

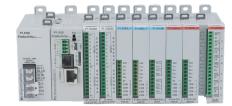
Productivity Series (

Software Overview

Affordable automation for everyone!

Productivity[®] Series

Productivity 1000



Only \$237.00 for CPU - value leader!

The Productivity1000 series PLC is the super compact yet highly capable member of our Productivity controller family. Packed with many of the features you love about the Productivity family but housed in a smaller, slimmer design and with a CPU price of \$237.00, the Productivity 1000 PLC will deliver the time, space, and budget savings your project

Top hardware features:

- 50MB user memory easily handles complex applications
- Up to 5 built-in communication ports for easy connectivity to your PC or various industrial networks: micro USB, sérial RS-485, serial RS-232, general purpose Ethernet 10/100Mbps and remote I/O Ethernet 10/100Mbps ports
- Data logging up to 32GB on a microSD card (sold sepa-
- Slim, stackable, super compact design
- Add up to 15 I/O modules for a total of 240 discrete I/O points or 120 analog I/O channels or expand remotely for an additional 512 discrete or 256 analog points (using
- Numerous I/O modules available including discrete, analog and high-speed I/O
- Low-cost high-speed counter and pulse width modulation modules for accurate control in pulsed I/O applications

GO TO: **OVERVIEW PDF**

GO TO: TECH SPECS PDF



Looking for industrial open-source control? GO TO: **PRODUCTIVITY** OPEN **BROCHURE**

Productivity 2000



\$299.00 CPU with 5 built-in comm ports

The Productivity2000 PLC is where value meets power. This controller was designed to provide advanced features at an extremely affordable price and lowest cost of ownership in its class. Considering the memory, performance, options, free software, free support and everything else this controller has to offer, it really does stand above the competition.

Top hardware features:

- 50MB user memory easily handles complex applications
- 5 built-in communication ports including: (1) plug-and-play USB programming port, (1) general purpose Ethernet 10/100Mbps port, (1) remote I/O Ethernet 10/100Mbps port (can be used as an additional general purpose Ethernet port w/ P2-622 CPU) and (2)
- Data logging up to 32GB on a microSD card (sold separately)
- Programmable 4-line OLED message display on CPU for system status and tag data readouts and user defined messages
- Patented OLED displays on select analog modules for real-time, no meter required measurements

Micro-modular rack-based system

- Full lineup of over 50 discrete, analog, and high-speed I/O
- Accurate high-speed control using HSI, HSO, and HSC modules
- Pulse width modulation modules for precise control in applications requiring PWM signals
- Up to 480 local I/O points and 4,320 total I/O through remote expansion (using P2-RS and/or P1-RX modules)
- Hot-swappable I/O, no module placement restrictions, no power
- Select modules are ABS certified for marine applications (standard of excellence in marine and offshore classification)

GO TO: **OVERVIEW PDF**

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1 - 8 0 0 - 6 3 3 - 0 4 0 5







Productivity₃₀₀₀°



Expansive I/O and 6 built-in comm ports

The Productivity3000 PLC is a communications powerhouse with numerous networking options built in. It's also the I/O leader of the group with over 59,000 I/O points possible through local and remote expansion.

Top hardware features:

- 50MB user memory easily handles complex applications
- 6 communications ports built in including: local expansion, and Ethernet remote I/O ports
- Data logging to external USB drive
- Programmable 4-line LCD message display on CPU for system status and tag data readouts
- Patented LCD displays on all analog modules for real-time, no meter required measurements

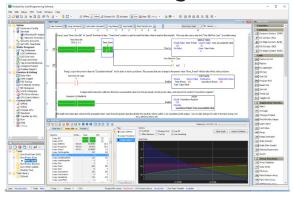
Modular rack-based system

- Over 30 discrete, analog, and specialty PLC I/O modules including high-speed
- High-density I/O modules up to 64 discrete I/O points
- Accurate high-speed control using HSI and HSO modules
- Support for local expansion and remote I/O bases, up to 59,840 I/O points (plus additional networkable Modbus and EtherNet/IP field I/O)
- Hot-swappable I/O, no module placement restrictions, no power budget limitations
- ABS certified for marine applications (standard of excellence in marine and offshore classification)

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Productivity Suite



Full featured PLC programming software with no strings attached

No more "pay as you go" software with an annual subscription year after year...this is FREE software - developed and supported in the USA.

Top software features:

- Project simulator for easy logic verification/testing
- EDS file support for easy EtherNet/IP device setup
- User defined structure data types
- Tag-based programming with no pre-defined memory
- Auto-discover local and remote PLC bases, Protos X field I/O, PS-AMC motion controllers and GS series drives
- Integrated StrideLinx VPN support
- Advanced "fill-in-the-blank" instructions including application specific commands
- Variable communications instructions for on-the-fly connection changes
- Helpful Data view, I/O view, Graph view, and histogram dialogs for insight into system performance
- Task Manager for increased efficiency
- ProNET networking for easy CPU data sharing
- Tag database export to C-more HMI
- Tag I/O reassignment to simplify offline configuration
- Easy project conversion to/from each PLC in family
- Project and database compare feature
- Web server and mobile access

GO TO: **OVERVIEW PDF**



PS-AMC - Enhanced motion control exclusively for Productivity systems

The PS-AMC motion controller is designed to work effortlessly with select Productivity CPUs. The AMC provides accurate, synchronized, motion control on up to four axes and is easily configured within Productivity Suite using built-in motion instructions.

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Visit www.ProductivityPLC.com for complete details and **FREE software download**

PRS-2 Productivity Series PLCs

VAUTOMATION DIRECT

www.automationdirect.com/productivityseries

Fast programming with FREE software...

Pro Productivity Suite Programming Software

Run Every Second

Run When Called

Disable Task

Task Library

Loopy.Reset

Loopy.Rate Loopy.OutUpperLim Loopy.OutLowerLim

Loopy.SampleRate

Rung 1

Developed in-house with customer feedback

Productivity Suite is our FREE programing software for the Productivity Series of controllers. Our own engineers developed this software 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 was built to meet the needs of our customers and it provides a quick, userfriendly way to program our Productivity family of PLCs. Based on customer feedback we have continually improved our software since its first release. Now Productivity Suite is even better with numerous features added to make your Productivity Series programming even more productive.

And it's FREE!

