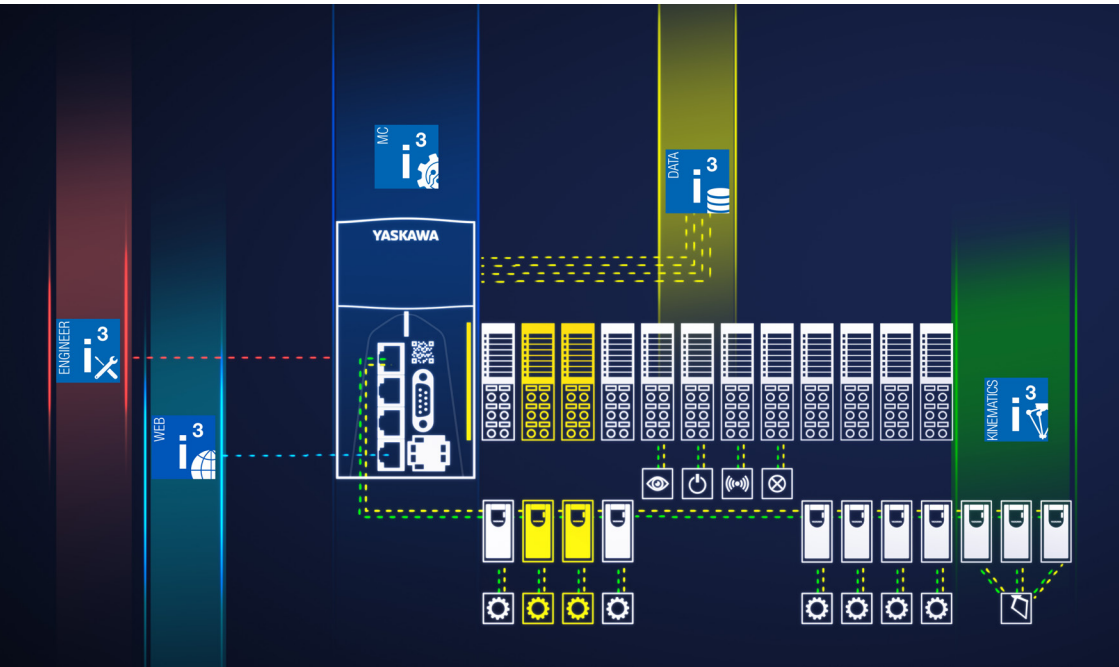
i³ CONTROL

Our i³ Control platform combines powerful, modular hardware with a flexible software infrastructure and the ability to develop solutions collaboratively

We thought about it for a long time: What is important to you when it comes to motion control? We talked to users, analyzed existing systems, and poked holes in our own experts - all with the goal of finding a solution that satisfies you, more than that, satisfies everyone. And what came out of it?

That we are quite diverse and have highly individual requirements! There is no one-size-fits-all for this topic, and that's a good thing. But what there is, and that's even better, is your-size-fits-you - now and in the future. This is the claim we associate with our i³ Control system and stand behind it. A system that adapts to your personal ideas, wishes, working methods and ideas. A system that supports your individual needs and does not try to squeeze them into a mold. In short, i³ Control is indeed as individual as your needs.

Note: Not all functions shown are available on inital launch, but will gradually be implemented and made available. For specifics, please contact us and we are more than happy to help.



„Strong, flexible and always on the cutting edge - I measure my hardware by the same standards.“

Your personal i³ Control building kit

The heart of the system - A machine controller for motion, logic, kinematics, safety and even more. You can tickle out everything you need from our i³ MC. Even if you don't yet know what challenges you'll face next year, our i³ MC is ready and just waiting for new tasks.

You like to have an overview of everything? Luckily, so do we! With i³ Data you can get all the relevant data, and probably even more, out of your application and do whatever you want with it. Analyze, process and react to it - go wild!

If i³ MC is the heart, then we have worked our way up to the brain with i³ Engineer. Here you can write programs and applications in the language that suits you. You can also take a rest and use function blocks that we have already prepared for you. And all this in cooperation with colleagues from all over the world.

With kinematics, things often get really exciting - and unfortunately also complicated. But not with us, because with i³ Kinematics we cover this area seamlessly thanks to integrated control for Delta, Scara and much more.

Are you in need of new functions? Do you need to control more axes tomorrow than you did three months ago? What was previously only possible with new hardware can now conveniently be brought into your machine with i³ Web. At any time in just a few minutes. This way you always have what you need - no more and no less.

With i³ Control you finally have control. Over your ideas and their implementation. Entirely according to your style. As individual as your needs.

