

AUTOMATIONDIRECT.com

Programmable Logic Controllers (PLC)



Up-to-date price list:
www.automationdirect.com/pricelist

FREE Technical Support:
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At AutomationDirect.com we have the PLCs you need at the prices you want.

Regardless of your project or system needs, AutomationDirect has a PLC to match your specs and your budget. We have partnered with three well-established companies, our federation partners, to manufacture our own PLC brands that provide low-cost, reliable control solutions. We also carry name brand controllers from LS Electric, a well-known name in the motion control industry. So whether you're building a simple process or a complex machine, you can count on us for affordable PLCs you can rely on.

To learn more about our PLC offering as a whole, check out the PLC FAQs on the next page or skip to the specifics for each controller family by clicking a link below.



GO TO:
AutomationDirect Federation Partner PLCs
Starting at \$97.00

GO TO:
LS Electric PLCs by AutomationDirect
Starting at \$329.00

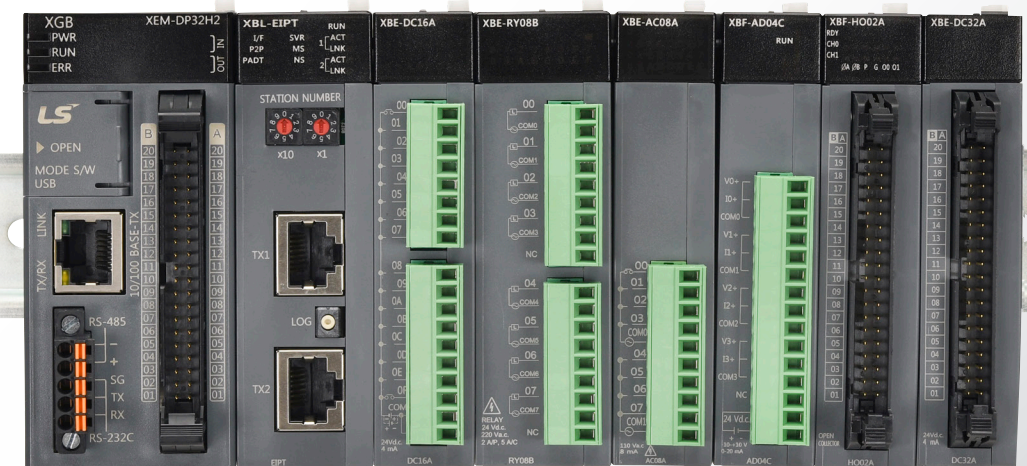
Automation Direct®

CLICK PLUS

Do more!

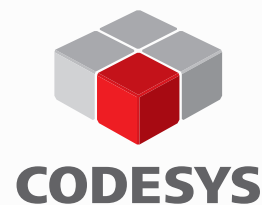
Productivity Series

LS XGB
PLC



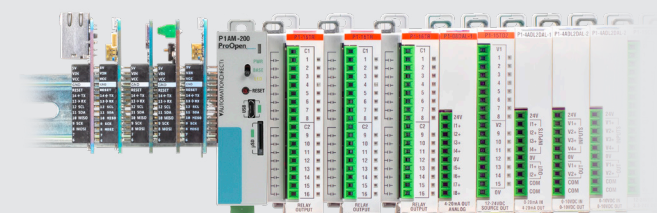
EtherCAT®

IEC 61131



Prefer CODESYS programming?
GO TO: ProductivityCODESYS
CPU priced at \$534.00

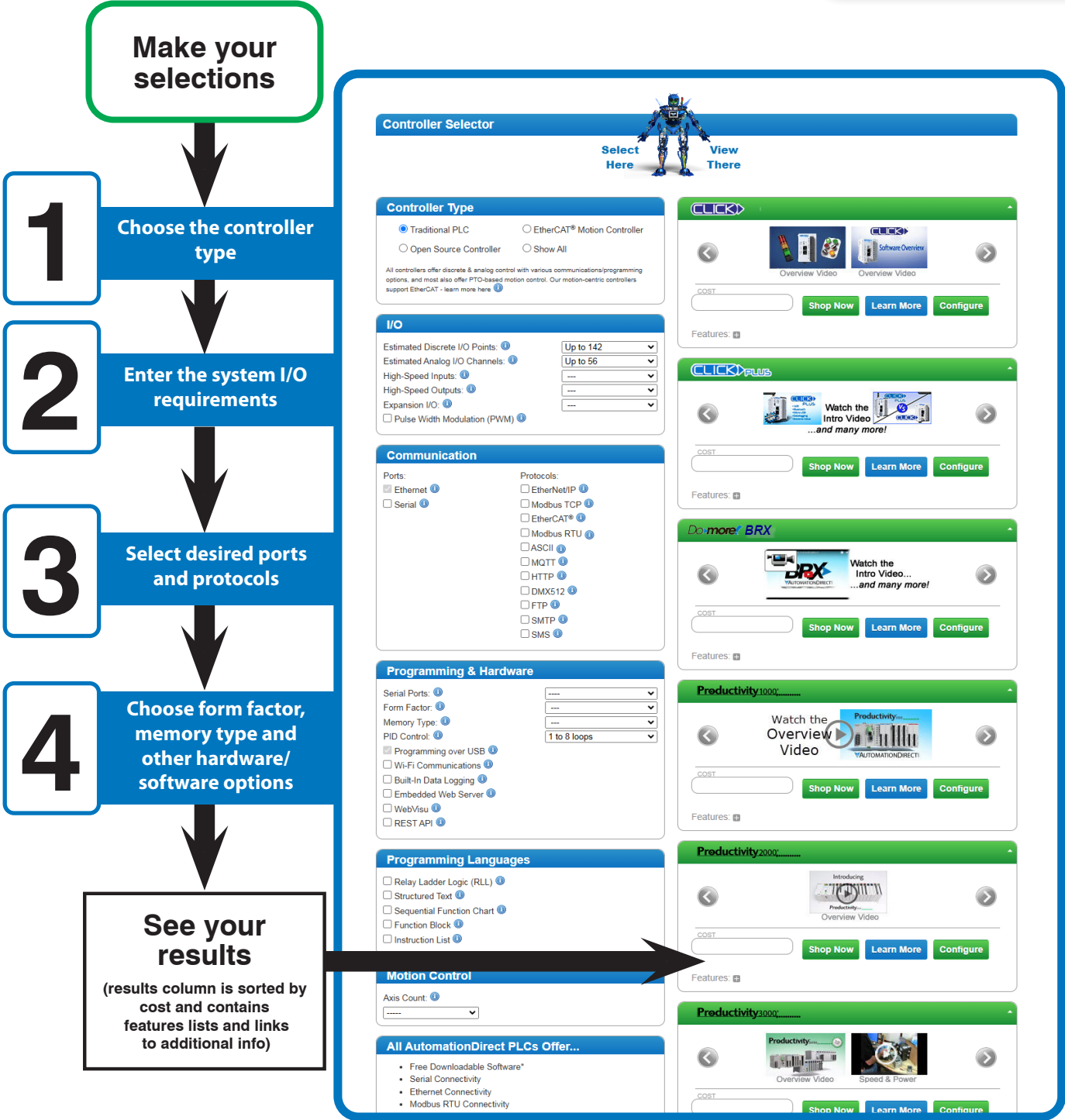
Looking for industrial open-source control?
GO TO: Productivity Open
Starting at \$69.00



In a hurry? Find the PLC you need quickly with our interactive PLC selector tool.

When it comes to deciding which one of our PLCs is the one for your application, we want to help. Our online interactive PLC selector tool can help get you on the right path to the right PLC. Simply choose the controller type and amount of I/O, the type of communication, and any hardware or software requirements. The tool will then display the suitable PLC families for your selections, along with overview videos, cost comparisons, and feature listings. Look for the “Interactive PLC Selector” button on our homepage or click the box to the right to get started.

And don’t forget, our tech support group is available at 1(800) 633-0405 to answer any questions you may have about the capabilities of our many PLC products.



- Why do you have so many different PLC options?
- Is your newest PLC the latest and greatest?
- Do you manufacture your PLCs in house?
- Do your PLCs offer IEC 61131-3 programming languages?
- What is the long-term plan for your PLC families?

PLC FAQs

Why do you have so many different PLC options?

Easy - customer satisfaction. We offer many PLC options so we can satisfy as many customers, all with different wants and needs, as possible. Each PLC family offers different benefits/capabilities and they are all fully backed by the companies we partner with. It is important to realize that these companies are competing for your PLC dollar and are continually striving to make their products better and more affordable.

Is your newest PLC the latest and greatest?

Each PLC family offers a different approach to hardware/software functionality with their own value proposition, product management team, and primary supplier. The product roadmaps for these PLCs are completely independent of each other and are not coordinated in any way. These families are constantly updated and will continue to have new additions for many different reasons. Some of the new additions will be technology advancements while others will be to fill out the PLC line with more options; a new form factor or lower priced model. Therefore, a new PLC added to one family doesn't mean it is the latest and greatest for all of our PLCs.

Do you manufacture your PLCs in house?

We do not manufacture PLC hardware in house. However, as mentioned previously, we have partnered with three great companies that specialize in manufacturing PLC hardware for our AutomationDirect Federation PLCs. We work very closely with these companies to ensure these PLCs exceed our customers' expectations in both quality and cost. We have also brought in a third party manufacturer, LS Electric, to offer our customers even more PLC options, especially in the advanced motion control arena.

Do your PLCs offer IEC 61131-3 programming languages?

Our PLC selection is constantly expanding and while ladder logic is still one of the primary programming methods used in industry, we do offer a few controllers that can be programmed with the other IEC languages. The LS Electric XGB PLC offers many of the languages included in the IEC standard and the ProductivityCODESYS controller offers full IEC 61131-3 programming using the CODESYS development system.

What is the long-term plan for your PLC families?

We recognize the investment our customers make when selecting any of our PLCs for their control systems. As such, we will continue to do our best to protect that investment by keeping our PLC platforms in production for as long as we can. As we roll out enhancements for existing PLCs or even entirely new PLC platforms, these initiatives are in addition to and not instead of our existing PLC platforms.

We recognize many of our customers have invested in the legacy DirectLOGIC family for decades, so our focus for the DirectLOGIC PLCs is to keep them in production for as long as possible. We are not planning to add any new features to the DirectLOGIC product family, our entire focus is keeping the DL05/06/205/405 PLCs available for as long as possible. Our newer, more modern PLC families – CLICK PLCs, Productivity Series PLCs, Do-more/BRX Series PLCs and LS Electric PLCs – will continue to receive ongoing investments to greatly expand features in hardware, firmware, and software.

