AUTOMATIONDIRECT.com

BRX Programmable Controller

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Located in USA

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for many products
see website for details

BRX PLC
Designed, Manufactured, Supported in the USA

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Do-more DRIVEN

For the latest prices, please check AutomationDirect.com.

The NEW BRX PLC doesn't know it's a micro-controller . . .

FREE SOFTWARE
with simulator

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

BRX
(pronounced "Bricks")

Do-more DRIVEN

Starting at $202.00
(BX-DM1-10AR-D)

ADVANCED INSTRUCTIONS

UP TO 36 BUILT-IN DISCRETE I/O POINTS

INTERNAL RAM AND microSD DATA LOGGING

ONBOARD SERIAL/ETHERNET COMM PORTS
(most models)

HOT-SWAPPABLE COMM PORT
(OPTIONAL)

INDUSTRY 4.0 & IIOT READY
(MQTT(S), HTTP(S), FTP)

INTEGRATED HIGH-SPEED I/O

MOTION CONTROL INCLUDED

ONBOARD ANALOG
(select models)

Performance at a Low Cost

The new BRX controller redefines what it means to be a PLC. Programmable Logic Controller - sure, but for BRX we prefer Performance at a Low Cost. You won't find a micro PLC with this many features, at this price, and with the Do-more can-do attitude anywhere else!

This under-budget overachiever was designed and is manufactured in the U.S. and comes with built-in data logging, versatile motion control, onboard serial communication with Ethernet option, an additional hot-swappable communications port, and integrated discrete, high-speed, and analog I/O (select models).

Four form factors are available to choose from with various built-in I/O configurations; the BRX PLC units are also expandable with up to 8 additional I/O modules (depending on model).

Expandable I/O starting at $39.00

So if you are ready to experience a new kind of PLC, one where price doesn't dictate performance, then you should check out the new Do-more BRX controllers. Save money and build it strong with BRX!

www.BRXPLC.com

BRX PLC featured is
BX-DM1E-36ED23 priced at $506.00
20-pt in and 16-pt out discrete,
4-ch in and 2-ch out analog

BRX PLC Designed, Manufactured, Supported in the USA
2 YEAR WARRANTY
30-day Money-Back Guarantee
FREE Technical Support Located in USA

. . . and neither will you!

AUTOMATIONDIRECT.com

For the latest prices, please check AutomationDirect.com.

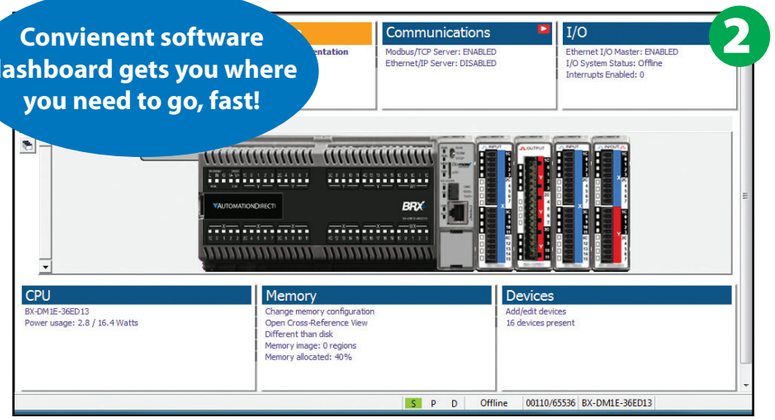
10 ways it's better with BRX PLCs!

1 Value that's hard to believe. Starting at just $202.00 (BX-DM1-10AR-D)

What would you expect to pay for a PLC with built-in data logging, integrated motion control, customizable communications ports, and expansion capabilities? If you said a few thousand, then you are definitely in the right place. If you said a few hundred, then you've been here before! The BRX PLC platform, with the proven Do-more! DM1 technology, raises the bar on getting the most out of your PLC dollar. Whether you need a little (a simple communications controller with no on-board I/O) or a lot (36 built-in I/O points with motion, analog and expansion), the BRX family of PLCs will deliver outstanding features and ease-of-use at an unbelievable price.

Don't forget, with BRX PLCs you also get FREE software, FREE award-winning tech support, FREE shipping and FREE PLC training. You wont find this much value anywhere else!