That's right, get all of the benefits without any extra cost. Forget licenses or licensing fees, download the software to as many PCs as needed or take it for a test drive and try it before you buy it. After all, you bought the controller, why pay more to control it?

Compare our FREE price to the \$2,829* per user, per year retail price of the Studio 5000 Full Edition software used with the \$5,070* Allen Bradley CompactLogix PLC CPU (1769-L33ER) and ask yourself what exactly you are paying so much for.





FREE Software! Download as often as you need. No license or key needed. Click here to download.

Get more than you paid for with **Productivity!**

*Allen Bradley hardware price taken from www.radwell.com 9/30/22.

Allen Bradley software price taken from www.rockwellautomation.com 9/30/22.

...software that's developed and supported in the USA!

oroductivity's

STR Array Statistic

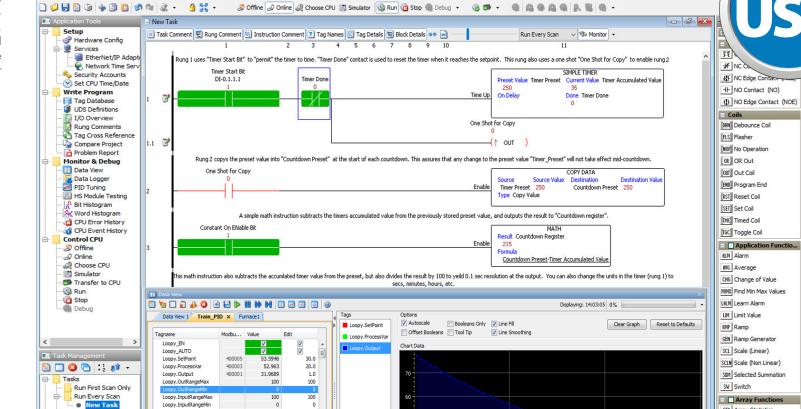
PBR Pack Boolean Array

PWR Pack Word Array

CPR Copy Array

FLA Fill Array

Productivity Suite



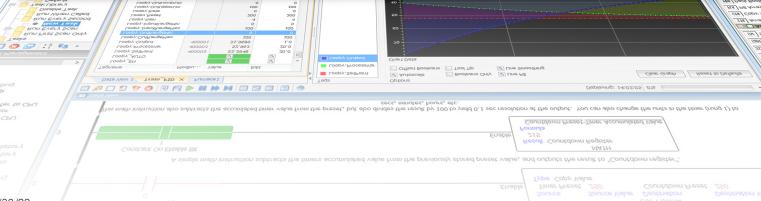
Tag name based control that's powerful and easy to use

Don't let your controller control you. 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 decide on. With tag name based programming, there are no pre-defined, fixed memory maps and no wasted, unused memory allocations.

- No limits on PID loops**
- No limits on Counters**
- No limits on Timers**

**Limited only by the available memory in the PLC.

Tag name based control also offers the ability to descriptively identify the tags 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. In addition, the tag database format of the Productivity Suite software can be easily shared between other tag name-based systems. HMI, SCADA and data logging devices with tag name based software can be configured with ease by simply exporting the tag database from Productivity Series and importing it directly into



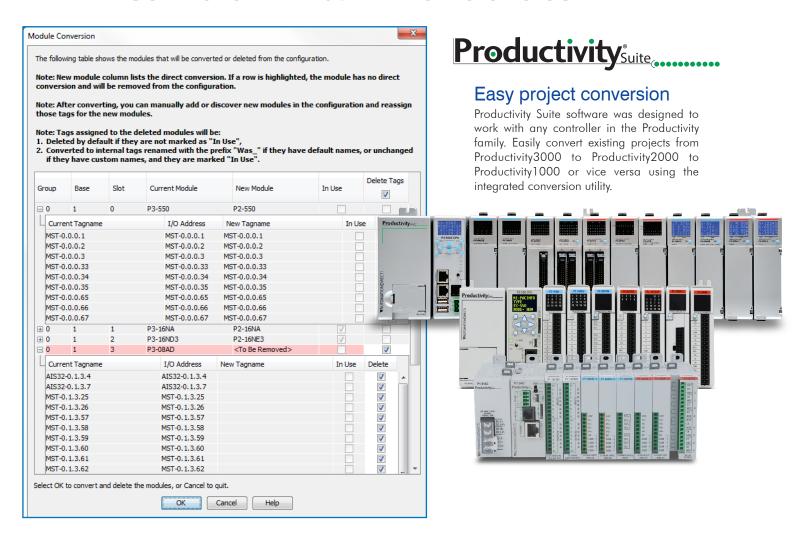
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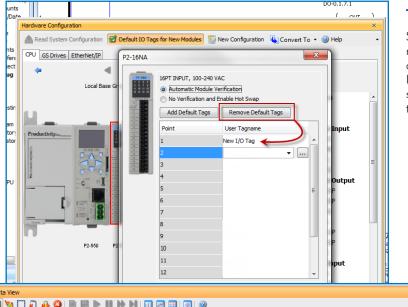


Productivity Series PLCs PRS-5

VAUTOMATION DIRECT

FREE software with built-in efficiencies



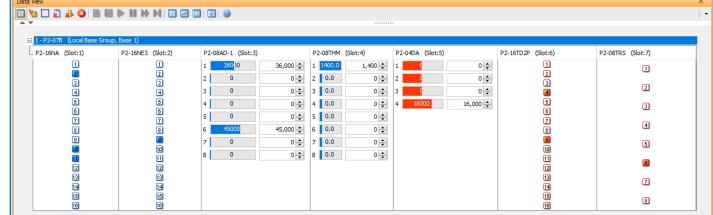


Tag I/O reassignment

Start programming now! Tag I/O reassignment allows you the freedom to develop your code now and assign your I/O later. Create your user tags offline and swap them out for the default tags once the hardware is available.

Graphical I/O view

The I/O View gives you a quick and friendly way to monitor all hardware points in a system. Force discrete points on and off or edit raw analog values easily with this tool.