AutomationDirect Federation Partner PLC Families



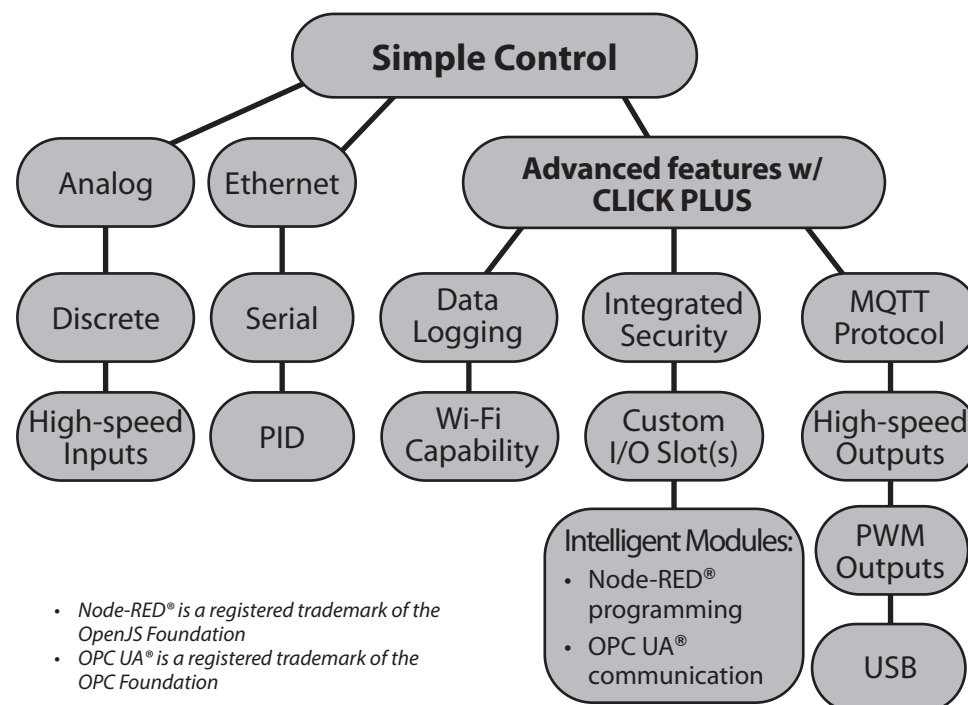
CLICK **CLICK PLUS**



CLICK Basic PLC Unit starting at **\$97.00**
CLICK PLUS PLC CPU starting at **\$102.00**

Free Programming Software & Tech Support

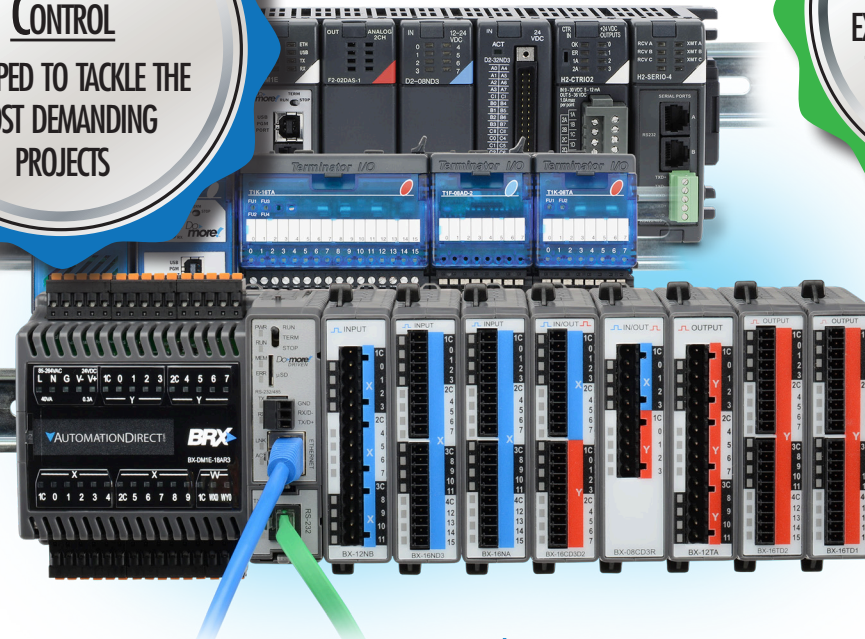
The CLICK/CLICK PLUS PLC family offers extreme value for everyday applications. The compact size and easy programming make CLICK PLCs great for small applications and beginner projects. The CLICK PLUS series adds modern features to the CLICK PLC line with Wi-Fi capability, motion control, intelligent modules, data logging, and more.



• Node-RED® is a registered trademark of the OpenJS Foundation
• OPC UA® is a registered trademark of the OPC Foundation



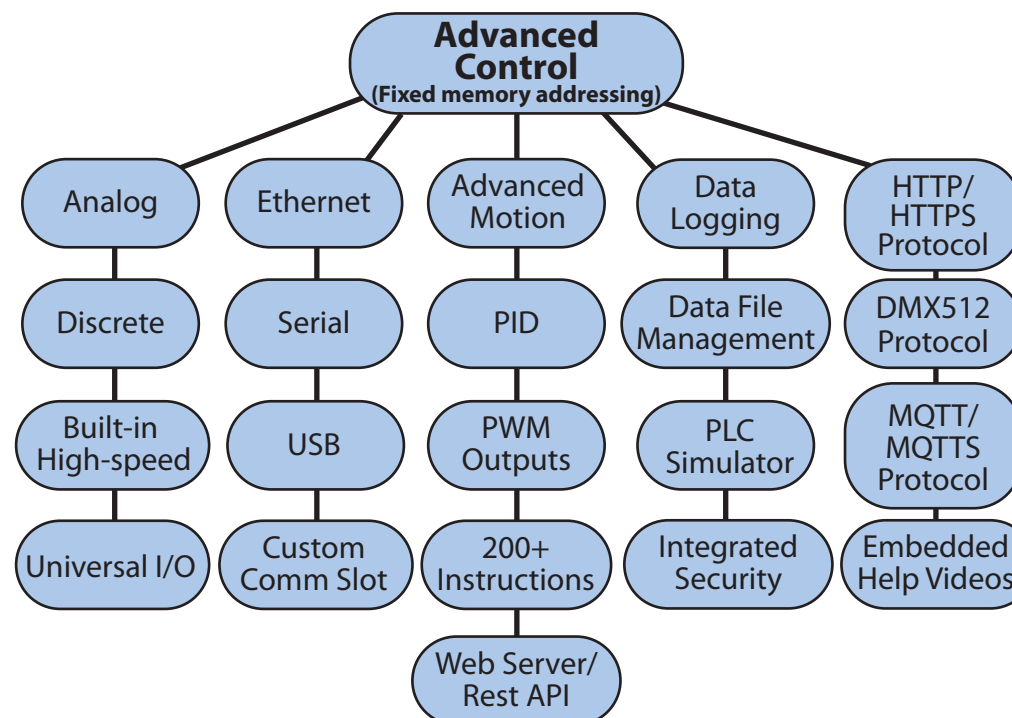
Do-more



Do-more PLCs starting at **\$213.00**

Free Programming Software & Tech Support

The Do-more PLC family is determined to get it done. This programming powerhouse has one of the most advanced instruction sets in the market and many other features that allow it to stand strong against any challenge.



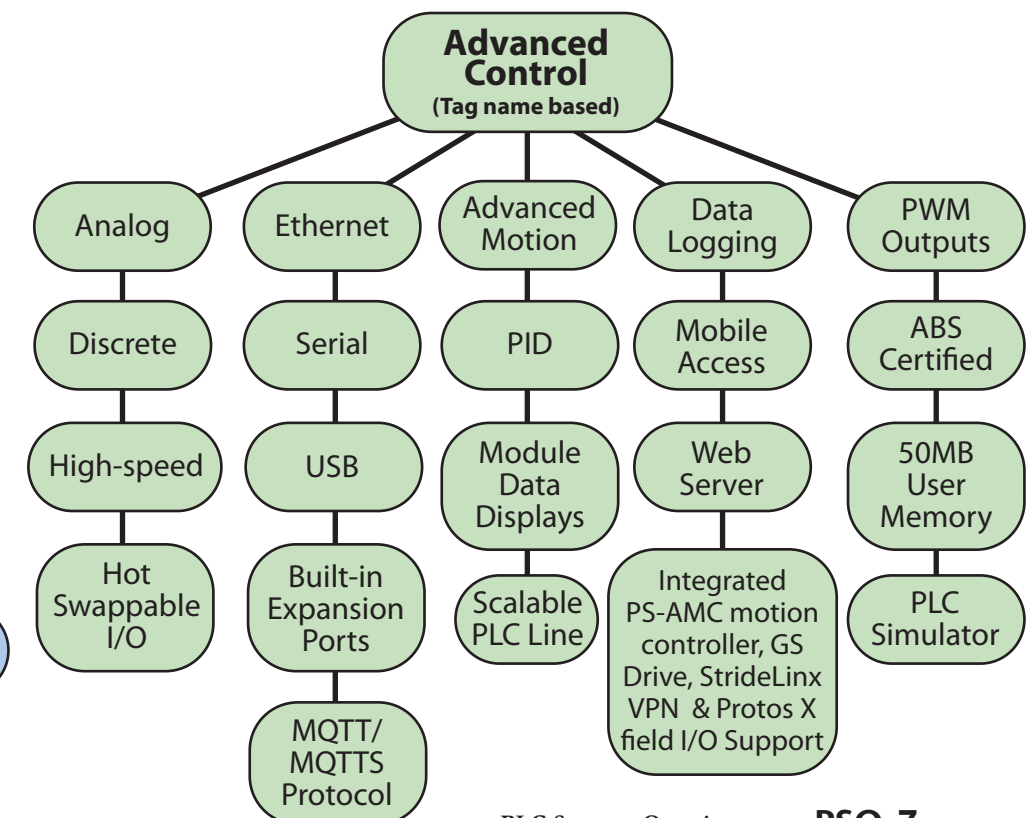
Productivity Series



Productivity Series CPU starting at **\$237.00**

Free Programming Software & Tech Support

The Productivity PLC family offers the utmost versatility in both hardware and software. This scalable PLC line will easily conform to large systems with tons of I/O or smaller/segmented systems using limited I/O. With tag name programming, device integration that includes PS-AMC motion controllers, GS drives, Protos X field I/O and others, and a few WOW factors, like analog data displays, Productivity PLCs are a perfect fit for almost any application.



Working together to give you even more!

Industrial automation needs vary from customer to customer or job site to job site. From the smallest simplest machine to the most complex plant-wide operation, we want the opportunity to serve each and every one. In order to meet the demands of this wide market while at the same time guaranteeing the utmost satisfaction, we've partnered with three well-respected companies in the automation technology field to manufacture our own PLC product lines. Each company fully supports and is constantly improving their PLC offerings to not only meet ever-changing industry demands but also exceed customer expectations.

So, if you've never considered AutomationDirect for your controller needs, let us show you how price and performance can work hand-in-hand for a better customer experience.



Recent Engineering Awards

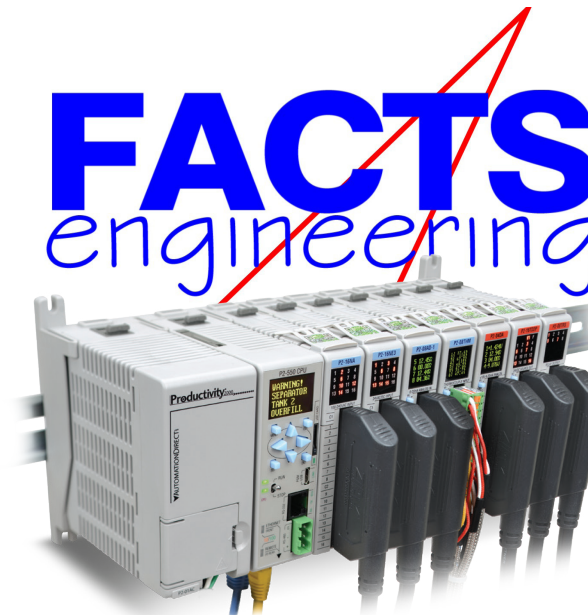
(click logo to read more)



JONESBOROUGH, TN

Host Engineering was founded in 1992 with the mission to create DirectSOFT, the first Window-based micro PLC programming package, which supported the 1994 launch of PLCDirect, now AutomationDirect.com. Host Engineering and AutomationDirect have partnered to develop and offer enhanced PLC programming software, data servers, Ethernet communications, and high-speed motion I/O products. In 2012, the powerful and agile Do-more! PLC control technology was launched and now, this partnership has produced the Do-more! based BRX PLC platform with a multitude of new features that are both innovative and affordable.

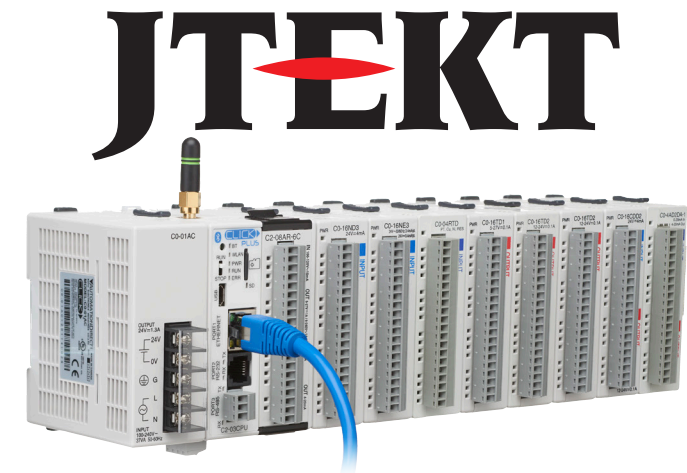
Do-more!