- Data logging
- Advanced motion capability
- FREE Programming software with simulator
- Hot swappable comm ports
- Built-in high-speed I/O
- Rest API for seamless integration with IT systems
- Embedded Web server
- Plus much more



2 FREE Industry-proven Software

The FREE Do-more Designer programming software was developed and is supported in the U.S. and was designed to be powerful, flexible and easy to use. The user-friendly, fill-in-the-blank design makes complex operations like PID and motion control a cinch. It's available to download online whenever you choose, however many times you'd like. Take it for a spin or start your project immediately, there are never any licensing fees or service charges.

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

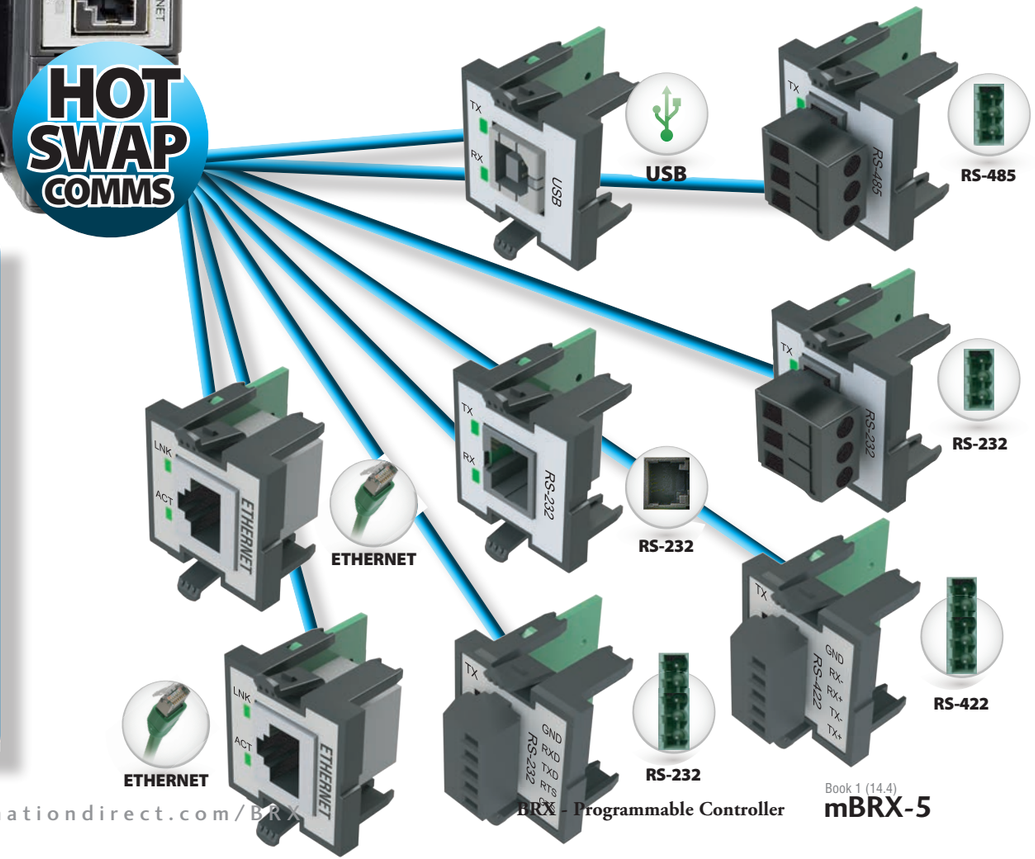
www.BRXPLC.com

3 Customized Communication

With the BRX PLC platform you can choose which communications ports you need. All BRX PLC base units come with a built-in RS232C/485 software-selectable serial port, with an optional RJ45, 10/100Mbps Ethernet port on select units.

With support for EtherNet/IP (Explicit (Client, Server), Implicit (Server)), MQTT/MQTTS, HTTP/HTTPS, DHCP, FTP (Client), Modbus TCP, TCP/IP, Modbus RTU (Master/Slave), SMTP (Email), SNTP (Time Server), K-sequence (DirectLOGIC users), and Ethernet remote I/O, the BRX PLC family provides supreme communications versatility for any application.

In addition, all BRX base units have a slot in the CPU that allows for an additional user-selected communications port. These user-selected ports are called Pluggable Option Modules (POMs) and come in 3-pin serial RS232, RJ12 serial RS232, 3-pin serial RS485, 5-pin serial RS232 with flow control, 5-pin serial RS422, USB and Ethernet versions. Simply choose the port you want, install it and go!



