UNITRONICS®

ONE

— INTEGRATED —

SOLUTION

for Control & Automation

The Power of One:
One Integrated Solution for Control & Automation

Building new machines for today's smart factories requires sophisticated control and automation that can only be delivered through multiple solutions and components – including a PLC, HMI, I/Os and motion components such as AC Servo systems and VFDs. As all components must be integrated, selecting the right combination is crucial to the efficiency and success of any project.

Risk. Multi-vendor Complexity is Risky

It's possible to source the various components from different suppliers. This allows flexibility in selecting each element according to specific criteria, but it almost always carries high costs in time and effort at every stage of the process.

This may be an attempt to lower costs, or you may want flexibility in selecting each element according to specific criteria. However, in practice, this approach generally costs you more in time, effort, and increased risk:

- Researching different products from multiple companies, tracking different offers, coordinating delivery schedules from different suppliers is difficult and takes time — and is prone to error.

- Compatibility. Ensuring compatibility, and later setting up communications and/or programming to integrate all components takes time — and again is prone to error.

- Support — when errors occur or integration issues arise, how do you identify the root cause of the problem? Which vendor do you call for support?

Select Smart & Reduce Risk. The Power of One

Unitronics' integrated solution for control and automation offers a better option. An easy way to avoid hassles, save time, and be confident that everything will work together exactly as you need it to, while still enjoying a wide choice of components and configurations.

Unitronics' all-in-one approach means dealing with only one vendor – which translates into less research time, simplified ordering, coordinated delivery, and a single point of contact for support. There's no legwork to find the source of a problem, and no finger-pointing between vendors.