NEW PORT RICHEY, FL

Founded in 1987, FACTS Engineering is an award-winning company and exclusive supplier for AutomationDirect. FACTS offers more than 500 products, including many PLC modules and pre-wired cables, power, and signal conditioning products. FACTS often collaborates with AutomationDirect on new products, such as ProductivityOpen, ProductivityCODESYS, and PS-AMC motion controllers, that are designed to exceed customer needs.

Productivity Series



TOKYO, JAPAN

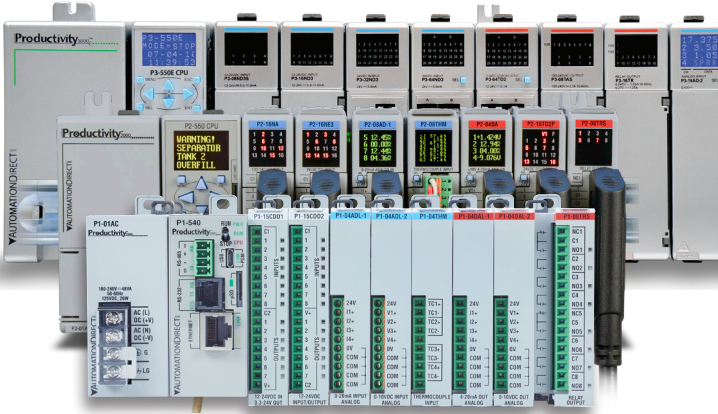
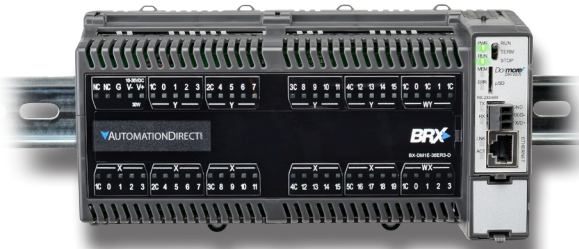
The multi-billion dollar JTEKT group of companies primarily provides components to automotive manufacturers such as Toyota. With over 60 years of engineering and manufacturing expertise, JTEKT is known around the world for creating products that offer the best combination of reliability, ease of use, features, and price. In 1994, PLCDirect was established as a subsidiary of JTEKT. This was the first entity within the JTEKT group to concentrate solely on the micro PLC market. Since then, many JTEKT PLC versions have been introduced – the DL205, DL305, and DL405, along with the eventual creation of the extremely practical CLICK/CLICK PLUS PLC lines.

CLICK PLUS

“Which AutomationDirect Federation PLC is best?”

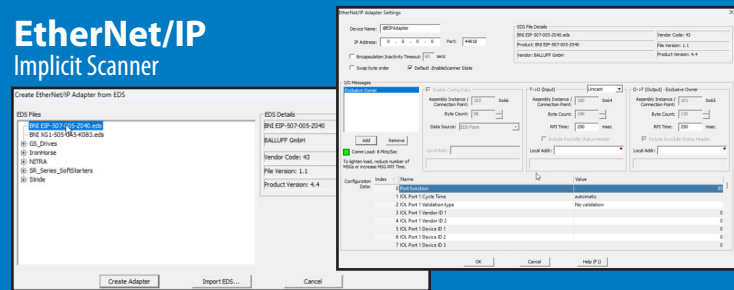
At AutomationDirect, we strive to provide an affordable solution for anyone who needs practical control systems. Therefore, we have quite a few options available. This abundance can sometimes cause confusion and we often hear, “But which PLC is the best?” That is a hard question to answer since everyone has different expectations and every job has different requirements.

All of our evolving PLC families have their benefits and offer different approaches. The following pages will try to assist you with your selection by highlighting the strengths of each PLC family, but ultimately the decision is a personal one and lies with you.



Recent Federation PLC Enhancements/Additions

EtherNet/IP Implicit Scanner



With the Implicit Scanner addition to the Do-more Designer software, BRX PLC users can now take full advantage of this popular protocol. The Implicit Scanner feature allows the Do-more BRX platform to easily integrate with up to 32 EtherNet/IP capable PLCs and field devices. An embedded EDS file library is also available that offers an easy way to upload, store, and manage EDS files. These files are organized in a simple-to-use drop-down menu and new devices can be easily added to the library; AutomationDirect.com EtherNet/IP EDS files are preloaded in the library for convenience.



New P3-622 CPU for the Productivity3000 PLC series. This CPU is a next generation CPU with improved processing that allows users to take advantage of new software features that are currently unavailable for older CPUs. Some of these features include variable comms instructions like MBUS, CSI, and NETW, access to systems settings via the ASP instruction, and secure MQTTS. The P3-622 features 7 communication ports with (2) Ethernet, (2) software-configurable serial ports, and (3) USB ports for programming, local expansion, and data logging to external devices.



Several new option slot modules have been added for the CLICK PLUS PLC line:

- C2-NRED offers Node-RED® programming for advanced IIoT applications
- C2-OPCUA for easy integration with existing OPC UA® networks
- C2-14TTL for low-voltage (~5VDC), high-speed motion control signals

Also added is the new C0-04POT 4-channel potentiometer analog simulator input module which can be used with CLICK or CLICK PLUS CPUs.



Common "care-about" for AutomationDirect Federation PLCs

Feature	Do-more BRX	Productivity2000	CLICK PLUS
PID	✓ with trending and auto-tuning	✓ with trending and auto-tuning	✓ with trending and auto-tuning
Max PID Loops	Only limited by memory	Only limited by memory	8 loops
Built-in Communications Ports	Up to 3 built in (including POM interchangeable port): RS232/485 serial port; Optional Ethernet port; POM Slot port options: USB, RS232, RS232 w/ Flow Control, RS422, RS485 or Ethernet	5 built in: USB, RS-232, RS-485, Ethernet, Remote I/O with integrated GS drives, remote slaves and Protos X field I/O systems; P2-622 CPU offers ability to use Remote I/O port for general-purpose Ethernet	Up to 9 built in (including 2 C2-DCM option modules): Wi-Fi (antenna sold separately), USB, RS-232, RS-485 and Ethernet
Serial/Ethernet Communication Speeds	Ethernet: 10/100 Mbps Serial: up to 115.2k baud	Ethernet: 10/100 Mbps Serial: up to 115.2k baud	Ethernet: 10/100 Mbps Serial: up to 115.2k baud
Communications Protocols	Modbus RTU Master/Slave, Modbus TCP, TCP/IP, EtherNet/IP, MQTT/MQTTS, HTTP/HTTPS, FTP, SMTP, SNTP, DHCP, Ethernet remote I/O, K-sequence Slave	Modbus RTU Master/Slave, Modbus TCP, ASCII In/out, TCP/IP, UDP/IP EtherNet/IP, MQTT/MQTTS, Ethernet remote I/O, ProNET, Custom	MQTT, Modbus RTU Master/Slave, Modbus TCP, EtherNet/IP, ASCII In/out, OPC UA ¹ , HTTP/HTTPS ² , UDP ² , TCP ²
Email	✓ allows data file attachments	✓ allows data file attachments	✓
Data Displays	---	✓ CPU and analog modules	---
Data Logging	✓ 1MB Internal RAM + 32GB MicroSD option	✓ 32GB MicroSD option	✓ 32GB MicroSD option (Onboard SQLite database with additional support for remote databases like MS-SQL, Postgres, or Oracle) ²
Data File Management	✓ 12 specific instructions for file handling	---	✓ (Read/write using JavaScript ²)
Built-in Web Server/Mobile Access	✓ Web server	✓ Web server and mobile app	✓ Mobile apps for provisioning, monitoring, and control (Onboard Node.js webserver ²)
Max Local Discrete/Analog I/O	292 discrete I/O points and 134 analog channels	480 discrete I/O points 240 analog channels	156 discrete I/O points or 60 analog channels
Max Local High-speed I/O	146 high-speed I/O channels at up to 250kHz using built-in DC I/O and HSI01/2 modules or 64 channels at up to 2MHz with the HSI04	30 high-speed I/O channels at up to 1MHz using additional modules	8 inputs / 6 counters and 3 pulsed outputs at up to 100kHz using DC option slot I/O
Coordinated/Interpolated Motion Capability	✓ Coordinated	✓ Coordinated using PS-AMC	✓ Interpolated
Remote Expansion	Up to 247 remote I/O bases (using MBIO controller) and up to 32 Scanner/Client EtherNet/IP connections	Up to eight remote I/O base groups and up to 32 scanner/client Ethernet connections	---
Auto-configured I/O	✓	✓	✓
Integrated motion controller, VFD, VPN & field I/O support	---	✓	---
Max User Memory	1.89 MB	50 MB	16 KB
Programming Environment	Fixed memory addressing; ladder logic with fill-in-the-blank function blocks, stage sequencing	Tag name addressing; ladder logic with fill-in-the-blank function blocks (CODESYS option available ³)	Fixed memory addressing; ladder logic with fill-in-the-blank function blocks (Node-RED and JavaScript ²)
Ladder Logic Instruction Set	200+ instructions	80+ instructions	21 instructions (CLICK), 24 instructions (CLICK PLUS)
Structure Data Types	✓ user defined	✓ user defined	---
Data Arrays	1D	1D/2D	1D
Code Blocks	Programs/Subroutines/Tasks/Interrupts	Tasks	Subroutines/Interrupts
Project Simulator	✓	✓	---
Rest API	✓	---	✓ (Available via Node-RED ²)
Security	OS/Project/Communication	Project/Communication	Project/Communication

1. Requires C2-OPCUA option slot module
2. Requires C2-NRED option slot module
3. Requires P2CDS-622 CPU

CLICK PLCs are so simple and inexpensive...

For the latest prices, please check AutomationDirect.com.

For the latest prices, please check AutomationDirect.com.

AUTOMATIONDIRECT.COM

CLICK PLC
starting at
\$97.00
(C0-00DD1-D)



...you'll want to use them everywhere.

CLICK - The almost free PLC

The CLICK micro-brick PLC is one of the best PLC values in the industry. With basic models starting at just \$97.00 and FREE easy-to-use programming software, CLICK is by far the most practical PLC for the smallest of applications and the perfect tool for beginners.