CUSTOMER FEEDBACK

"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

CPU and I/O Comparison

	AutomationDirect BRX PLC	vs. Allen-Bradley Micro 800	vs. Siemens S7-1200	vs. IDEC FC6A
PLC Unit (with Ethernet)	$484.00 BX-DM1E-36ED13-D	$754.75 2080-LC50-48QVB	$1,300.00 6ES7 214-1AG31-0XB0	$700.00 FC6A-C40K1CE
(28) 24VDC Inputs	$39.00 BX-08ND3 (8-pt DC IN module + 20 DC IN on PLC unit)	Built-in (28 DC IN on PLC unit)	$720.00 6ES7 221-1BH30-0XB0 (16-pt DC IN module + 14 DC IN on PLC unit)	$125.00 FC6A-N08B1 (8-pt DC IN module + 20 DC IN on PLC unit)
(20) 24VDC Outputs	$46.00 BX-08TD1 (8-pt DC OUT module + 16 DC OUT on PLC unit)	Built-in (20 DC OUT on PLC unit)	$614.29 6ES7 222-1BH30-0XB0 (16-pt DC OUT module + 10 DC OUT on PLC unit)	$180.00 FC6A-T08K1 (8-pt DC OUT module + 16 DC OUT on PLC unit)
(4) Analog Inputs	Built-in (4 Analog IN on PLC unit)	$171.72 2080-IF4	$450.00 6ES7 234-4HE30-0XB0 (4IN/2OUT Analog combination module)	$460.00 FC6A-L06A1 (4IN/2OUT Analog combination module)
(2) Analog Outputs	Built-in (2 Analog OUT on PLC unit)	$102.61 2080-OF2		
Total System Price	$569.00	$1,029.08	$3,084.29	$1,465.00

All prices are U.S. published prices. AutomationDirect prices as of 11/5/2020. Allen-Bradley, Siemens and IDEC prices taken from www.radwell.com 11/5/2020.

For the latest prices, please check AutomationDirect.com.

10 ways it's better with BRX PLCs!

BRX

4 Integrated Motion on Multiple Levels

Motion with BRX PLCs can be as easy or sophisticated as your application needs. Multiple instructions allow you to easily define the complexity of your motion control application. Simple instructions with minimal user input for basic move commands, intermediate instructions with more user-defined selections, and advanced instructions to create custom move profiles are all available for you to choose from. And with the built-in high-speed I/O, the BRX platform takes practical motion to a whole new level.

5 Built-in Data Handling and Storage

Data collection is becoming one of the most important functions of a control system and with the BRX PLC family, data logging is included free of charge. The BRX CPUs come standard with 1MB of internal RAM for data logging plus up to 32GB of data storage on an optional, removable microSD card. The BRX platform also integrates many data-centric instructions for custom data logging and file handling operations.