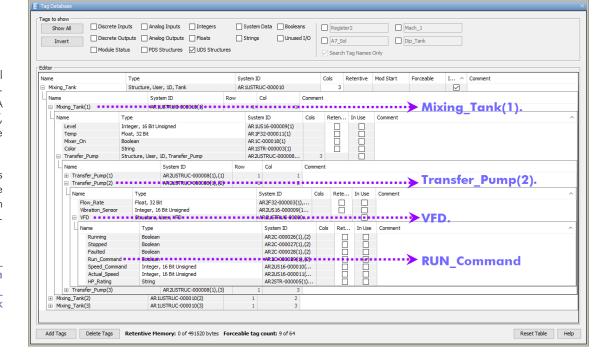


Advanced user defined structures

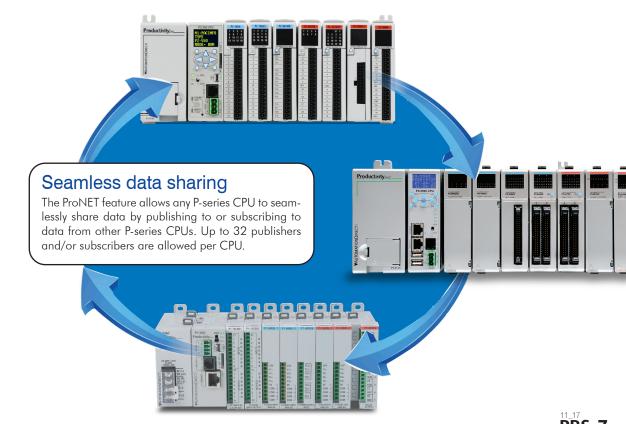
User defined structures (UDS) are a powerful tool that helps speed up program development and improve uniformity of your logic. A UDS is a group of data types (BOOL, FLOAT, INT, pre-defined structures, etc.) which are defined by the user and re-used at will.

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.



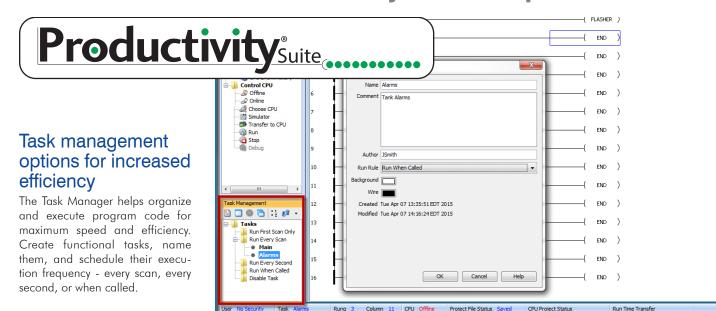
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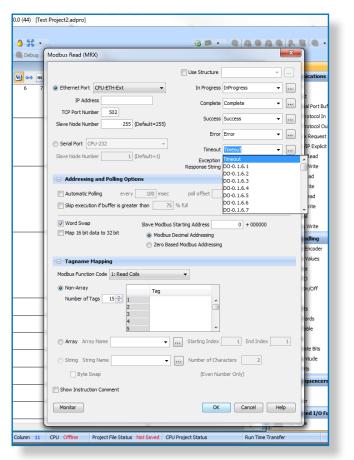


OK Cancel Help

Compare

FREE software that makes you more proficient!





Helpful favorite instructions list

they are readily available and easily accessible.

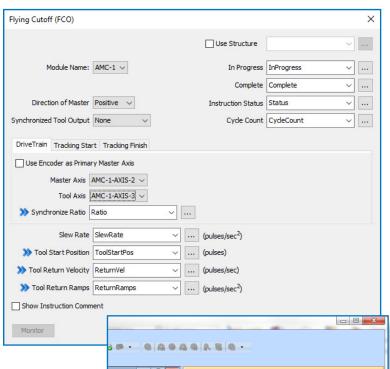
Speed up your programming time by placing your most

commonly used instructions in your Favorites list, where

VAUTOMATION DIRECT

Convenient fill-in-the-blank style function blocks w/ application specific commands

Math, PID, array, communication, data handling, high speed and application function blocks are available and easily configured with user friendly selections.



RLM Alarm

SCL Scale (Linea

CPR Copy Array

MWX Modbus Write

5ই Compare Contact (CMP)

#IN ASCII In **ROUT ASCII Out** MRX Modbus Read

DO-0.1.7.1

DO-0.1.6.7

DO-0.1.6.13

DO-0.1.7.5

Variable communication

Force from ladder functionality

Turn forcing on or off right from the ladder view.

Right click any contact or coil in the rung and turn

the force on, off or remove the force all together.

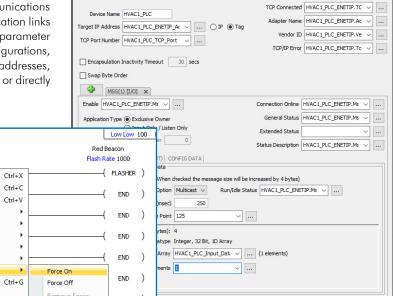
Productivity Suite provides utmost flexibility when it comes to PLC communication and with the Variable Communications Instructions (VCIs), you can reconfigure your communication links with simple tag value changes. By using tags in the parameter fields of Modbus, serial, EtherNet/IP, MQTT, etc. configurations,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

Delete

Go To

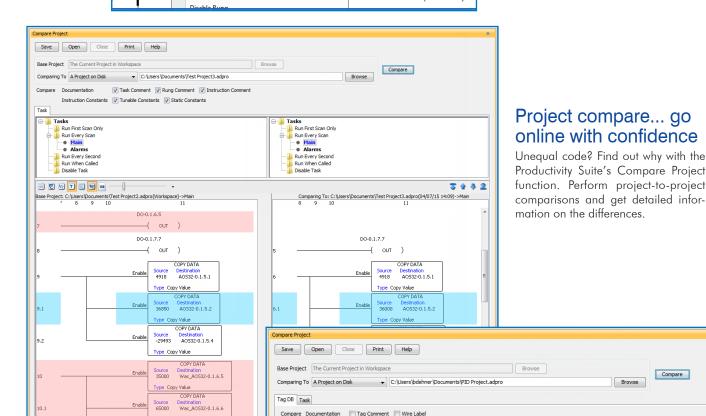
Erase with Curso

Tag Search for 'Tank Level.IsHighHigh



Pro EtherNet/IP Client Properties

END



▼ Include Matches

Tag database compare

different from one project to the next with the convienent tag database compare feature. With this feature there is no more guessing and you'll know exactly if and what changes were made from previous versions of your tag database.