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Time Saving

One Programming Environment

Single Point for Support
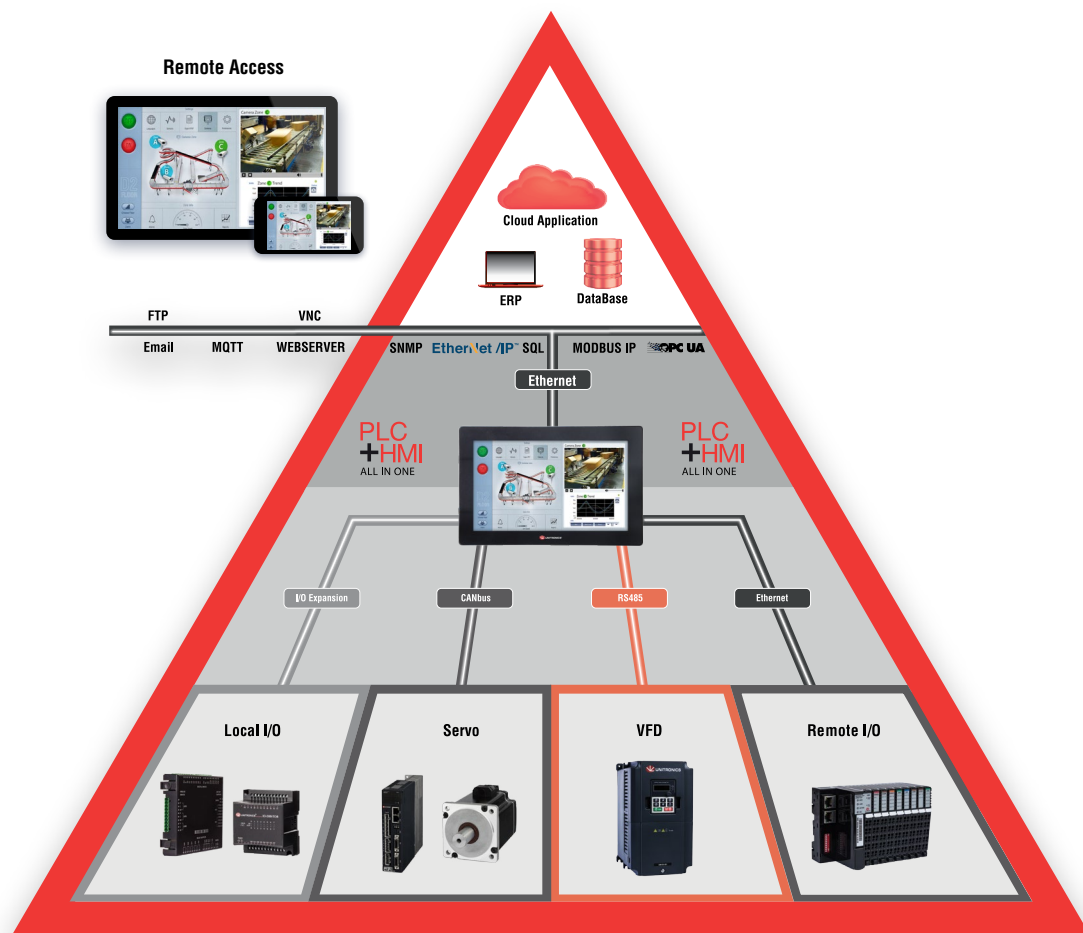
One Vendor

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Unitronics' One Integrated Solution

With one integrated solution comprising the PLC + HMI + I/O + Servo + VFD + related components, all programming and trouble-shooting can be done at once, in an All-in-One software environment.

You benefit from a shorter learning curve, simplified workflow and integration.

Large-scale, complex projects, simple stand-alone machines – from big to small, Unitronics' products offer simple solutions for all.

PLCs, PLC+ HMI Controllers: Complete Range

Unitronics' PLCs are field-proven in control applications worldwide and have won a number of industry awards. Easy to use, dynamic, and economical, Unitronics' controllers have been automating processes, systems, and stand-alone applications in diverse fields for over 30 years. With Unitronics' controllers, customers can better optimize their processes and improve control of site operation and consumption, thereby using less energy and contributing to a greener and sustainable world.

Four major PLC product series are available: UniStream®, Vision™ and Samba™. Each PLC series is designed to address application needs in a broad range of industry sectors, such as packaging, food and beverage processing, water treatment, oil and gas, pumps, material handling and many more.

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▪ PLC ▪ HMI ▪ I/O ▪ VFD ▪ SERVO ▪
▪ ALL-IN-ONE PROGRAMMING SOFTWARE ▪

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UniStream® PLC+HMI

Powerful programmable controllers that target machine applications and automation projects. They are available with HMI panels ranging from 5" to 15.6". In addition to high-performance features such as trends, auto-tuned PID, and multi-level password protection, UniStream controllers offer an embedded webserver and support the advanced communications protocols required by smart factories for Industry 4.0, including OPC UA, MQTT and SQL.

UniStream® PLC with Virtual HMI

Multi-function stand-alone PLCs that offer all of the functionality of the UniStream series; they store and run the program logic as well as the HMI user application within the PLC itself. This allows the application to be accessed and operated remotely via any mobile phone, PC, or remote display device.

Vision™

Programmable controllers (PLC + HMI) that range from palm-sized controllers with onboard I/O to large-screen controllers with snap-in I/O. A true workhorse, Vision controllers are reliable, versatile, and field-hardened – providing a cost-effective all-in-one controller for a wide range of applications.

Samba™

All-in-one PLC+HMI+I/Os that provide a highly cost-effective full-function controller, ideal for simple machines on a budget. They feature a full-color integrated touchscreen measuring 3.5", 4.3", or 7".