„If I invest in something, I want it to add value for me in the future as well.“

i³ MC

One controller for motion, logic, robotics, safety, AC drives, HMI and network

Yaskawa Triton processor

3-core ARM processor with a clock speed of 1.26 GHz, an exclusive in-house development for our high demand on synchronous movement and compactness with lower power dissipation than other chips

Network communication

- OPC UA, EtherNet/IP, Modbus TCP, IO-Link, PROFINET RT (Control and I-Device)

Open programming

- IEC61131-3 with PLCopen function blocks, C#, C++, Python, MATLAB Simulink

Modular design

- Scalable performance on a real-time Linux system

Safety over EtherCAT

- FSoE network safety profile that meets SIL3 requirements

Network security

- Certification according to ISA/IEC 62443

„Automation is fun when the controller dances to my tune.“

i3 DATA

Real-time data acquisition, processing, communication and feedback

Dedicated data acquisition module

- Acquisition of all machine process data from one location
- Synchronous data acquisition for continuous monitoring
- Asynchronous data acquisition for data on demand
- Synchronized data from all axes and mechanisms in the machine

Real-time process improvement

- Analysis of machine and process data
- Adjustment of machine variables based on data analysis

„I know my way around C# - all the better that I will soon be able to program machines with it.“

i³ ENGINEER

Our new i³ Engineer development environment opens up countless new possibilities for the development of solutions. Designed for collaboration, it gives developers the freedom to develop function modules in the language of their choice.

Integrated Environment

- Logic programming with extensive PLC functionality
- Control of all Yaskawa and many third party devices
- Network configuration, diagnostics and security functions
- FSoE integrated

Open Programming

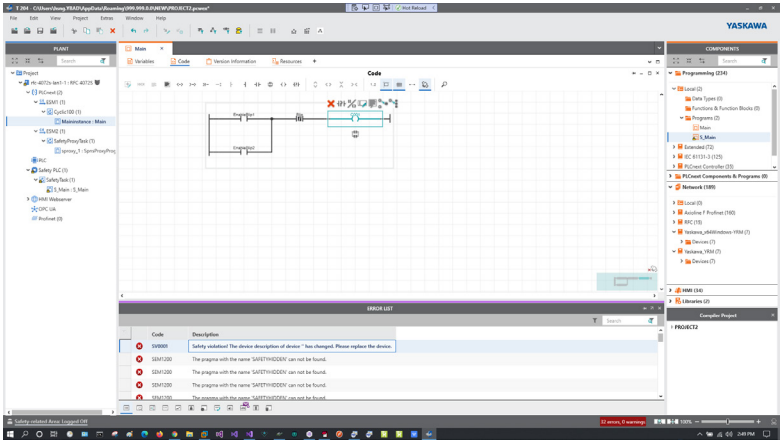
- IEC61131-3 Graphical, Structured Text, or SFC programming
- Create libraries with C#, C++, Python and MATLAB Simulink

Network security

- Device certificates and password protection
- Network security functions

Ready to collaborate

- Managed program access for multiple developers
- Online editing and version management



„For me, the shortest way to the goal is always the best.“

i³ KINEMATICS

Integrated control and safety for Delta, SCARA, 6-axis, Gantry and customer-specific mechanisms

A complete mechatronic continuum

Motion axes, standard mechanisms, robots and user-defined mechanisms run interchangeably under the same controller and application code

Familiar programming

Programming robots with ladder logic and function blocks, no proprietary robot programming language

Integrated control

Control all types of mechanisms with one software engineering tool using the same function blocks

Flexibility of the machine

Change the mechanism type with minimal changes to the application code

Future-proof

Easily upgrade to new mechanisms, migrate your machine IP as technology advances

Easy integration

All Yaskawa products can be easily integrated into the ecosystem

Scalable motion

Depending on the motion requirements, we can offer different solutions, from a single frequency converter in speed mode to high-end synchronized motion with 64 axes

Common handling

Programming of the motion devices is uniform, independent of the network and the motion

„Collaboration with colleagues all over the world is just part of it for me.“

i³ WEB

Webshop and App-Store for licences and libraries, service hotline, online platform

Worldwide connectivity

Easy web-based access from any location with internet connection, remotely change settings or update firmware

Reduced maintenance costs

Monitor variables, status, diagnostics and alarms from any web browser, download new programs to the controller without Yaskawa software, update firmware, monitor position, speed and torque of servo axes, live display and adjustment of I/O values

Flexible access

Connect via computer or mobile device

Secure access

https and password-based user login with multiple access levels

Web-based administration

Managed program access for multiple developers, online editing and version detection

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