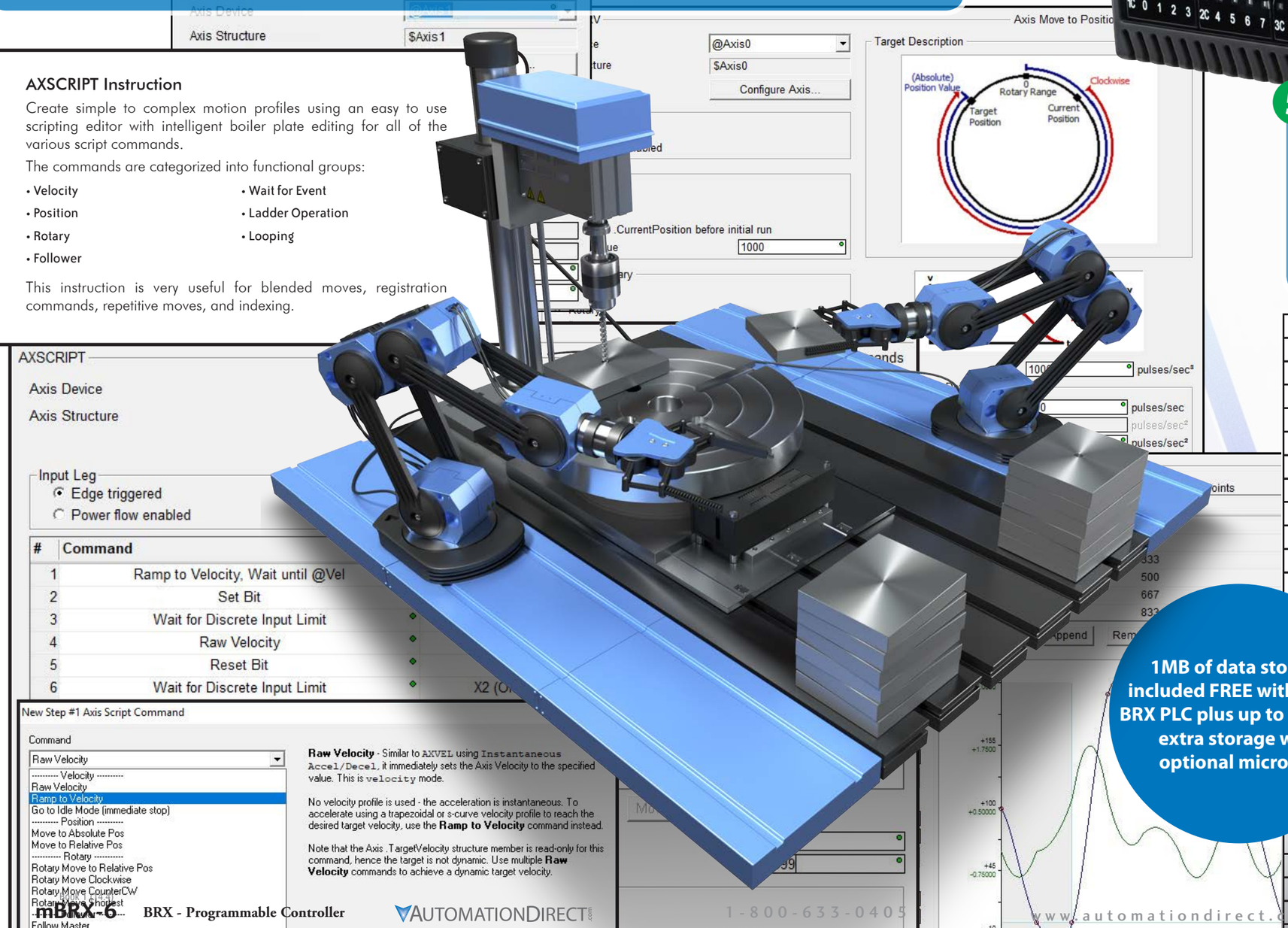
AXSCRIPT Instruction

Create simple to complex motion profiles using an easy to use scripting editor with intelligent boiler plate editing for all of the various script commands.

The commands are categorized into functional groups:

- Velocity
- Position
- Rotary
- Follower
- Wait for Event
- Ladder Operation
- Looping

This instruction is very useful for blended moves, registration commands, repetitive moves, and indexing.



Date	Time	Tank1Temp	Tank2Temp	Tank3Tem
2/22/2017	12:35:49.538	79.400002	59.200005	86.40000
2/22/2017	12:35:50.467	79.400002	59.200005	86.40000
2/22/2017	12:35:51.468	78.900002	58.1100005	88.60000
2/22/2017	12:35:52.468	78.800003	58.800003	88.80000
2/22/2017	12:35:53.468	78.900002	59.5	88.60000
2/22/2017	12:35:54.468	79.5	59.5	88.60000
2/22/2017	12:35:55.468	79.400002	59.200005	86.40000
2/22/2017	12:35:56.468	78.900002	58.1100005	88.60000
2/22/2017	12:35:57.468	78.900002	58.1100005	88.60000
2/22/2017	12:35:58.468	78.900002	58.1100005	88.60000
2/22/2017	12:35:59.469	79.5	58.1100005	86.7
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2/22/2017	12:36:01.469	79.5	58.1100005	86.7
2/22/2017	12:36:02.469	79	59	86.7
2/22/2017	12:36:03.469	79.099998	59.099998	86.06666
2/22/2017	12:36:04.469	79.099998	59.099998	86.06666
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2/22/2017	12:36:07.470	79.099998	59.099998	86.06666
2/22/2017	12:36:08.470	79.200005	59.500005	86.20000
2/22/2017	12:36:09.470	79.200005	59.500005	86.20000
2/22/2017	12:36:10.470	79.800003	59.800003	86.80000
2/22/2017	12:36:11.470	79.800003	59.800003	86.80000
2/22/2017	12:36:12.470	79.900002	59.1100005	86.60000
2/22/2017	12:36:13.470	79.200005	59.500005	86.20000
2/22/2017	12:36:14.470	79.200005	59.500005	86.20000

1MB of data storage included FREE with every BRX PLC plus up to 32GB of extra storage with optional microSD!