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I/Os: Full Range of Options

Unitronics I/O options include digital, analog, weight/pressure, high-speed, and temperature. In addition to built-in and local I/Os, the company produces two lines of Remote I/O modules, one running over CANbus, the other Ethernet-based. Both lines offer a broad variety of modules, each with a different I/O configuration.
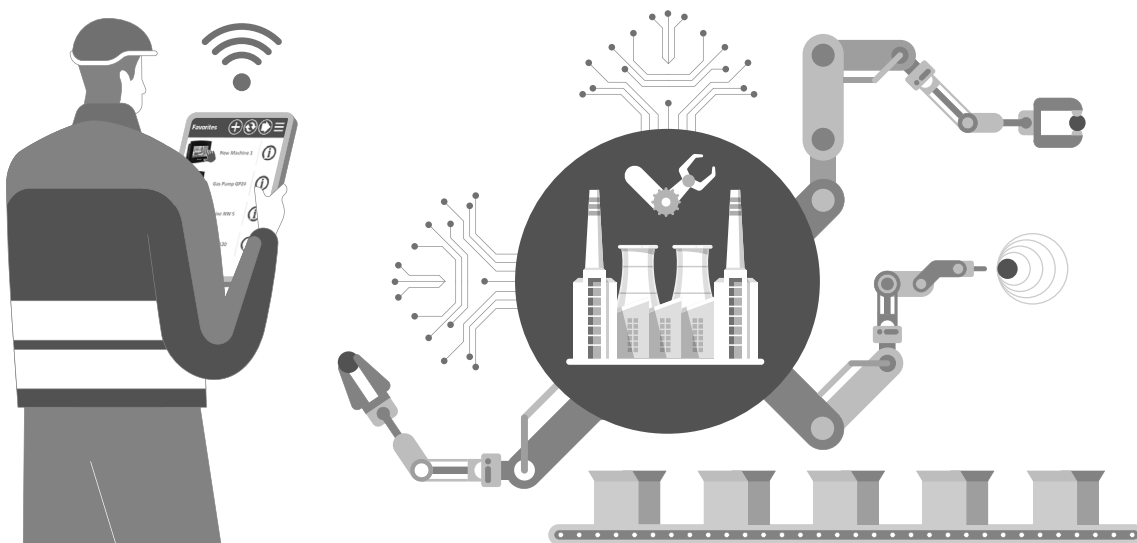

VFDs (Variable Frequency Drives)

Unitronics VFDs can be used as stand-alone products, or can be transparently integrated with Unitronics' applications. These VFDs offer:

- Wide power range, options for both single and three phase input voltage
- Built-in EMI filters
- Built-in braking units
- Heavy-duty overload capacity
- STO (safe torque off) functionality

You can operate, monitor, or debug VFDs via the controller's integrated HMI panel, or remotely using Unitronics' software via Unitronics' Remote Access, Web Server, or VNC connection.

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AC Servo Drives & Motors

Unitronics' AC Servo Drives & Motors (UMD) are transparently supported by UniStream and Vision controllers. The line includes 1 and 3-phase drives and motors, operating at a wide power range of 50W to 5,000W (0.06-6.7 HP) to suit any machine size, with robust, high-resolution built-in serial encoders (absolute: 23-bit, incremental: 20-bit), IP65.
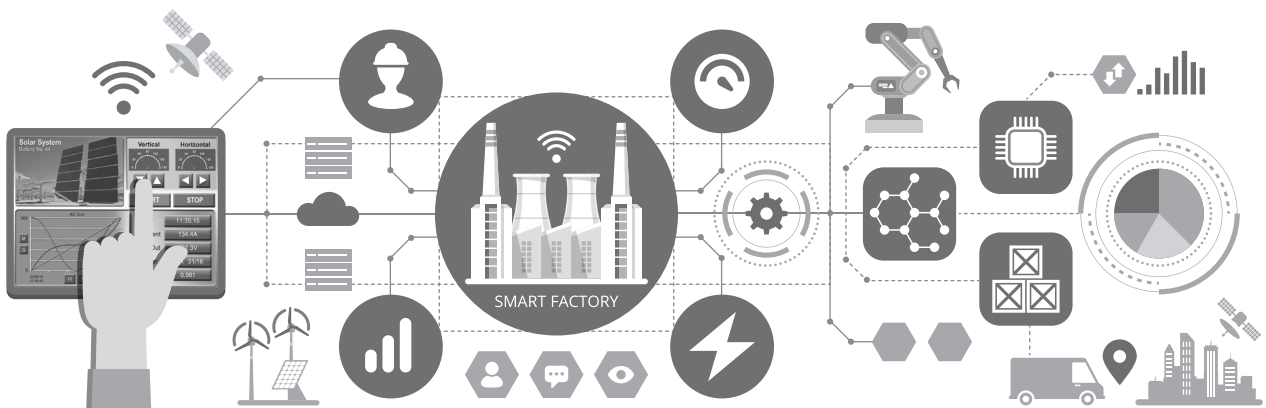
Unitronics highly innovative approach, Servo Made Simple, greatly simplifies motion application programming, and brings a number of advantages:

• One software for all project needs: Set up and program PLC, HMI, Servo, VFD, and I/O—no need to struggle with multiple software tools to build an application with up to 8 axes

• Automatic communication setup: Absolutely seamless

• Minimal room for error: UniLogic software automatically analyzes mechanical properties and recommends safe values for the user application

The UniStream platform offers additional benefits:

• No coding needed: Ready-Made Motion code, provided with every purchase, enables Unitronics' customers to test their completed system; this code can be opened and adapted to other applications via PLCopen standard functions

• Diagnostics: UniLogic includes a built-in powerful, high-speed scope to view servo run-time performance

• Tune the system: Using only one single parameter

• Embedded Diagnostic tools: No PC needed. Use Via an HMI panel – or a virtual HMI screen on their mobile device users can:

   – Set motion parameters

   – Monitor Axis behavior and I/Os

   – Execute movements, such as Point-to-Point, Jog, and Homing

All-in-One Programming Software

- **Setup, Configure, Program, and Commission All Hardware:** PLCs, HMIs, AC Servos, VFD, I/O → In one simple environment

- **Control Application Programming:** Drag & Drop Ladder, develop your PLC, HMI, VFD, and Servo applications in one programming environment

- **Advanced HMI Design:** Full library of Drag & Drop quality images, plus widgets for Trends, Gauges, and much more

- **Communications:**

  – Transparent communications between all Unitronics hardware components

  – All industrial fieldbus and advanced protocols → Simple to configure and implement

  – Build your own protocol → Communicate with any third-party device

- **Complex Tasks Made Easy:** Auto-tuned PID, data-logging and file management tools, Recipes, Alarms, multi-language support, multi-level passwords and more

UniLogic for UniStream brings added value. In addition to easily implemented Industry 4.0 protocols such as SNMP, FTP, e-mail, SMS, GPRS/GSM, Remote Access via VNC Client / built-in Webserver, OPC UA, SQL & MQTT, users benefit from the features listed below.

Remote Access from Anywhere, at Anytime

Design Unique HMI Displays – Stream Video, Audio, PDF

Build-it-Once, then Reuse – The Ultimate Time Saver

Languages – from Italian to Chinese at the Touch of a Button

Built-in Alarms – Easily Boost Application Safety

Communications – Configuration not Programming

Communication via Configuration

Power Data Tools – Data Sampler, Data Tables, Recipes, SQL

Web Server: Web Pages – No HMTL Required

MQTT, SQL, OPC UA

Structs – Tag Database on Steroids

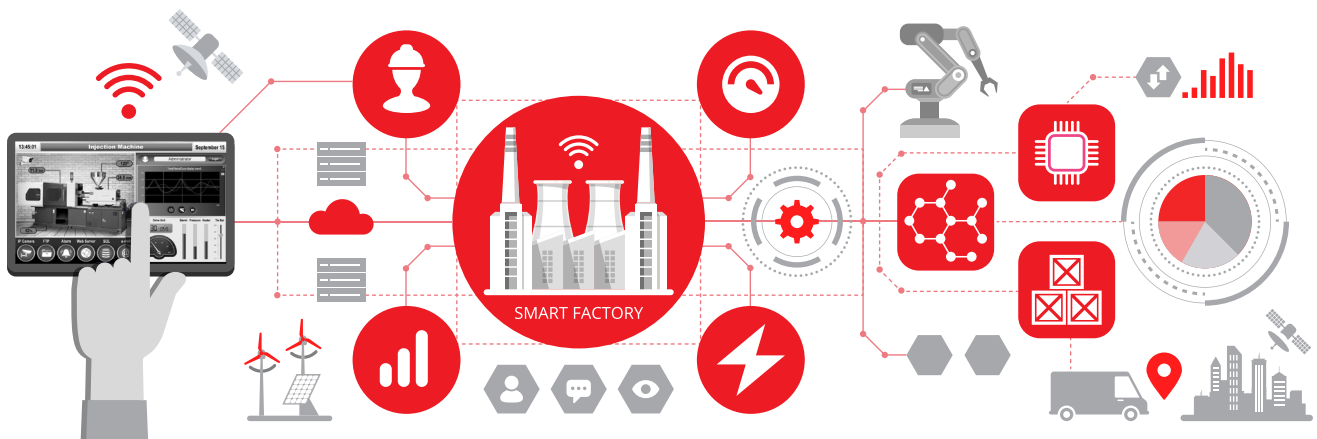**Speed Ladder + "C" Power** – Program C code with the built-in editor