Know which tags are missing, deleted or

AIF32-0, 1,6,1 Analog Input, F.,. AIF32-0, 1,6,1 AIF32-0.1.6.2 Analog Input, F... AIF32-0.1.6.2 AIF32-0.1.6.3 Analog Input, F... AIF32-0.1.6.3 AIF32-0.1.6.4 Analog Input, F... AIF32-0.1.6.4 AIS32-0.1.5.1 Analog Input, I... AIS32-0.1.5.1 AIS32-0.1.5.2 Analog Input, I... AIS32-0.1.5.2 AIS32-0.1.5.3 Analog Input, I... AIS32-0.1.5.3 AIS32-0.1.5.4 Analog Input, I... AIS32-0.1.5.4 AOS32-0.1.... Analog Output,... AOS32-0.1.7.1 AOS32-0.1.... Analog Output,... AOS32-0.1.7.2

www.automationdirect.com/productivityseries

C-more HMI

Touch Screen

FREE software that gives you a head start

MEAU

STOP
SCSCT 4/V ENTER

GS Drives

EtherNet/IP

devices

devices quickly.

EtherNet/IP devices

SureStep

Productivity Suite was designed with many features intended to work hand-in-hand with certain field devices and third party software. This level of integration gives us a clear advantage over many other programmable controllers and is intended to help with system development.

Auto-discover GS series drives

When connected to the P1000, P2000 or P3000 CPU's Remote I/O port via an Ethernet connection, GS series drives are auto-discovered in the controller's hardware configuration. All drive parameters can then be edited from within the Productivity Suite software. The system can also be configured to write these parameters to the drive with each program transfer, making troubleshooting and replacement in the field a cinch!

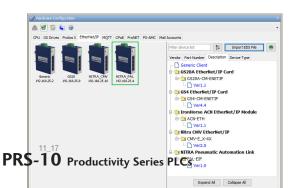
ViewMarq displays

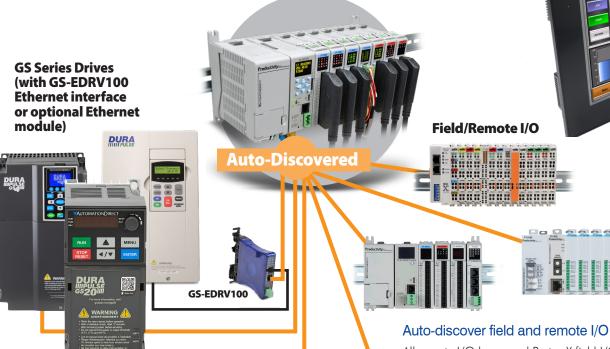
The integrated VMW function block instruction was created specifically for communication with ViewMarg message displays. This instruction provides all the needed parameters and even simplifies string creation by allowing you to copy and paste data from the ViewMarq configuration



EDS Library

The EDS file library offers a powerful way to organize and sort your EDS files - automatically group by device type or vendor and manage versions. AutomationDirect. com EtherNet/IP EDS files come already installed for added convenience.





Built-in Instructions

Serial & Ethernet

MODBUS devices

Modbus devices

connected.

When talking to Modbus

devices over serial or Ethernet,

the Modbus Read (MRX)

and Modbus Write (MWX)

instructions make it easy to get

All remote I/O bases and Protos X field I/O

Field/Remote I/O

HOUSE HOUSE

racks connected to the Ethernet remote I/O port of the P1000, P2000 or P3000 CPU will be auto-discovered into the hardware configuration.



Auto-discover PS-AMC motion controllers and program with ease!

Connect up to four PS-AMC motion controllers to your Productivity CPU (dependant on CPU chosen) and they will automatically be added to the hardware configuration for that CPU.

In addition, Productivity Suite has numerous instructions designed into the software, including flying cut-off and rotary table instructions, that allow you to program complex, coordinated motion profiles in no time.

Share your database and speed up development

Productivity Suite's tag database can easily be exported to a .CSV file and then imported into other devices/software that use the same tag naming convention including C-more HMIs. This can provide valuable time savings with project development and help ensure deadlines are met.

Shared Tag name database



HMI/SCADA

Easily import tags into SCADA software for quick and easy additions to existing projects or to speed up new project devel-

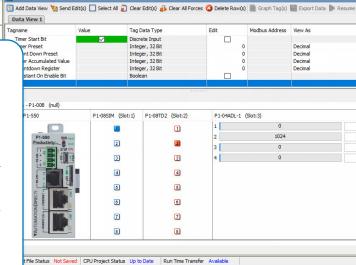
Simulator File Edit Setup CPU Tools Window ffline 🔊 Online 🍭 Choose CPU 🎆 Simulator 🐞 Run Setup Hardware Config Services EtherNet/IP Adapt Network Time Serv Security Accounts Set CPU Time/Date ∨ S Monitor -Run Every Scan I/O Overview Rung Comments Tag Cross Refere Compare Project Problem Report Monitor & Debug Data View Data Logger PID Tuning BHS Module Testing 🛅 Add Data View 🥎 Send Edit(s) 🦳 Select All 👔 Clear Edit(s) 🚜 Clear All Forces 🙆 Delete Row(s) 📗 Graph Tag(s) 📗 Export Data 🛭

Why wait, when you can simulate?!

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 will come in handy not only with new builds but also when maintaining existing systems.

With the Productivity Suite simulator you can verify the effects of code changes before implementation, replicate fault conditions to test code stability, or try out new programming techniques/methods for greater efficiency. This can jump-start your project development on the front end and reduce unexpected errors with systems that are already live.



Simulator supports:

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



Easy-to-use scanner and adapter

configuration windows, as well as

an EMSG function block instruction

for Explicit Message setup and

control, connect EtherNet/IP

FREE software that's field friendly

Data View tools

ivity Series PLCs

and each provides invaluable assistance when trouble-

- 1. The basic Data View window lets you monitor, edit and force all tag values regardless of data type. Boolean, signed or unsigned integer, bit of word, string tag, or structure, you can view and edit them all right here! You can also configure each Data View tab to monitor entire instructions, view all forcible tags, view all Modbus address, etc.
- The Data View feature gives you three unique tools in one 2. I/O View is an optional view that gives you a graphical representation of your current hardware configuration. You can easily scan your hardware configuration module-bymodule with full editing and forcing capabilities. Force discrete points and change analog I/O values right from
 - **3.** Graph View is a simple trend graph that you can set up quickly for instant feedback. Drag tags right from your Data View into the Graph view and configure as needed.