"Have used this model Click in many small applications, and it has worked, reliably, for many years. We even talked some customers out of using "programmable relays" for they are not as versatile or as cost effective as this PLC."
Todd in ONTARIO, CA



CLICK PLC features:

- Stand-alone PLC units with built-in discrete or discrete/analog I/O
- Expandable with stackable I/O modules up to 142 discrete or 54 analog I/O points total
- Onboard communication (Ethernet and serial options)
- High-speed counter/timer support
- Micro size - approximately 2" (W) x 3" (H) x 3" (D)
- Removable terminal blocks for easy wiring
- Optional battery backup and real time clock/calendar
- FREE programming software with a simple but practical instruction set
- Easy PID for simple process control (Ethernet models only)

Learn more at: www.CLICKPLCs.com

SIMPLE CONTROL
WITH BIG FEATURES
FOR SMALL SYSTEMS

CLICK
PLUS

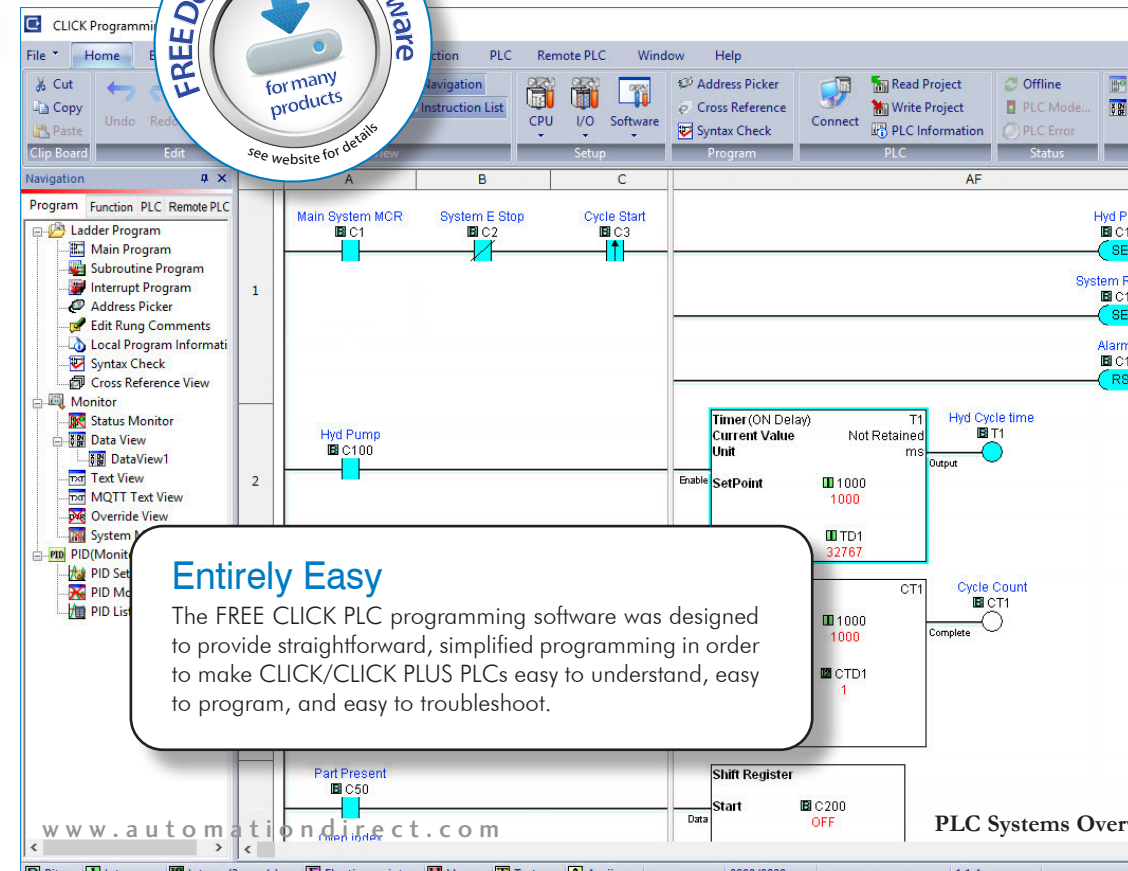
CLICK PLUS PLC features:

- All the great features of the original CLICK PLC
- Wired and wireless CPU options
- Data logging (microSD support)
- IIoT ready with MQTT protocol (Node-RED® available with option slot module)
- Modbus RTU, Modbus TCP and EtherNet/IP protocol support (OPC UA® available with option slot module)
- Wi-Fi with Bluetooth provisioning
- Micro USB programming port
- Option module slot(s) for custom I/O configurations in lieu of fixed I/O
- Simple 3-axis PTO/PWM motion control
- Enhanced security
- Secure email using TLS



1-Slot CLICK
PLUS PLC Unit
starting at
\$102.00
(C2-01CPU)

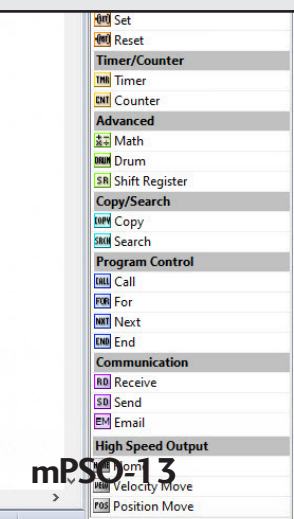
2-Slot CLICK
PLUS PLC Unit
starting at
\$143.00
(C2-01CPU-2)



Entirely Easy

The FREE CLICK PLC programming software was designed to provide straightforward, simplified programming in order to make CLICK/CLICK PLUS PLCs easy to understand, easy to program, and easy to troubleshoot.

EtherNet/IP
Modbus
MQTT
Node-RED
OPC UA



Most PLCs will do but only some will Do-more!

**HIGH-PERFORMANCE
CONTROL**
EQUIPPED TO TACKLE THE
MOST DEMANDING
PROJECTS



**Do-more
DRIVEN**

“The Do-More PLC is one of the best I have worked on in over 15 years. I easily had my program written and tested (using the simulation in the software!) in very little time. The instruction set is one of the best in the market...”
Garry in TRENTON, ON

Do-more than ever before.

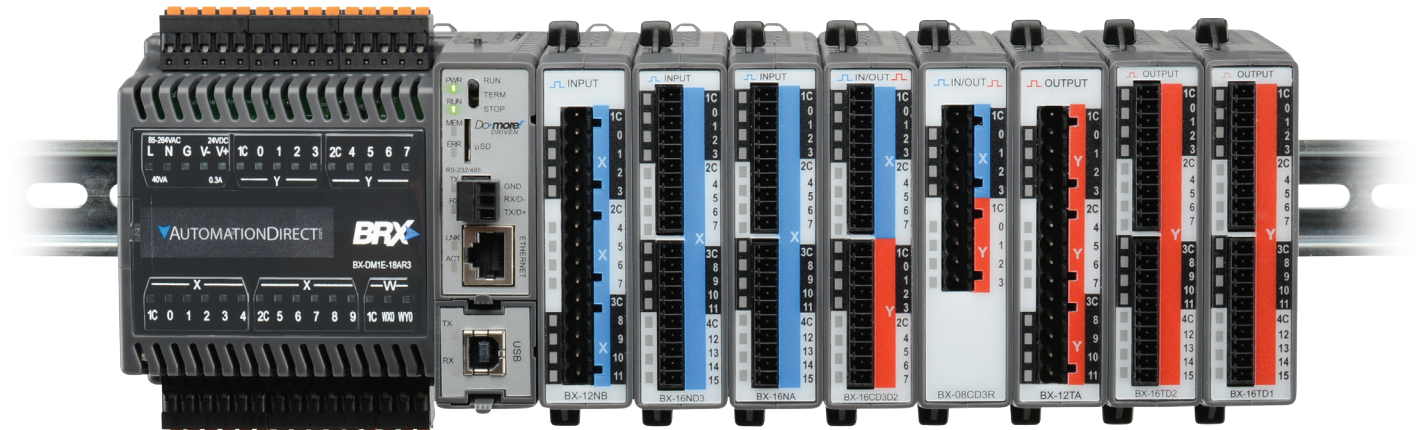
The ground-breaking Do-more! PLC control technology was developed to tackle both straightforward and complex applications in no time. This PLC series is loaded with hardware and software features (including the FREE simulator and Rest API functionality) that provide an extensive toolbox to satisfy even the most demanding projects.

One of the many benefits Do-more PLCs offer is device-centric programming. This programming method allows the user to configure software “devices” that act as liaisons between the ladder code and the hardware itself. For example, easily create a device to handle communication rates, timeouts, etc. all behind the scenes without any extra ladder programming. This feature along with the other efficiencies built into the Do-more platform, and the many tools it provides, will allow you to master any control challenge, big or small.

Full-featured hardware with FREE software that offers:

- Project simulator provides a head start on code verification
- Added efficiency with device-centric programming and easy top-down configurations
- User defined structure data types
- Support for tasks, programs, subroutines, and interrupt service routines (ISRs)
- Embedded video help
- Dashboard for easy navigation
- Complete program, data file and memory management
- Robust instruction set with custom motion profiles and Axis commands
- Modular, easily adaptable PID control loops
- Enhanced troubleshooting tools including Debug, Trend and PID views (with PID auto tune)
- Integrated project, communication and OS security
- Software selectable analog with auto-scaling
- Stage sequencing
- Seamless integration with high-level IT systems and IIoT/cloud platforms using MQTT(S), HTTP(S), FTP protocols and Rest API capability
- Much more...

Do-more! really packs a punch



Built using extensive software development expertise with customer feedback and decades of PLC hardware design knowledge, these PLCs deliver advanced functionality at a budget-friendly price.

Here are a few of the many features available with the Do-more family of PLCs:

- High-performance processors
- Internal RAM and optional external microSD data storage (on select models)
- Ethernet, serial, and USB communication available
- Onboard high-speed I/O with high-speed expansion I/O options for frequencies up to 2MHz (BRX series only)
- Hot-swappable communications port (BRX series only)
- FREE advanced programming software with powerful development tools



BRX

Do-more! BRX PLC platform

The latest Do-more edition, built exclusively for the Do-more engine. Available in four form factors with up to 36 I/O points built in.

This advanced controller comes with embedded data logging, versatile motion control, onboard serial communication with Ethernet option, an additional hot-swappable communications port, integrated discrete, high-speed, and high-performance analog I/O (select models), and numerous built-in connectivity options including MQTT(S), HTTP(S), FTP protocols, and more.

Stand-alone PLC units starting at \$213.00

Expandable I/O starting at \$56.00

Direct LOGIC **TERMINATOR**

Do-more! H2 and T1H PLC platforms

The H2 series CPU allows the power of Do-more to be deployed in existing DirectLOGIC 205 systems.

Add the compact T1H CPU to an installed Terminator I/O base to transform simple I/O into an enhanced, high-performance control system.



Find out all you need to know at: www.Do-morePLC.com

FREE software that's designed around YOU

Your success is our success

At AutomationDirect, we aren't interested in squeezing every dollar we can out of your PLC purchase. We would much rather give you what you need to be successful with our products and in turn keep you coming back. That's why we never charge a dime for the Do-more Designer programming software. This software was designed to not only be easy to use but to provide the tools you need to get the most out of your Do-more! PLCs. We want you to be satisfied with your purchase, and paying extra for software just isn't that satisfying!

Download the fully-functional (not a demo) software at www.Do-morePLC.com and try it out. You'll be surprised at how robust FREE can be.

Do-more!

DESIGNER

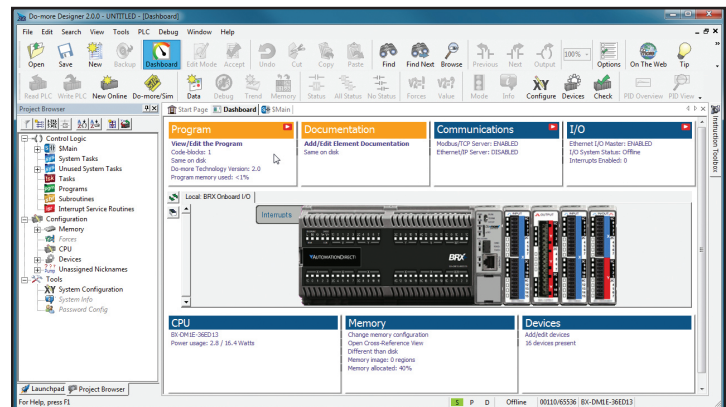


"The Do-more software is more user friendly than any I have ever used before. PID, Modbus communications, Filters etc... All very easy to use!"

SK in ENDERBY, BC

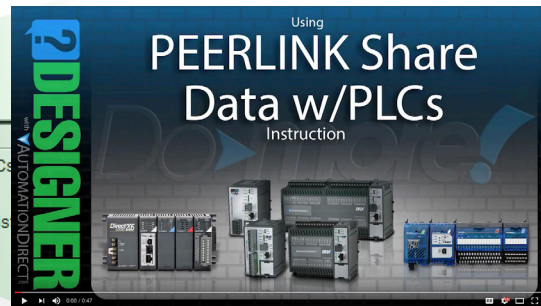
No Frustration Navigation

The Do-more Designer software is jam-packed with features and includes an intuitive software interface to make finding your way around easier than ever. The System Dashboard gives you real time project status such as enabled interrupts and used program memory percentage. It also provides interactive graphics and links that will take you directly to the feature you need to get the job done.