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Communications

Broad communication support is a major benefit of Unitronics control products:

• Transparent Communications: When you use Unitronics products – PLC, HMI, VFD, Servo – all devices communicate – no fuss, no fail

• Fieldbus: Built-in support for major serial, CANbus, and Ethernet protocols

• "Protocol Function": All Unitronics controllers offer a build-your-own-protocol function, that allows you to support any serial, CANbus, or Ethernet protocol – a true advantage when you need to integrate with an existing installation or retrofit machine

• Supporting: Industry 4.0, IIoT, OT to IT, and more

In today's production environments, OT and IT are no longer distinct domains. Even if your customers are not yet leveraging inter-device and cloud connectivity for production monitoring, predictive maintenance and big-data analytics, you can be sure they will soon be.

This means that the applications you build today should be ready to support Industry 4.0 and IIoT (Industrial Internet of Things). As an OEM or integrator, it's now a vital requirement to ensure the future of your business. Unitronics' products support MQTT, VNC, FTP, OPC UA, web server, email, text messaging and SQL, enabling the data connectivity that is vital for Industry 4.0 and IIoT. With this one integrated solution, you are well-positioned to meet the needs of connected production floor, today and tomorrow.

SMART FACTORY

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The Bottom Line: Fast & Easy

No matter your industry, Unitronics' integrated solution for control and automation offers the best of two worlds: broad choice and flexibility in choosing solution components together with the simplicity and time-savings of an all-inclusive, single-vendor solution.

Unitronics' customers benefit from a broad range of PLCs. From micro-PLC + HMI devices for simple machine control, to complex controllers with advanced functions, a variety of onboard IOs, and multiple communication options, including support for Industry 4.0 and IIOT technologies.