Clear Graph Reset to Defaults

The Data View panel is a modal window, meaning that you can change its position in the software layout: dock it, tab it, pin it or float it. You can even drag it outside of the programming software for added usability.

Configure replacement drives instantly!

One of the more powerful features of the Productivity Series controllers is the integrated GS series drive configuration capability. Not only can Productivity Suite auto-discover newly installed drives and provide all parameters needed for drive configuration, but you can also save drive configurations in the project. These saved parameters can be written to the new drive with a project transfer, eliminating the need for manual configuration of the drive parameters on the keypad or using yet another configuration utility.

Consider the downtime you could save when replacing a drive in the field, if all it took was a simple download to configure the replacement drive exactly like the one you just removed.

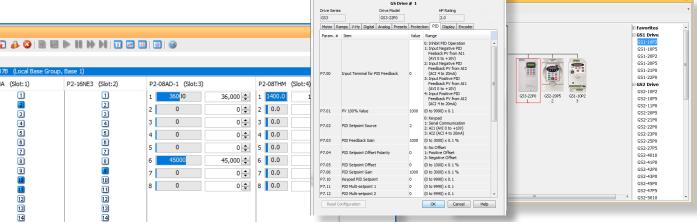
Productivity Suite.











achnica/ c

Runtime edits

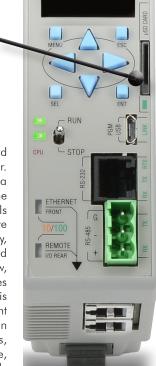
Commissioning or troubleshooting a system can be less time-consuming if you can make program edits on the fly. Download edits to the CPU without pausing I/O updates or stopping/ restarting the program. From melting rubber to making paper, you can keep your process running, avoiding downtime and product waste.

Built-in data logging

Knowledge is power, especially when troubleshooting! Having historical data available to you when trying to find or correct an issue can make a huge difference. The micro SD card or USB slot on the Productivity CPU allows you to log up to 32GB of tag data. This data is saved in .CSV format on a removable micro SD card or USB pen drive and can be easily downloaded to your PC or the most current data log can be emailed via the Send Fmail instruction

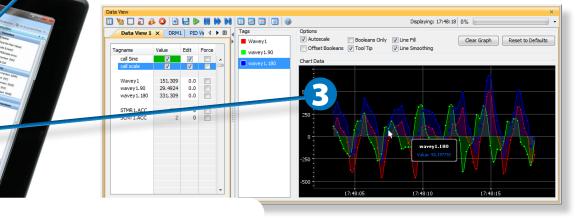
You can also access the data via a standard browser using the CPU's built-in Web server. Once enabled, simply enter your CPU's IP address into a

browser's address bar, enter the appropriate security credentials when prompted, and you have access to system data (error history, CPU status, scan time, etc.) and any data log files. You can view, download or delete these files through the Web browser. This gives you a quick and convenient troubleshooting tool that you can use to track historical patterns, examine equipment performance, or record data from a newly installed repair.



P2-550 CPU

NNOVATIO



Helpful tag names

Tag name based controllers provides you with a higher level of documentation than a typical fixed address PLC. When troubleshooting a system or application, it is always easier to identify a physical input, output or even an internal memory location if it has a real-world name. Consider this: X15, I:4/3, C200, B3:0/2 mean very little with respect to what they are actually related to in your process. However, 'System Start PB1', 'Auto Mode SW1' or ' Batch Seg Enabled' are very clear and concise. These common descriptors can be added to a fixed memory address but a tag name based controller makes it simple by embedding the description into the tag. This allows for better naming conventions and results in a more well-written and documented program. 1 - 8 0 0 - 6 3 3 - 0 4 0 5

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If you need assistance, give us a call.

Our technical support staff is highly-

trained, field-experienced and always

happy to help. 1-800-633-0405

At the office...



Web Server

With the Productivity CPU's integrated Web Server, you can access Data Logger

files stored on an installed flash device (optional) as well as monitor system status via the (read-only) System Tags.

...or on the go!

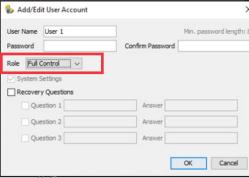
Apple iOS PACDATA

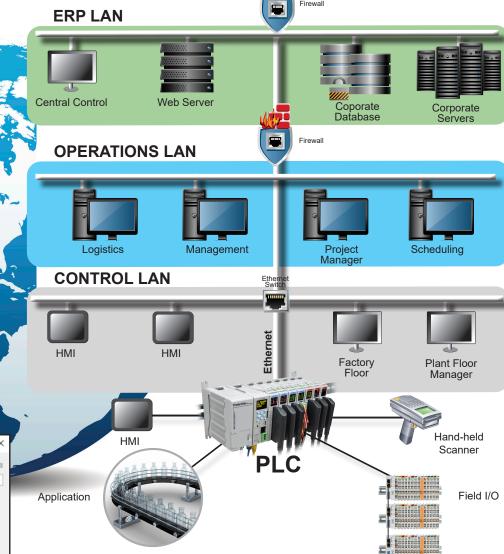
The FREE PAC/PLC Data Remote Monitor App allows you to connect to remote systems from a Wi-Fi or cellular network connection. The Remote user can monitor the local PLC system and user tags configured for remote access inside the tag database of the controller.

The MQTT protocol has become frontrunner for many machineto-machine (M2M) and IIoT/cloud networking applications, due to its lightweight overhead and reduced bandwidth consumption. Productivity PLCs support MQTT communication (the P2-622 CPU also supports the more secure MQTTS protocol) and with Productivity Suite's fill-in-the-blank MQTT messaging configurations, delivering vital data to advanced cloud computing platforms is easy.

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.