Let our instructional videos show you how

Enhanced video help is incorporated right into the instruction set of Do-more Designer. If you need assistance with an instruction, you can select the video icon (if available) to see a quick video explanation of how the instruction works and/or how it needs to be configured.



PEERLINK Share Data w/PLCs

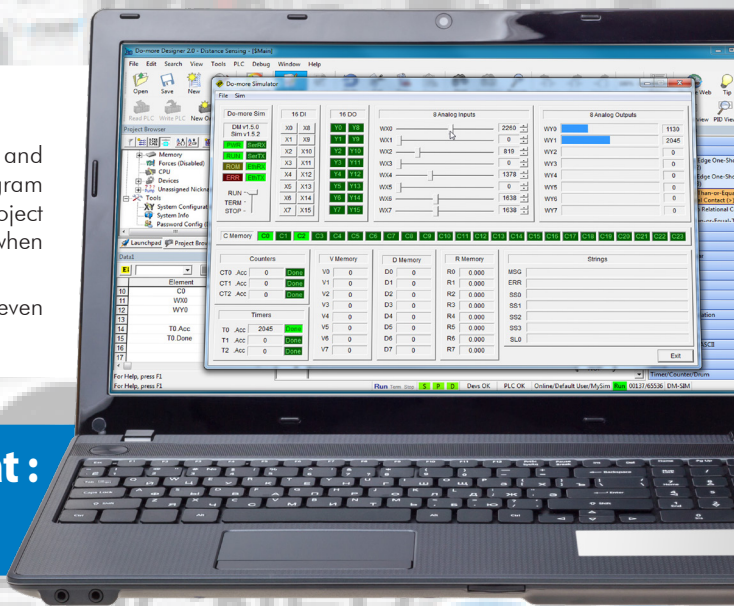
When enabled, PEERLINK publishes its designated PL memory blocks, and subscribes to all remotely published blocks. In the list below, check any PL memory block(s) this PLC publishes

<input checked="" type="checkbox"/> Block 0: PL0-PL15	<input type="checkbox"/> Block 8: PL128-PL143
<input checked="" type="checkbox"/> Block 1: PL16-PL31	<input type="checkbox"/> Block 9: PL144-PL159
<input checked="" type="checkbox"/> Block 2: PL32-PL47	<input type="checkbox"/> Block 10: PL160-PL175
<input type="checkbox"/> Block 3: PL48-PL63	<input checked="" type="checkbox"/> Block 11: PL176-PL191
<input type="checkbox"/> Block 4: PL64-PL79	<input checked="" type="checkbox"/> Block 12: PL192-PL207
<input type="checkbox"/> Block 5: PL80-PL95	<input type="checkbox"/> Block 13: PL208-PL223
<input checked="" type="checkbox"/> Block 6: PL96-PL111	<input type="checkbox"/> Block 14: PL224-PL239
<input type="checkbox"/> Block 7: PL112-PL127	<input type="checkbox"/> Block 15: PL240-PL255

Timesaving Project Simulator

The integrated simulator provides virtual inputs, outputs, and memory locations that you need to test your control program without the hardware connected. This can jump-start your project development on the front end and reduce unexpected errors when the system goes live.

Think about that - you can test your program design before even ordering the hardware!



See all that Do-more Designer has to offer at : www.Do-morePLC.com

Productivity PLCs - value engineered to perform



ProductivitySeries.....

Easily adapts to meet your needs

The Productivity family of PLCs is our most versatile family. In terms of hardware, Productivity offers three distinct form factors with two being rack-based and one being stackable. Each series offers different I/O capacities but all use the same programming software, allowing you to easily scale your control up or down depending on the application or machine build. The ProductivitySuite software provides versatile programming with tag name addressing that has no predefined memory structure, and offers convenient device integration for easy plug-and-play operation with our PS-AMC motion controllers, GS drives, Protos X field I/O, and StrideLinX VPNs.



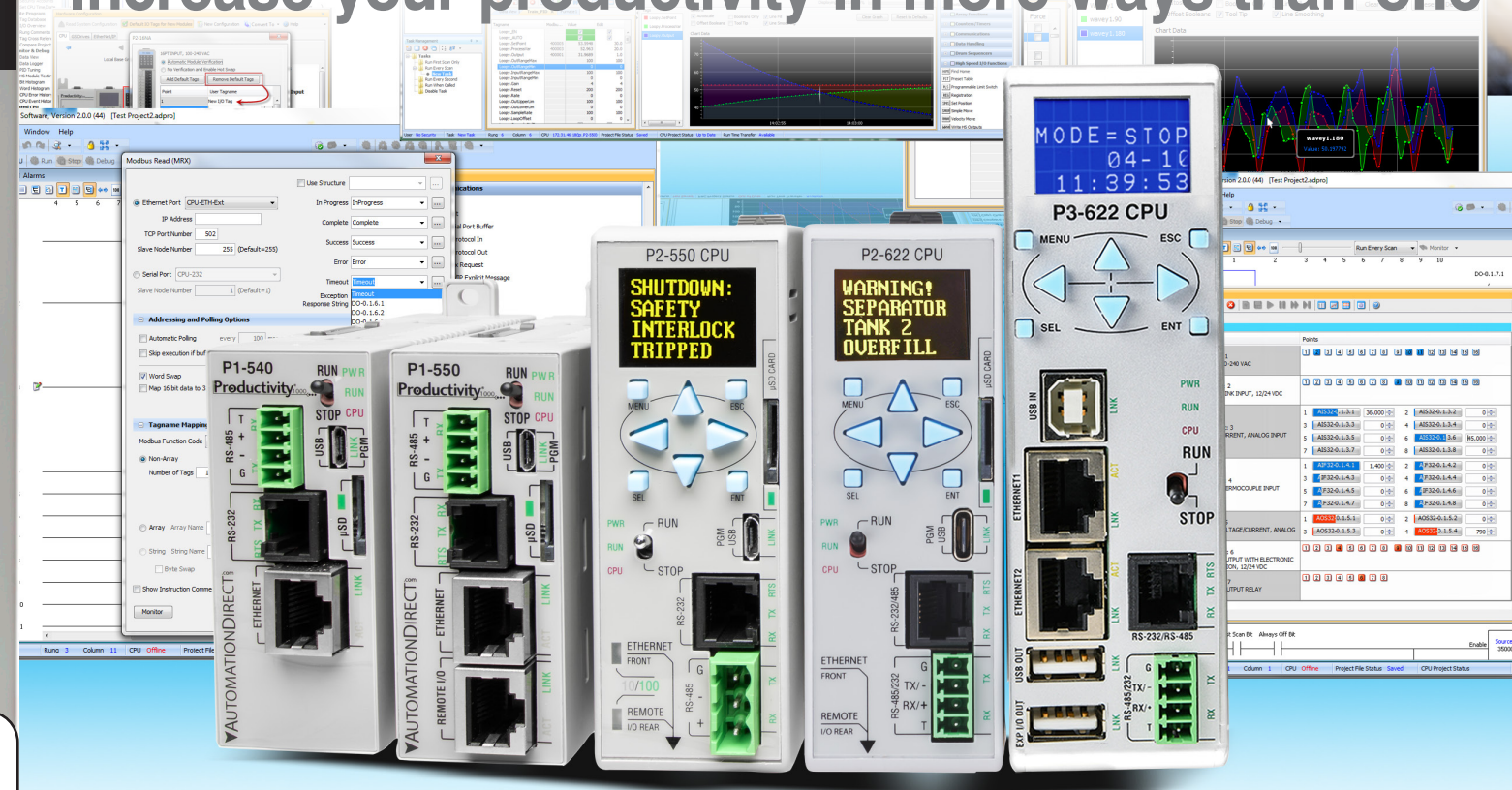
"We are an OEM, and in the past used the Allen-Bradley Compactlogix platform for our higher end equipment. We think we have found its replacement...The idea of a low cost controller, with all the available communication ports is a big plus for us. We really like, and prefer, the tag based programming utilized by this unit. We typically use drives to control conveyors running to our machinery, and the fact that the drive communication, and variables are on-board is fantastic... We think this one is a winner!"
Todd in ONTARIO, CA

Here are just some reasons to consider the Productivity series:

- Numerous onboard communication ports to meet in-house and on-site network requirements
- High-contrast OLED/LCD displays provide accurate process variable data as well as system diagnostics in real time - No meter required! (P2000/P3000 only)
- Convenient QR codes link customers to needed documents in an instant (P1000/P2000 only)
- Auto-discover local and remote PLC bases, Protos X field I/O, PS-AMC motion controllers and GS series drives
- Integrated StrideLinX VPN support
- Access to remote installations using integrated web server and/or mobile app
- EDS file support for easy EtherNet/IP device setup and an EDS file library to upload, store, and manage your EDS files
- Hot-swappable I/O for easy hardware changes on-the-fly (P2000/P3000 only)
- Scalable product offering from large control systems with thousands of I/O and high demand applications (speed, communications, expandability) to simple, low cost, space-saving stackable I/O platforms
- Project simulator provides a head start on code verification
- ABS certified for marine applications (select modules)



Increase your productivity in more ways than one

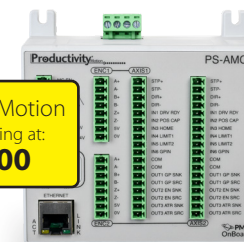


Whether you are a machine builder, systems integrator or anyone in need of an advanced, low-cost controls solution, the Productivity family of controllers can deliver. Built to go above and beyond, these controllers offer many outstanding features that provide easy programming, multiple networking solutions, and faster troubleshooting.

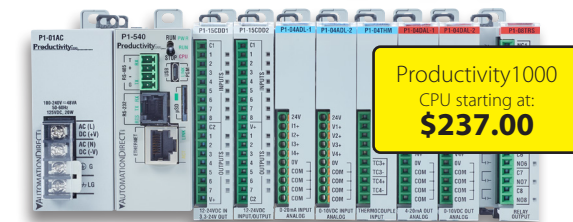
Here are a few more of the many benefits you get with Productivity:

- CPUs with expansive 50MB memory
- 32GB of microSD data logging
- Unmatched built-in communications capabilities, including local and remote I/O ports, EtherNet/IP, MQTT (MQTTs w/P2-622 and P3-622 CPUs), custom protocols, and more
- Built-in Ethernet port allows for HMI and peer-to-peer or business system networking (no Ethernet communications module needed)
- Modular rack-based or stackable footprint with many discrete and analog I/O option modules, scalable up to 59K+ I/O
- Plug-and-play USB programming (on select CPUs)
- Advanced "fill-in-the-blank" instructions for utmost ease of use
- Variable communications instructions for on-the-fly connection changes
- Tag name programming with advanced user-defined structure data types
- Easy-to-use coordinated motion control with the PS-AMC motion controllers and built-in motion instructions
- And so much more...

ProductivityMotion
PS-AMC starting at:
\$331.00



- AREG Automatic Registration
- FLO Flying Cutoff
- GEAR Gear Drivetrain
- HOME Find Home
- AREG Manual Registration
- ISEQ Motion Sequencer
- Multi-Axis Motion Sequencer (MMSEQ)
- PLS Programmable Limit Switch



See what Productivity can do for you at: www.ProductivityPLC.com

Fast Programming with FREE downloadable software



Developed in-house with customer feedback

Productivity Suite is our free programming software for the Productivity family of controllers. Our own software engineers developed this programming package at our headquarters near Atlanta, Ga. It was designed with input from our technical service team who communicate on a daily basis with our customers. As a result, Productivity Suite not only meets but exceeds the needs of our customers, and provides a quick, user-friendly way to efficiently program the Productivity family of PLCs.