10 ways it's better with BRX PLCs!

6 Flexible hardware to meet your needs

The BRX PLC family uses the popular Do-more! DM1 technology and is an extremely versatile compact stackable system that you can customize to your specific controller needs. With four different form factors, built-in high-speed inputs, interchangeable communications port, on-board analog I/O, and many I/O expansion modules available, you can build the ideal controller for your application.

See what BRX is all about in this video

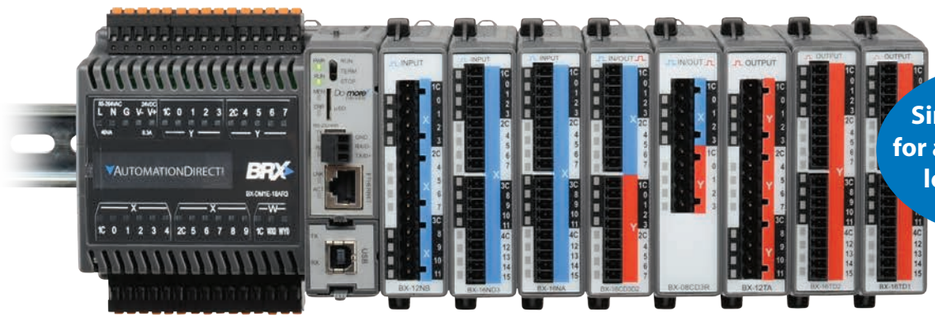
For the latest prices, please check AutomationDirect.com.