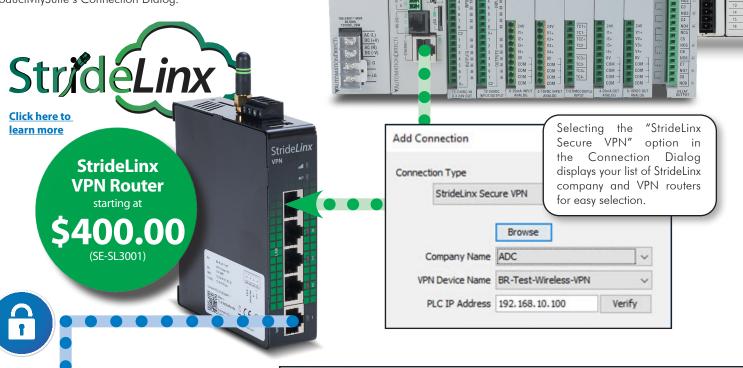
From Factory Floor to anywhere in the world.

PRS-14 Productivity Series PLCs

Secure VPN integration

Cybersecurity is an important part of modern day control systems and ProductivitySuite makes connecting to your remote PLCs through a StrideLinx secure VPN much easier. StrideLinx provides end-to-end secure remote connections using wired, wireless and/or 4G LTE capable VPN routers. ProductivitySuite makes it simple to securely connect to remote PLCs using StrideLinx by incorporating StrideLinx connection options directly into ProductivitySuite's Connection Dialog.

For the latest prices, please check AutomationDirect.com.



60 52 d0 06 5c 67

60 52 d0 05 5a a9

60 52 d0 06 33 3d

Pro CPU Connections

Refresh Done

Connection

Ethernet

Ethernet

Ethernet

Productivity20

The CPU Connections dialog shows the available CPUs on the network including those available through a StrideLinx secure VPN connection. To connect to one of these controllers just simply select it and click on the Connect button as you would any other CPU, enter your login credentials and that's it. No need to open StrideLinx software, log in, and configure the connection, it's all done inside ProductivitySuite!

(U)



Cancel

MoToM-P2-Dry-Rak

192.168.140.55

192.168.0.50

172.31.40.135

172, 31, 40, 170

10.11.0.55

StrideLinx VPN

StrideLinx VPN

StrideLinx VPN

Auto-Discovered

Auto-Discovered

Disconnected

VAUTOMATIONDIRECT

...............

SIMPLE TIMER Current Value Timer Acc

Done Timer Done

Application-specific instructions

APPLICATION

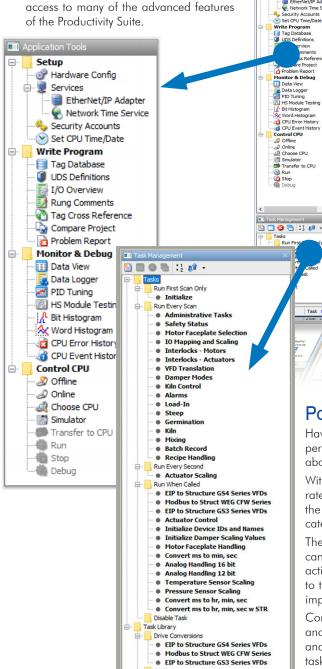
FREE software with a user-friendly programming environment

Customizable layout

The Productivity Suite is organized into a set of fully-dockable and configurable "Panes". Dock them, un-dock them, and rearrange them to suit your programming style.

Application tools

The Application Tools pane allows quick access to many of the advanced features of the Productivity Suite



Actuator Control

PRS-16 Productivity Series Picessure Sensor Scaling

Analog Handling 16 bit
Analog Handling 12 bit

 Convert ms to min, sec Convert ms to hr, min, se

Main ladder/task area

□ 💋 🔒 🖺 🔞 🐞 🚳 🛍 🔊 🐧 💸 🔹 🗳 Offine 🖉 Onine 💐 Choose CPU 🐚 Simulator 🔞 Run 🔞 Sto

This is where you create your ladder program. Create/organize your Tasks

in this area, and drag and drop instructions from the Instructions Pane. The Application Specific Instructions built in to the Productivity Suite will save you time, and ignite your productivity. Productivity Suite Programming Softwa

H NO Contact (NO) - 🗆 × [0IIT] Out Coil FLA Fill Array รีซ์ Compare Contact (CMP) ₩ NC Contact (NC) ₩ NC Contact (NC) 群 NC Edge Contact (NCE ₩ NC Edge Contact (NCE) H NO Contact (NO) H NO Contact (NO) NO Edge Contact (NOE) [FLS] Flasher [DBN] Debounce Coil [08] OR Out [FLS] Flasher (EN) Program [NOP] No Operation [SET] Set Coil [OR] OR Out [0IIT] Out Coil [160] Toggle Coil - Applicati [END] Program End [RST] Reset Coil CH6 Change of Value [SET] Set Coil [IMC] Timed Coil LALM Learn Alarm [TGC] Toggle Coil IMP Ramp **■ ■** Ap SCL | Scale (Linear) ALM Alarm SCLN Scale (Non Linea AVErage CHG Change of Value MIMX Find Min Max Values Collapsible Categories LALM Learn Alarm LIM Limit Value Instructions are organized into collapsible RMP Ramp categories, with a Favorites category at the GEN Ramp Generator top, where you can keep your frequently SCL Scale (Linear) used instructions. It's just one more way that SCLN Scale (Non Linear) the Productivity Suite Software enables you to be SUM Selected Summation SW Switch 🗏 🔳 Array Fu CPR Copy Array FLA Fill Array PBH Pack Boolean Array PWH Pack Word Array SRA Shift/Rotate Array

Pro CPU Connections

Ethernet

Refresh Done

MAC ID

P2-550 00 50 c2 2c b0 P3-550 60 52 d0 05 30 P2-550 60 52 d0 05 5f

P3-550 00 50 c2 2c b0

P3-550 00 50 c2 2c b2 P2-550 60 52 d0 05 5a

60 52 d0 05 5f

Connection Device Type Part #

P2-550

* in the CPU Source column indicate

UPBH UnPack Boolean Array

UPWN UnPack Word Array

it easy to configure tasks that used to require a whole bunch of program code. With Productivity Suite you just fill in the blanks. How productive is that! This style of programming is offered for even the more complex functions coordinated motion profiles, array functions, communications, PID, the list goes on and on. ■ Counters/Ti CNT Counter SCNT Simple Counter STMR Simple Timer TMR Timer = - 0 AIN ASCII In HOUT ASCII Out ACLR Clear Serial Port Buffer CPE | Custom Protocol Ethernet CPI Custom Protocol In CPO | Custom Protocol Out CSI Custom Serial Instruction DWX DataWorx Request FMSG EtherNet/IP Explicit Message GSR GS Drives Read 6SW GS Drives Write MBUS Modbus Read/Write MRX Modbus Read MWX Modbus Write NETW Network Read/Write RX Network Read WX Network Write EMAL Send Email UMW ViewMarq Write ■ Data I ABSE Absolute Encode CMPV Compare Values CPD Copy Data FILI FIFO/LIFO FIB First Bit On/Off INC Inc/Dec L06 Logical Bits LOGW Logical Words LKUP Lookup Table PKB Pack Bits