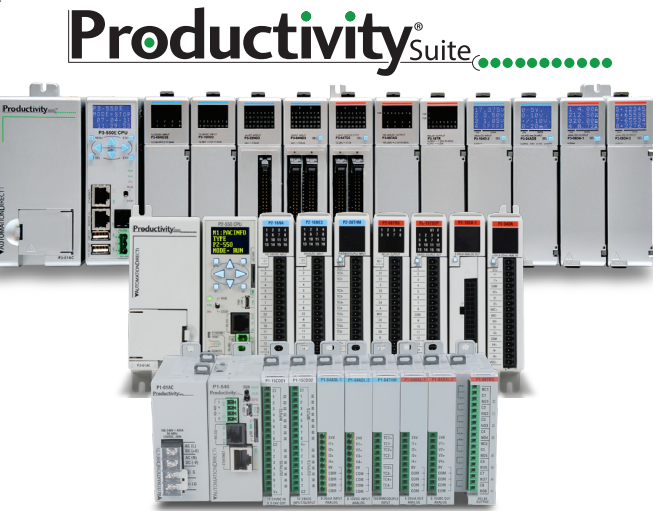
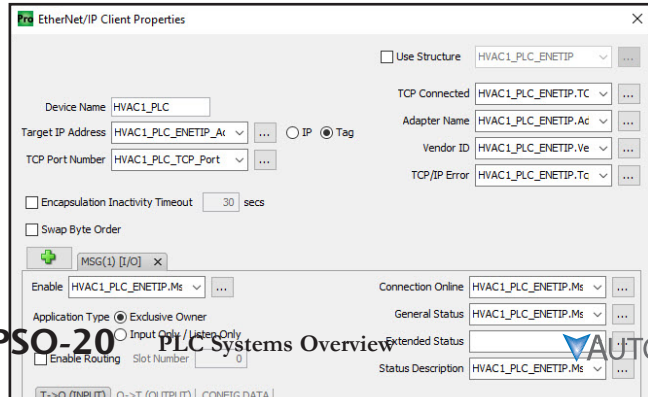
Program your way! Tag name based control that's powerful and easy to use

With Productivity Suite you have the freedom to define user tags with no limits or fixed boundaries. Configure timers, counters, integer words or any other data types you need. With tag name based programming, there are no pre-defined, fixed memory maps and no wasted, unused memory allocations.

Tag name based control also offers the ability to descriptively identify the control elements in your program. Older, fixed memory controllers force the use of pre-defined nomenclature for the data types. Which would you rather see when troubleshooting: T4:01 or Oven1 Purge Timer.Pre? The tag name helps identify the element as a numeric value for the oven purge timer's preset, making its purpose immediately clear.

Variable communication

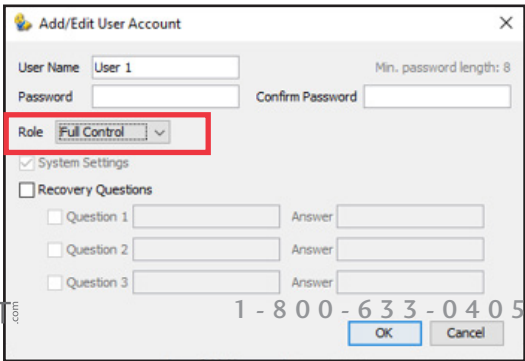
Productivity Suite provides utmost flexibility when it comes to PLC communication and with the Variable Communications Instructions (VCIs), you can reconfigure your communication links with simple tag value changes. By using tags in the parameter fields of Modbus, serial, EtherNet/IP, MQTT(S), etc. configurations, you can dynamically modify the messages, target IP addresses, and other connection parameters from the ladder code or directly from a connected HMI.



ONE SOFTWARE PACKAGE PROGRAMS ALL PRODUCTIVITY PLCS!

Easy access control

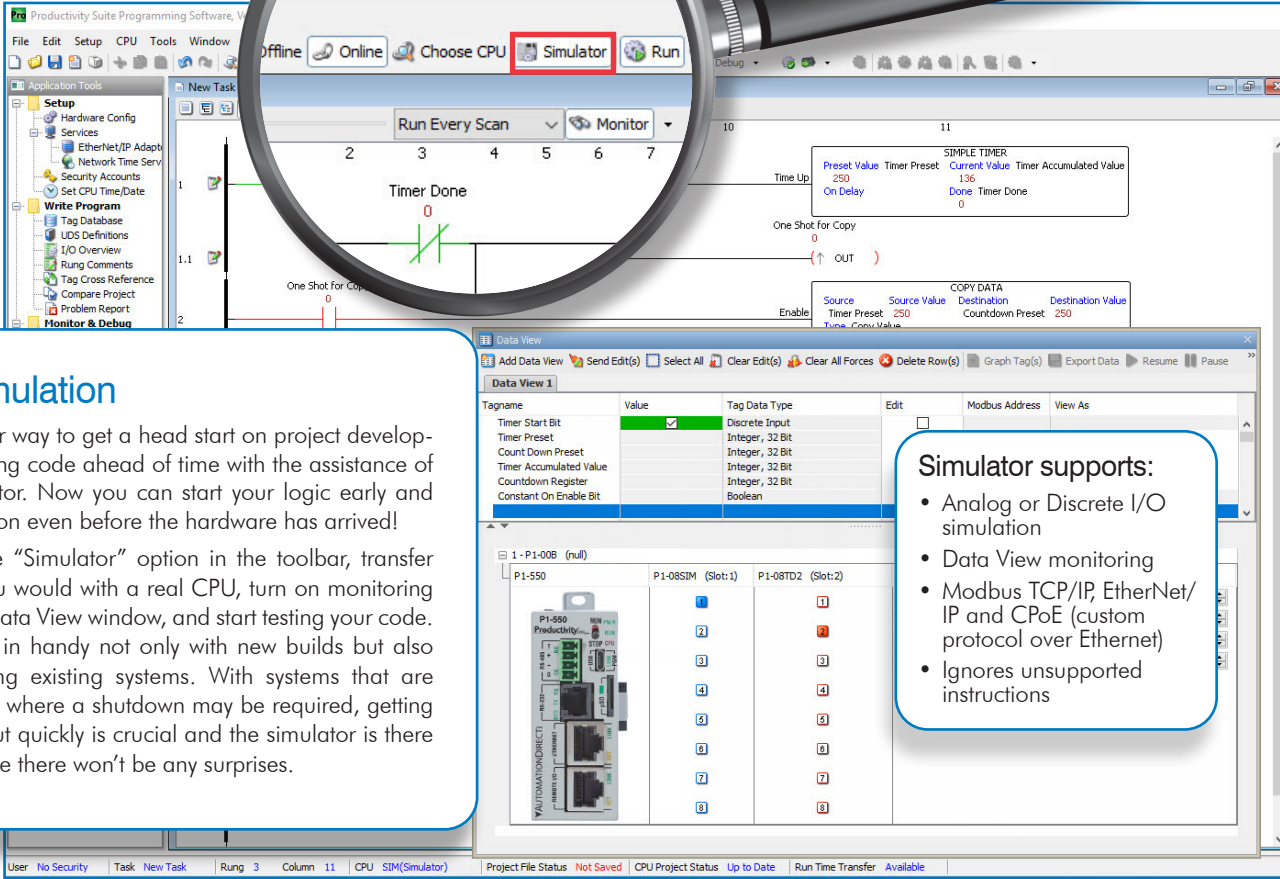
The Productivity Suite software has several remote access security features built in including project file encryption and user roles. User roles allow you to control who has access to the project file and what they can do with it. Full control, full monitor, limited monitor, and read only are some of the roles available and they can be easily set from the User Account dialog.



Simple simulation

There is no better way to get a head start on project development than building code ahead of time with the assistance of a project simulator. Now you can start your logic early and verify it's operation even before the hardware has arrived!

Simply select the "Simulator" option in the toolbar, transfer your code as you would with a real CPU, turn on monitoring and/or open a Data View window, and start testing your code. This tool comes in handy not only with new builds but also when maintaining existing systems. With systems that are already live, and where a shutdown may be required, getting in and getting out quickly is crucial and the simulator is there to help make sure there won't be any surprises.



Simulator supports:

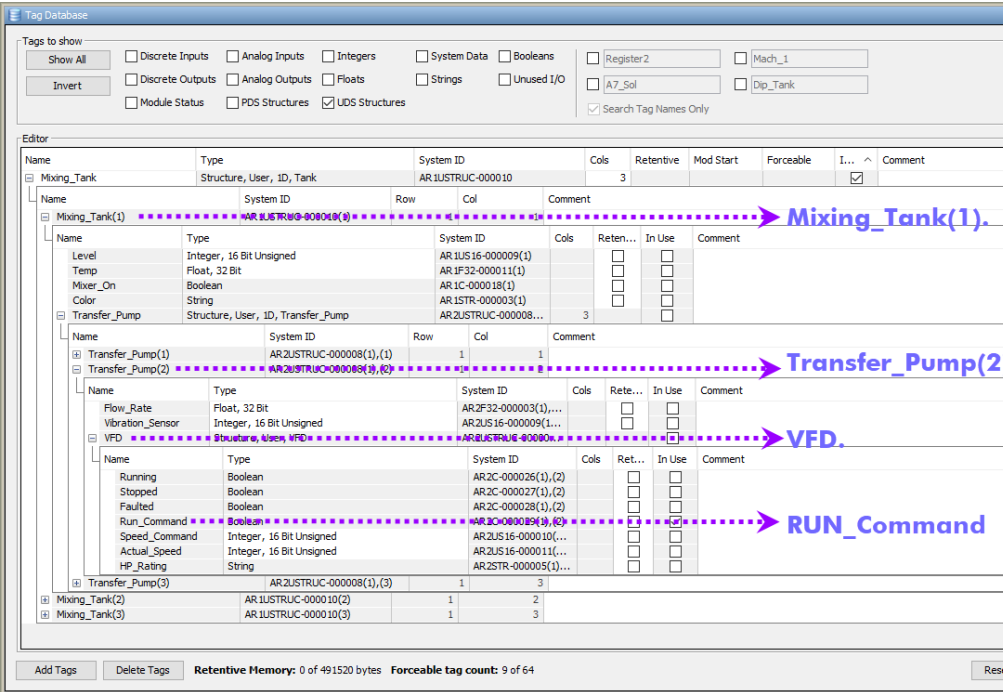
- Analog or Discrete I/O simulation
- Data View monitoring
- Modbus TCP/IP, EtherNet/IP and CPoE (custom protocol over Ethernet)
- Ignores unsupported instructions

Advanced user defined structures

User defined structures (UDS) are a powerful tool that helps speed up program development and improve uniformity of your logic. A UDS is a group of data types (BOOL, FLOAT, INT, pre-defined structures, etc.) which are defined by the user and re-used at will.

Productivity Suite allows you to embed arrays within the UDS definition, as well as, create arrays of structured tags so that you can programmatically index through your tag variables.

For example, `Mixing_Tank(1).Transfer_Pump(2).VFD.RUN_Command` which contains two nested UDS arrays (Transfer_Pump and VFD) inside the Mixing_Tank UDS definition.