The addition of motion control as part of Unitronics' One Integrated Solution simplifies workflows by enabling you to obtain AC Servos, VFDs, PLCs, and HMIs from a single trusted supplier, program them using one software environment, and receive support from the same team throughout your project.
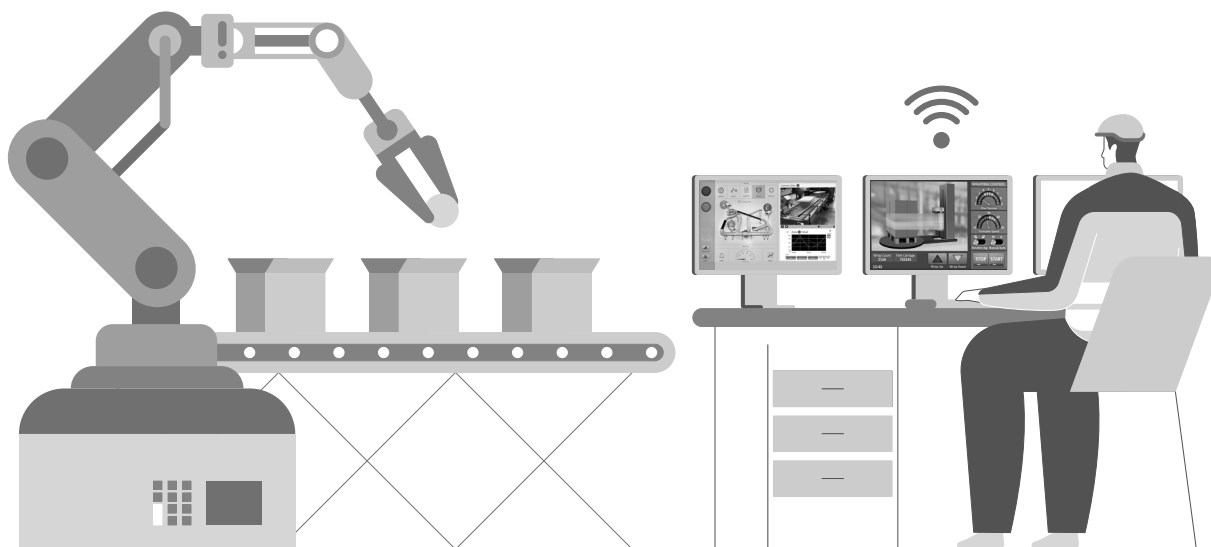
Unitronics' standard policy of customer care means that there are no hidden costs and no tiers. All software, utilities, and support – including membership in Unitronics' Community Forum – are provided at no additional charge.
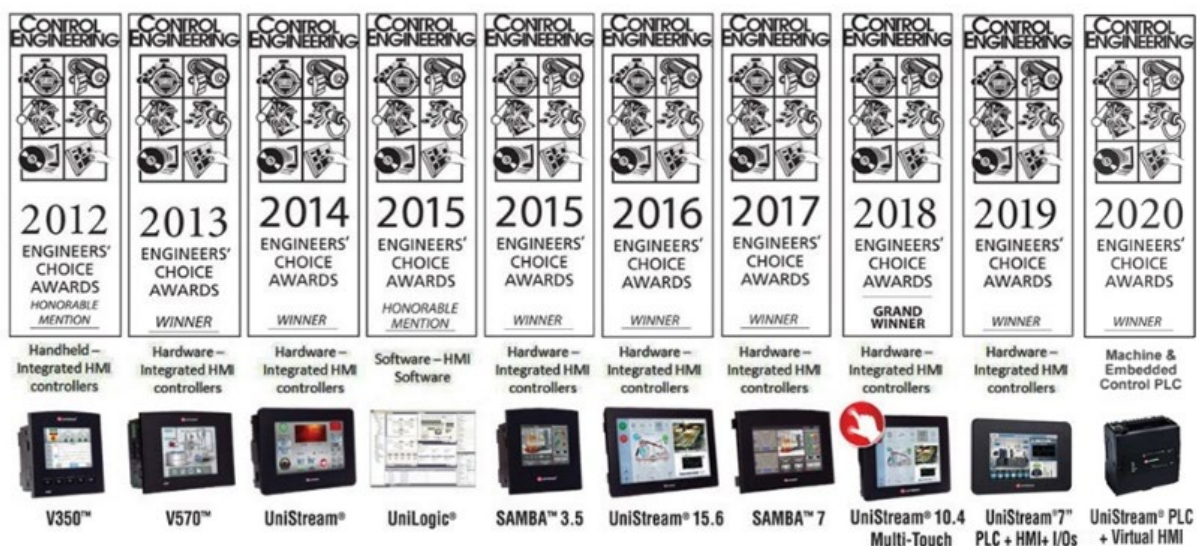
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Unitronics Benefits

• Full Product Range: PLC + HMI controllers, I/Os, AC Servos, and VFDs to meet all application needs

• All-in-One Integrated Software: Configure and program PLC, HMI, AC Servos, VFD, and all other components in one easy and powerful environment

• Industry 4.0: SNMP, FTP, e-mail, SMS, GPRS/GSM, Remote Access via VNC Client / built-in Webserver, OPC UA, SQL & MQTT

  – Rich Features: Auto-tuned PID, data logging, Recipes, HMI Trends & Gauges, Alarms, multi-level passwords, multi-language support, industrial fieldbuses such as: EtherCAT, Ethernet/IP, Modbus TCP and RTU, CANopen and more

• Proven Products: Over 1 million installations in diverse fields, worldwide

• Efficient Energy Control: Improved control of operational efficiency, reducing energy usage and improve sustainability

• Customer Care: All software, utilities and world-class technical support—at no additional charge

• Customized Solutions: Products can be tailored-made according to customer's specifications

Unitronics is an award-winning market leader that has earned the respect and admiration of industry experts and customers around the world, and is the clear choice for innovation, quality and service.

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