PKW Pack Word

SFR Shift/Rotate Bits

SMAG Sign Magnitude

UPKB UnPack Bits

UPKW UnPack Word

ductivitys

Productivity[®]Suite

In Productivity Suite there are so many time-saving instructions, even application-specific instructions like Flying Cutoff, and they all have one thing in common - their "fill-in-the-blank" programming method. This method makes



Powerful task manager

Have you ever had to write custom ladder logic to get a section of code to only execute periodically and not every scan? Or code that only needs to run on the first scan? What about code that runs multiple times per scan?

With the Productivity Suite Task Manager you simply break up your ladder logic into separate tasks and then drag them into the appropriate categories. In the screen shot to the left, the task (or ladder logic routine) "Initialize" has been placed in the "Run First Scan Only" category, and will only execute once at start-up.

The task "Convert ms to min, sec" has been placed in the "Run When Called" category, and can be used multiple times throughout the scan. Use the Task Library to reuse code or keep actions consistent between projects. Got a clever way of doing something? Save the task to the library for later, and import it into a new program as needed. Productivity Suite even imports any included UDS you've made to make integration a snap!

Combined with the ability to make run-time edits, the Task Manager is a powerful coding and debugging tool. Keep a task in the "disabled" category while you are developing it, and then drag it into the "Run Every Scan" to test it. Place data collection and other periodic tasks in the "Run Every Second" category and improve the scan time of your main routine.

Give it a try - we think you'll agree - the Task Manager offers true productivity enhancement.

AUTOMATION DIRECTS

1 - 8 0 0 - 6 3 3 - 0 4 0 5

more productive.

Program via USB or Ethernet

The Productivity Suite software supports PLC configuration and programming via either USB or Ethernet connection (dependent on CPU). The PLC Connections dialog box (shown left) allows you to connect to any PLC on your network for programming or data monitoring operations. The PLC Connections dialog even displays PLCs that are on other subnets, and will allow you to change the IP address and name of those PLCs so that you can connect to and program those as well. The "Blink CPU Display" buttons are a great way to make sure you are connected to the intended PLC, before risking a program transfer.

FREE software that's helpful and that customers love

Comprehensive help files

Index

Absolute Encoder (ARSE) Instruc

Agency Compliance and Certific Jarm (ALM) Instruction

rray Statistics (STA) Instr

ASCII Out (AOUT) Instruction Average (Continuous Running)

uilding a Ladder Logic Progran

Change of Value (CHG) Instruction

communication Error Codes ommunications ASCII and Cust mmunications Capabilities

mmunications Ethernet

communications Port Configurat ommunications Remote I/O and Compare Contact (CMP) Instruct

ompare Strings (CMPS) Instruct

compare Values (CMPV) Instruct ompile Error Messages

ASCII In (AIN) Instruction

Chart Properties . Check/Upgrade Firmware Clear Serial Port Buffer (ACLR) Ir

Close Project

ompile Project

Help Files are always available with detailed information on hundreds of topics and the latest version is embedded within your FREE copy of Productivity Suite. If that's not enough, give us a call at 1-800-633-0405 between 9am - 6pm weekdays. Won't cost you a penny and we're always glad to help.

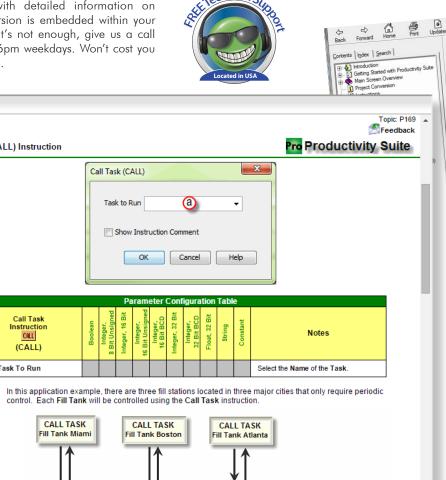
Call Task (CALL) Instruction

(CALL)

CALL TASK

Fill Tank Miam

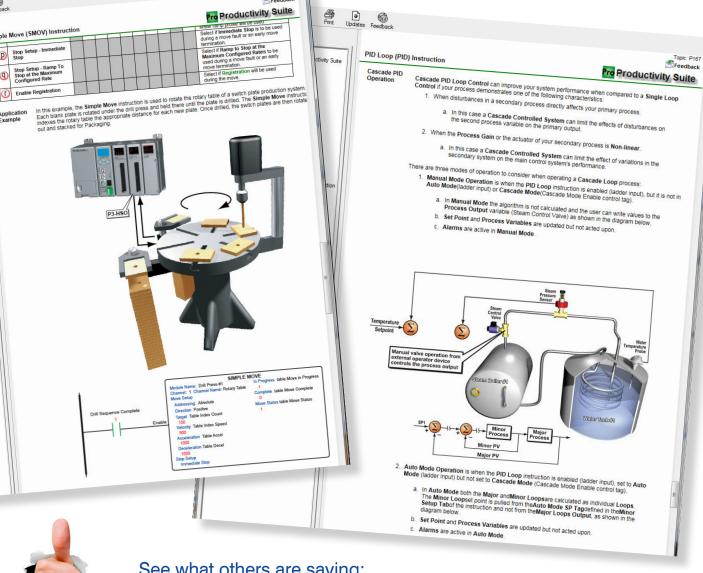
(a) Task To Run



1 - 8 0 0 - 6 3 3 - 0 4 0 5



Click here to browse the actual help files that are in software



See what others are saying:

"This is an extremely powerful CPU for the money. Also the free productivity software is a breeze to program with as well as to connect to the PLC. I use to swear by Allen Bradley components and will never go back unless specified by the customer. I have applied the Productivity 2000 to many machines around our plant and plan on converting everything over time. We currently have approximately 10 of these around the plant and have never had an issue with a CPU."