There's so much more! See all that Productivity Suite has to offer at:
www.ProductivityPLC.com

ProductivityCODESYS - CODESYS power in a Productivity package

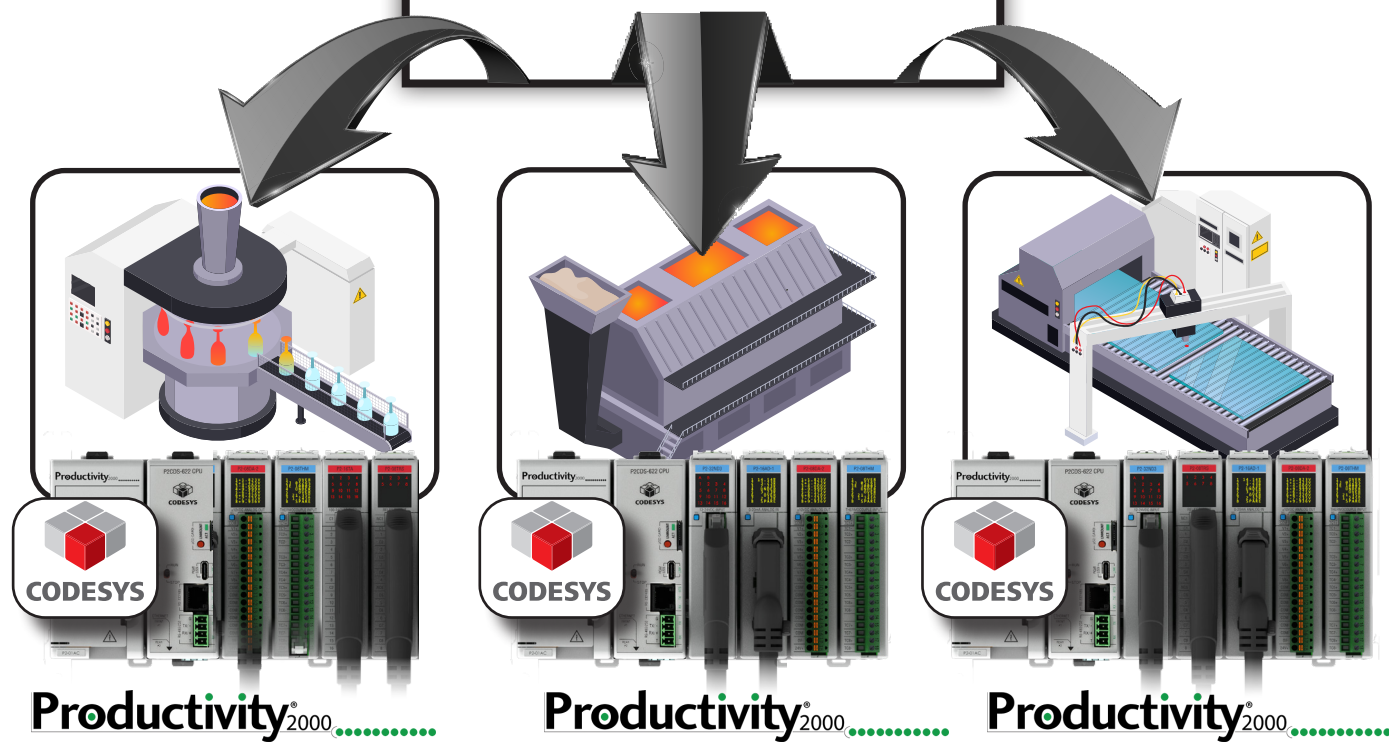
If you know and love CODESYS but have stayed away from implementing it in many of your applications because of high hardware costs, then the Productivity family of controllers has what you need. We've taken the time-tested Productivity2000 hardware and combined it with a CODESYS processor so you can afford to deploy CODESYS in many more ways, bringing a powerful world-renown IEC-based programming package to applications large and small.

**Break the chains of high prices!
Add more programming power
to your systems for less with
ProductivityCODESYS!**





CODESYS

CODESYS is the most widely used manufacturer independent IEC 61131-3 development system on the market. With over 5 million device licenses sold worldwide, more than 500 control system manufacturers, and tens of thousands of companies using CODESYS' products, this programming package has reliably served a wide variety of industries and applications.



Productivity²⁰⁰⁰ **Productivity²⁰⁰⁰** **Productivity²⁰⁰⁰**



CODESYS




ProductivityCODESYS
P2CDS-622 CPU priced at: **\$534.00**

Productivity2000
I/O modules starting at: **\$59.00**

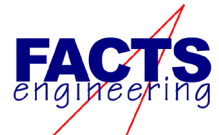
The P2CDS-622 CPU features a CODESYS runtime application housed in a Productivity2000 controller form factor. This CPU has ample communication capabilities, works seamlessly with low-cost Productivity2000 I/O modules, and includes the CODESYS IEC 61131-3-compliant software package along with several add-on licenses free of charge, so you can now reap the benefits of this powerful platform without breaking the bank.

- Full IEC 61131-3 compliant
 - Sequential Function Chart
 - Ladder Diagram
 - Function Block
 - Structured Text
 - Continuous Function Chart (CFC) programming is an extension to the IEC 61131-3 standard and uses interconnected function blocks to represent control logic visually
- Fieldbuses included (normally purchased separately):
 - Modbus RTU, Modbus TCP, EtherNet/IP Scanner, and EtherNet/IP Adapter
- Visualization - WebVisu included (normally purchased separately)
- IIoT library included (normally purchased separately):
 - MQTT Client w/ TLS, Web Client (http, https), AWS IoT Core Client, Azure IoT Hub Client, and more

Productivity²⁰⁰⁰

SOFTWARE

CODESYS

P2CDS-622


HARDWARE


The CODESYS software platform has found its home with numerous PLC manufacturers over the years. Many of these manufacturers charge premium rates for their CODESYS-enabled hardware which makes deploying CODESYS systems very cost prohibitive. Well, not anymore! By combining low-cost Productivity hardware with the power of CODESYS software, FACTS Engineering has created a value packed advanced control solution that makes CODESYS power accessible to anyone.

Click here to learn more about the most affordable CODESYS solution on the market...

Supporting your investment for over 25 years... ...and counting

Our legacy PLCs are some of the longest running controllers in the industry. Our commitment to your satisfaction and to quality products means we will continue to support these legacy controllers as long as possible.

The DirectLOGIC line has served the automation industry well; however, if you are designing a new system, we encourage you to review our latest PLCs with much easier configuration and more intuitive instruction sets - CLICK, Do-more or Productivity series controllers.

DL205

Our most practical micro-modular DirectLOGIC PLC providing extreme flexibility at the lowest cost possible.



Direct LOGIC

DL05/06

The DL05 was launched in 1999 as the first \$99 PLC to hit the industrial automation market.

The DL06 was introduced in 2002 as our first micro PLC to combine fixed I/O with four option card slots for added expansion - all in the same package.

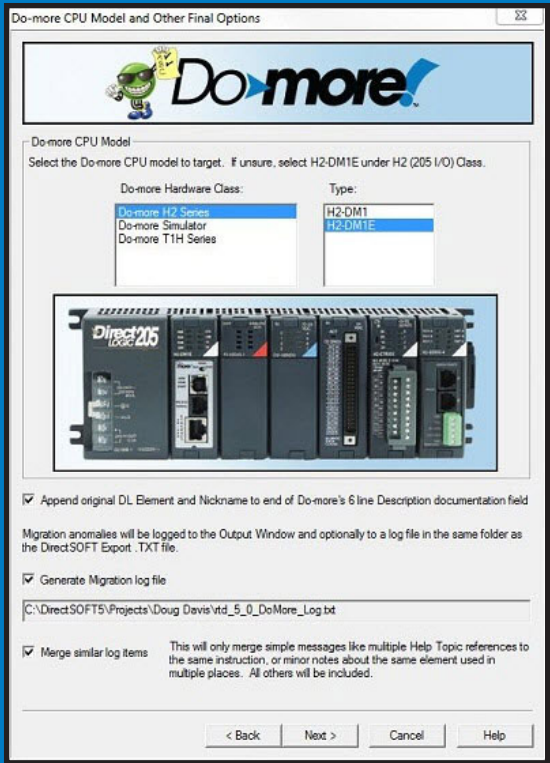
DL405

This PLC series has the widest variety of I/O modules and configurations of all DirectLOGIC PLCs.



DirectSOFT to Do-more Migration Utility

The super-convenient migration utility is available for DirectLOGIC customers wishing to experience the Do-more! difference. This program migration tool in the Do-more Designer programming software helps provide a quick transition from DirectLOGIC to the Do-more! family. This tool will guide you through the migration and greatly reduce the time needed for conversion.



Click the video for a quick tutorial on the migration process.



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Encompassing **PLC Direct**

The LS Electric XGB PLC makes advanced...affordable!

[Click here to learn more about the advanced XGB PLC from LS Electric...](#)

EtherCAT®

IEC
61131

LS
XGB

PLC

Starting at only:
\$307.00
w/FREE Software

The LS XGB PLC from LS Electric is a super-compact, advanced controller with numerous state-of-the-art features, but two of the more popular are its motion control capabilities and its IEC programming environment.

Cutting-Edge Motion Control - Several LS Electric XGB PLCs offer high-level motion control with up to 22 axes (up to 6 axes embedded on CPU and up to 16 axes using EtherCAT® modules) and multiple positioning methods including linear, circular, helical, and ellipse interpolation. Seven homing routines are also available and the FREE software offers a graphical interface so you can see the motion in action!

The XGB series PLC offers a perfect control solution for:

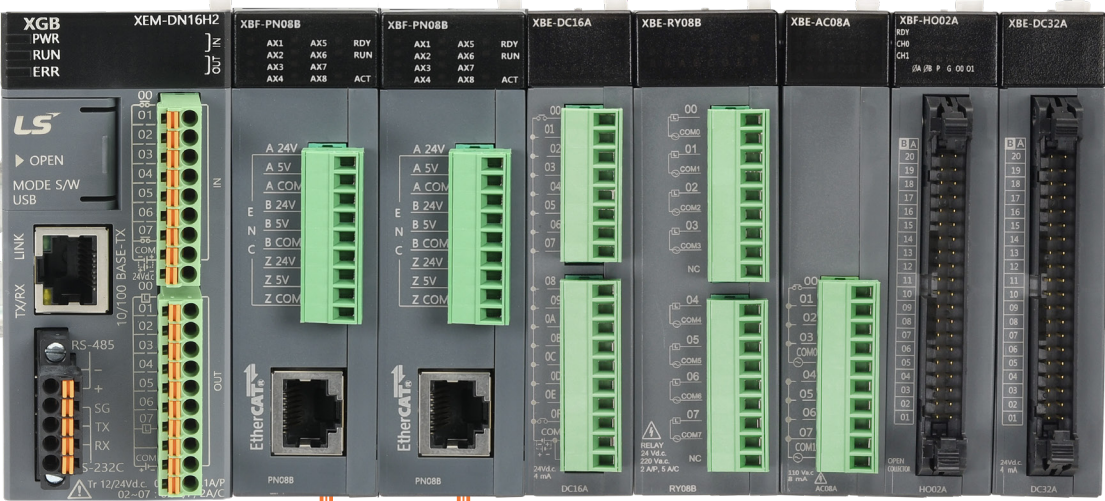
- Palletizers
- Pick-and-place applications
- Rotary tables
- Flying cutoff systems
- Precision machining tools
- Automated welding systems
- and much more

Advanced IEC Programming - The FREE XG5000 programming software features several IEC standard PLC languages including structured text and ladder diagram with many useful function blocks available. User defined function blocks and data types and easy "Excel®-like" tag creation make this software extremely versatile.

Use as a standalone PLC with up to 32 I/O points or add up to 7 I/O expansion modules for greater I/O needs.

(in addition, over 8,000 discrete I/O points can be added to the XGB control system using XEL-BSSRT bus couplers and EtherNet/IP communication)

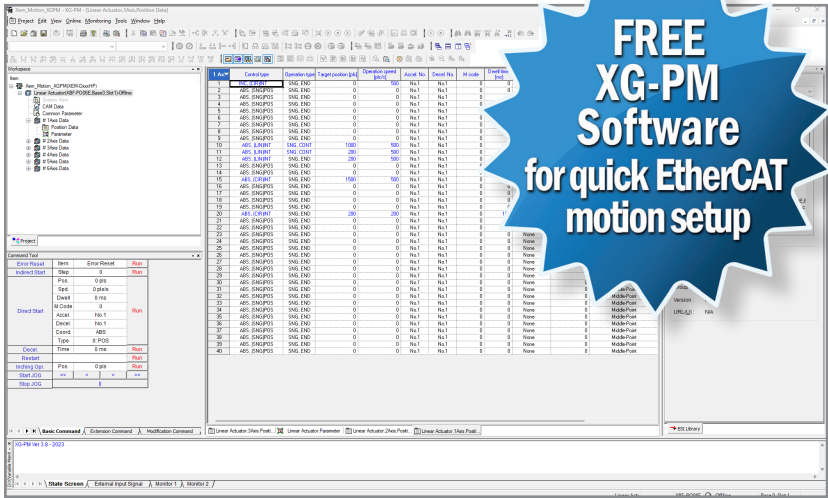
LS XGB PLCs and EtherCAT® motion for precise, real-time control



The EtherCAT protocol (Ethernet for Control Automation Technology) is an Ethernet fieldbus that provides industry leading performance, flexibility, and cost advantages. The functional principle - processing data on the fly - makes the EtherCAT network extremely fast and capable of real-time, deterministic communication with virtually unlimited nodes that can be synchronized for the highest precision. Other advantages include:

- Less wiring for complex motion applications, send signals over network instead of hardwired
- Extremely fast cycle times
- Provides virtual axes for more motion program flexibility
- Built in redundancy – network can detect a break
- Unlocks easy-to-use position registration capabilities
- CANopen over EtherCAT (CoE) device profiles allow easy addition of 3rd party devices

With the EtherCAT positioning modules, easily add up to 16 axes of EtherCAT controlled motion to your XGB PLC. Modules starting at only \$350.00.