Adam in KIRKVILLE, NY

"My go to PLC. The quality and performance is there. I have to use other brands of PLCs for one reason or another from time to time but this one is my favorite. Top 4 reasons I use this PLC... Small footprint, performance, great tech support and the software is by far the best out **there**. Everyone has a favorite and this one is mine. My second favorite is its bigger brother, but this one has so much hp, I don't have to call on him that often."

"Incredibly easy to use. Love the tag database, the several communication protocols available, the ladder logic is very user friendly. The price is outstanding. I've been replacing as much Allen Bradley PLCs as I can with these bad boys.."

Domenic in GLOUCESTER, MA

See more reviews under the Reviews tab on any Productivity Series CPU's product page at www.automationdirect.com

John in SIMPSONVILLE, SC

With AutomationDirect.com . . . you always get more than you paid for.



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As a direct seller of industrial automation products we strive to provide you with everything you'll need to get the job done. Manuals, help files, inserts, drawings are all available for free from our website, but for those times when you need more we do offer free technical support. Our technical support staff is field experienced, highly qualified and ready to assist you, and our service and support has won numerous awards. So before you sign an expensive service contract, check us out and see how we make it possible to get more than you paid for.







Multiple

2010









See what others are saying:

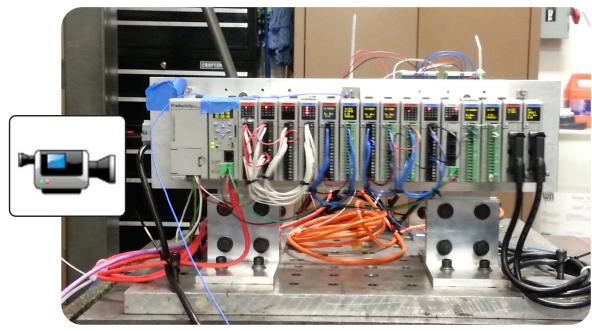
"Tech support is fantastic. They always get me pointed in the right direction. It's nice to call a company where the people on the phone don't just read pages from the manual, they can actively help solve your issue because they know how the systems work."

Adam in LAWRENCEVILLE, GA

OEMs voted our name 15 years in a row!

The Reader's Choice survey hosted by Control Design magazine aims to identify the best products and service in the industry. Results indicate we consistently provide topnotch support to our customers. This is in addition to several other industry awards from independent publications.





Online video of Productivity2000 QC vibration testing: http://go2adc.com/pro-shake

Affordable hardware that is built to last

Despite what you may have heard from the competition, our products are built to withstand the harshest field conditions. Check out the video above to see the Productivity2000 get put to the test. As you can see, the Productivity2000's rugged design was thoroughly tested for field duty and we stand behind its performance with a 2 year warranty. Not only can Productivity Series controllers handle adverse conditions, but the 50MB of user memory also ensures that they have enough processing power to accommodate any future expansions you may need.

FREE software - the way it should be!

You bought the controller, why pay more to control it? With Productivity, you always get what you need at no extra charge with the FREE feature-packed Productivity Suite software. Just check out what FREE will

- Flexible tag name programming
- Convenient, fill-in-the-blank function blocks
- Application specific instructions including user-friendly motion commands
- Time-saving hardware auto-discovery feature
- Built-in Web server and mobile connectivity for remote access
- Powerful Task Manager for increased efficiency
- Custom user defined tag structures
- Detailed Data view and histogram functionality
- Much, much more...





FREE Software! Download as often as you need. No license or key needed. Click here to download.



Other Freebies

And don't forget we also provide absolutely free online PLC training through our training partner Interconnecting Automation at www.automationdirect.com/plc-training. This free training encompasses basic PLC fundamentals as well as Productivity Suite specific topics.

Productivity Series PLCs PRS-21

PRS-20 Productivity Series PLCs

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1 - 8 0 0 - 6 3 3 - 0 4 0 5

Increase your productivity in more ways than one!

The Productivity Series offers a scalable controls solution with three low-cost hardware platforms and one FREE, powerful programming package. No matter the application, big or small, Productivity has the I/O, communications and affordability you need.



Productivity Series.....



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Click on part number (in second row) to be taken directly to AutomationDirect.com to check current pricing, stock status, tech specs, industry approvals, videos, photos and more...

		Productivity3000	Productivity2000		Productivity1000	
	Feature	P3-550E CPU	P2-550 CPU	P2-622 CPU	P1-550 CPU	P1-540 CPU
	User Display on CPU	V	/	V		
	Built-in USB Programming Port		V	~	✓	~
	Built-in Serial Ports (RS-232 & RS-485)	2	2	2 (each configurable for RS-232 or RS-485)	2	2
oh	Built-in Multipurpose Ethernet Ports (RJ45)	1	1	Up to 2*	1	1
1	EtherNet/IP Protocol	V	✓	~	✓	V
ļ	MQTT Protocol	>	V	(also supports MQTTS)	✓	V
Ų	Modbus RTU (serial) & Modbus TCP (Ethernet)	V	V	~	✓	V
in 8	Remote I/O Expansion Rack Support	V	>	/ *	V	
	Local I/O Expansion Rack Support	✓				
9	Max Productivity I/O Capacity	59,840 (using P3-RX and P3-EX modules)	4,320 (using P2-RS modules)	4,320 (using P2-RS modules)	752 (using P1-RX modules)	240 (local modules only)
	Hot Swappable I/O	V	V	V		
	Integrated GSDrive Support	✓ 32 max.	✓ 16 max.	✓* 16 max.	✓ 16 max.	
9	PS-AMC Support	>	V	✓ *	V	
	Data Port (data logging & project transfer)	√ USB	✓ microSD	✓ microSD	✓ microSD**	✓ microSD**
wed	Total Memory	50 MB	50 MB	50 MB	50 MB	50 MB
	Average Scantime (µsec) (1K boolean, 128 I/O)	380	200	200	1500	1300
	American Bureau of Shipping (ABS) Certification		V			
	Price	\$750.00	\$361.00	\$299.00	\$268.00	\$237.00

^{*} For 2 multipurpose Ethernet ports, Remote I/O port must be configured for multipurpose use. Remote I/O port cannot be used for native remote I/O connections if configured for multipurpose Ethernet.

^{**} Project transfer from the microSD card is not supported in the Productivity1000 CPUs

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