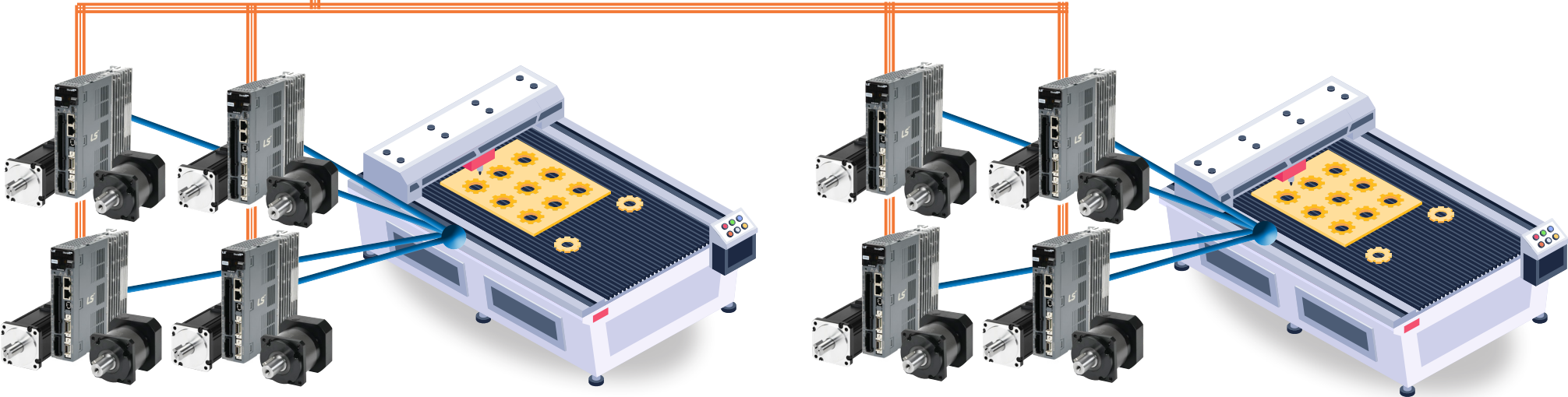
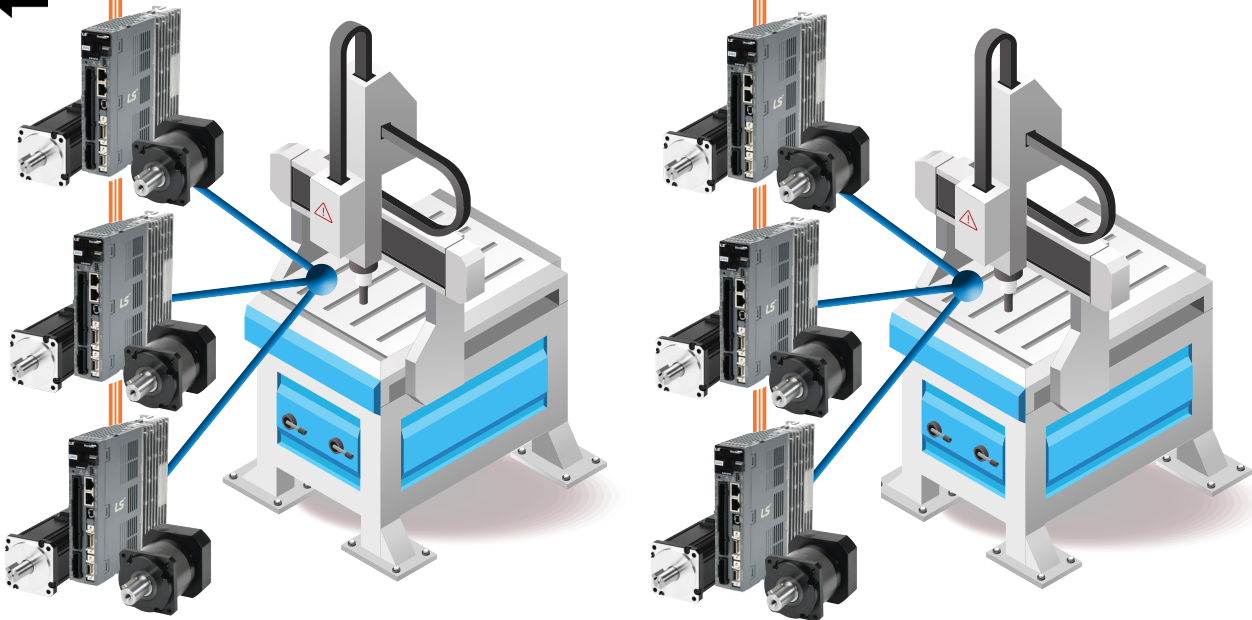


LS
XGB
PLC

EtherCAT®

EtherCAT®

Click here to learn more about the advanced XGB PLC from LS Electric...



Feature (Instruction)	XEM CPU (Pulse/Direction)	XBF-PN04B/ XBF-PN08B (EtherCAT)
Home (XPM_ORG)	✓	✓
Servo On (XPM_SVON)	X	✓
Reset Axis Error (XPM_RST)	✓	✓
Reset Servo Error (XPM_SRST)	X	✓
Stop Motion (XPM_STP)	✓	✓
Direct Start Movement (XPM_DST)	✓	✓
Position Table Movement (XPM_IST)	✓	✓
Speed Synchronization (XPM_SSS)	✓	✓
Position Synchronization (XPM_SSP)	✓	✓
Camming (XPM_CAM)	✓	✓
Torque Control (XPM_TRQ)	X	✓
Speed Limited Torque Control (XPM_TRQSL)	X	✓
Position Latching (XPM_TPROBE)	X	✓

For even more EtherCAT powered motion control, check out the LS XMC motion controller.

The LS Electric XMC controllers are optimized for advanced motion control and offer full EtherCAT capability. They are available in 8- or 16-axis models with a variety of high-tech functionality for a price that can't be beat!



LS
XMC
MOTION CONTROLLER

STARTING AT
\$857.00

*Supports EtherCAT, G-code, Delta3, Delta3R, Linear Delta, and more with all configuration in XG5000 software.

CLICK HERE to learn more

ProductivityOpen - MAKER IN...INDUSTRIAL OUT

Industry-tough control solutions for the DIY'er

INDUSTRIAL-GRADE SHIELDS

INDUSTRIAL-GRADE OPEN CPU
(C++ Arduino or CircuitPython)

INDUSTRIAL-GRADE
PRODUCTIVITY1000 I/O
MODULES

OVER 25 YEARS OF
AUTOMATION EXPERTISE

LONG-TERM PRODUCT
SUPPORT

3rd party open-
source MKR shields

Industrial grade
shields

Productivity1000 industrial I/O

Productivity[®]Open

With Productivity[®]Open UL/CE-certified open-source CPUs you get all the features of a standard Arduino plus the power and reliability of an industrial controller for only \$69.00!

What can they do?

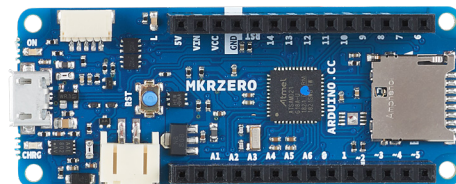
The P1AM CPUs are blank canvases and with the right know-how, you can make them do almost anything.

- Simple data logging
- IIoT functions
- Pick and place
- Greenhouse automation
- HVAC control
- Water treatment processes
- Package/material handling
- Generator switchgear
- Lighting control
- **The possibilities are ENDLESS!**

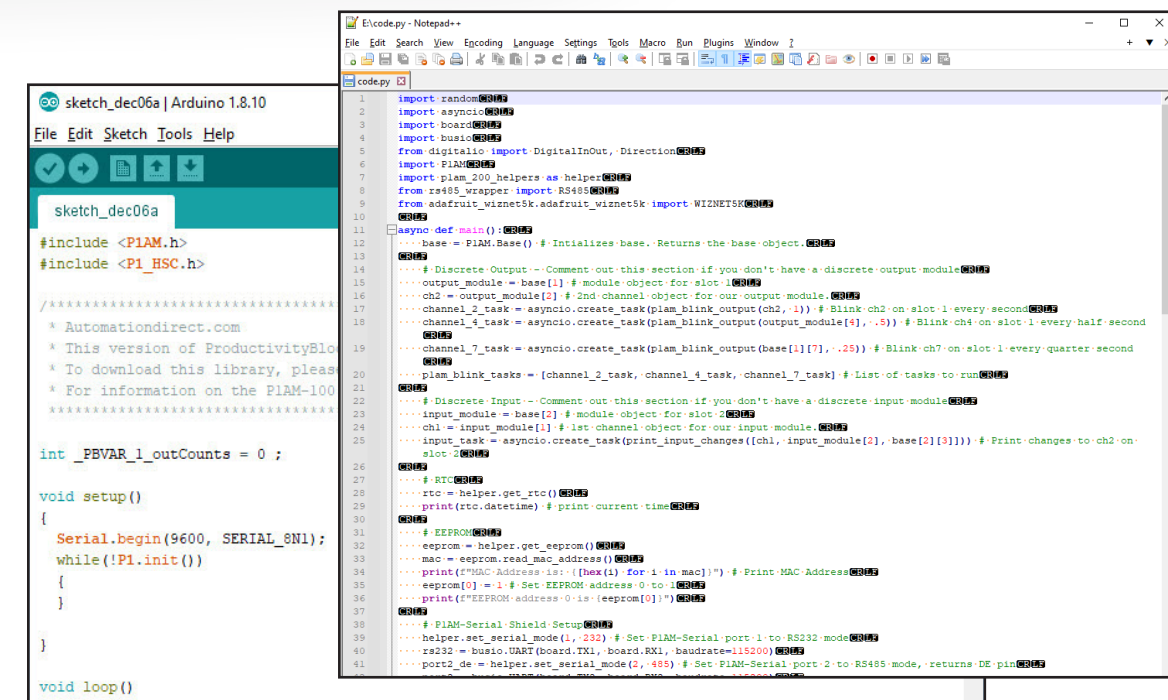
Open source at heart

The processor circuit of P1AM CPUs is designed to mimic the Arduino MKRZero microcontroller. By doing this, the CPUs are able to recognize most available Arduino MKR format shields and/or all of the industrially-hardened Productivity shields. The P1AM-100 CPU uses the Arduino IDE and can be programmed using C++ code or it can utilize most Arduino sketch programs found on open-source websites. The P1AM-200 CPU utilizes CircuitPython programming and can be coded using any text editor or IDE, or C++ using the Arduino IDE. Numerous sample programs are also available for CircuitPython that can be easily downloaded to the P1AM-200 CPU.

*The P1AM-200 CPU is also equipped with a Crypto coprocessor ensuring performance doesn't suffer when using encryption libraries.



Industrial-Grade
Open-Source CPUs
starting at
\$69.00



Programmed using the FREE
Arduino IDE (P1AM-100/200)
or any text editor including
Notepad++ (P1AM-200).

**Click here to learn more about
the ProductivityOpen industrialized open
source solution...**