BRX Starter Kits

EVERYTHING YOU NEED TO GET STARTED

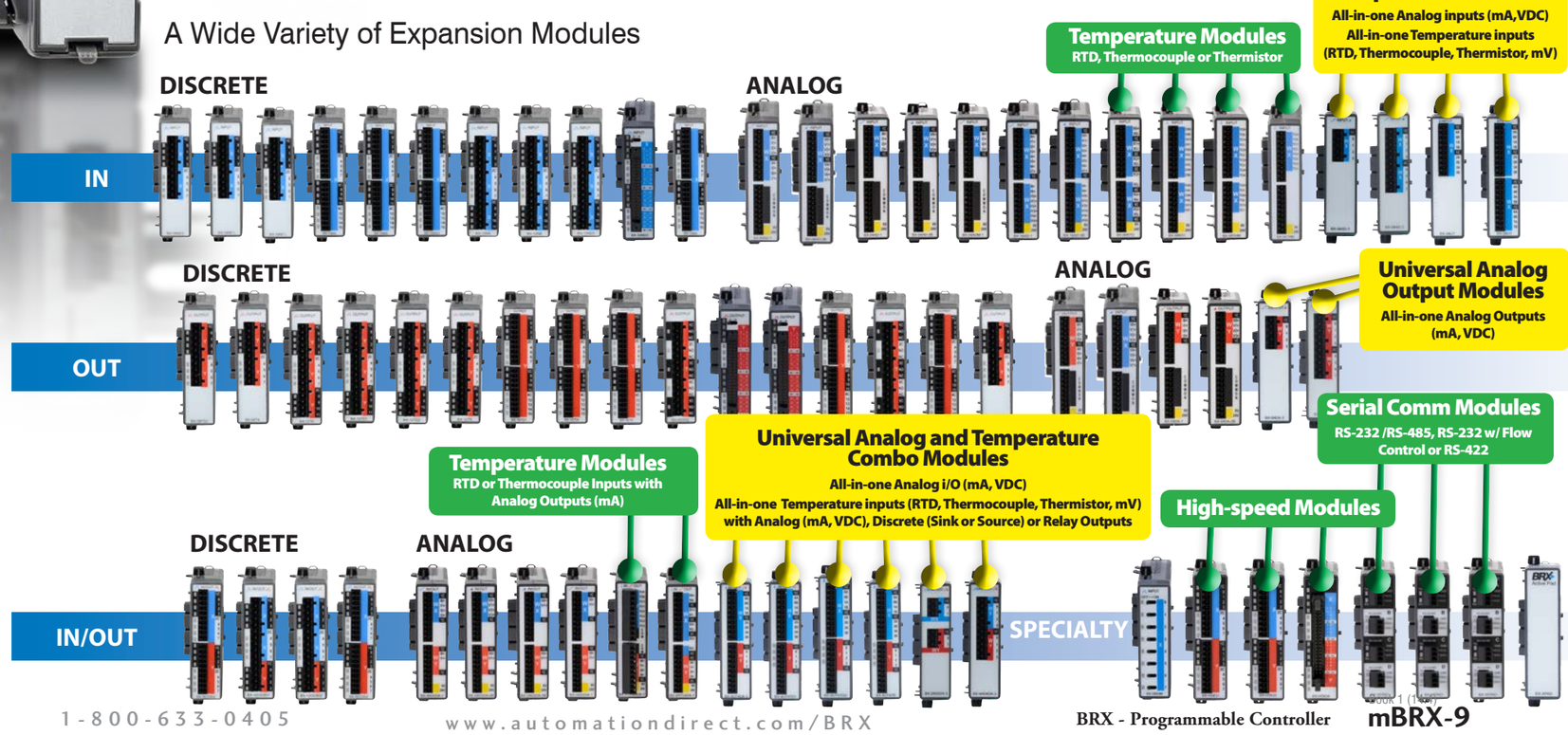
BX-DM1-START
$435.00

BX-DM1E-START (w/Ethernet and analog I/O)
$501.00



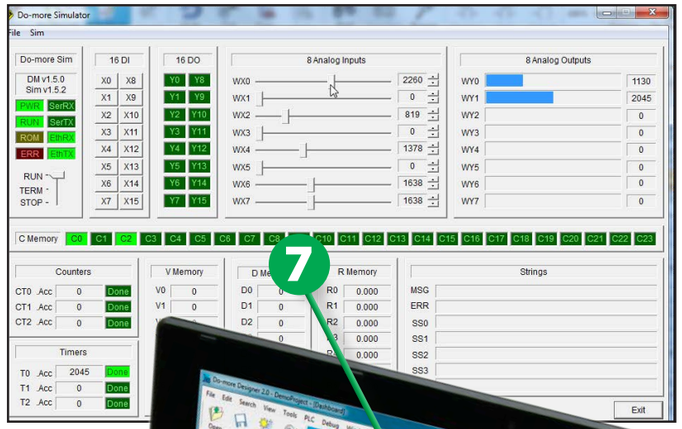
Simple expansion for an additional 256 local I/O points!

A Wide Variety of Expansion Modules



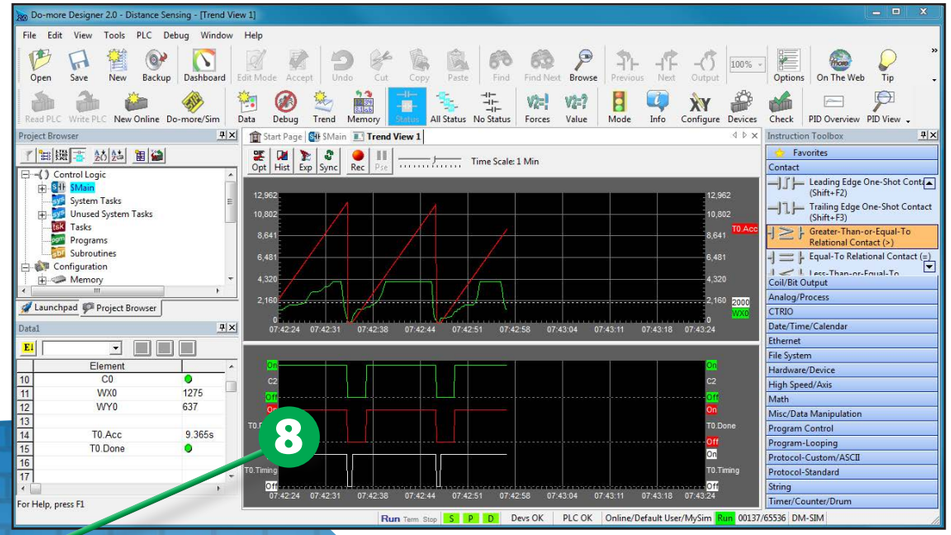
For the latest prices, please check AutomationDirect.com.

10 ways it's better with BRX PLCs!



Timesaving PLC Simulator included for FREE

There is no better time-saver than the FREE PLC simulator in the Do-more Designer software. Use it to test your system code without the hardware present, 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.

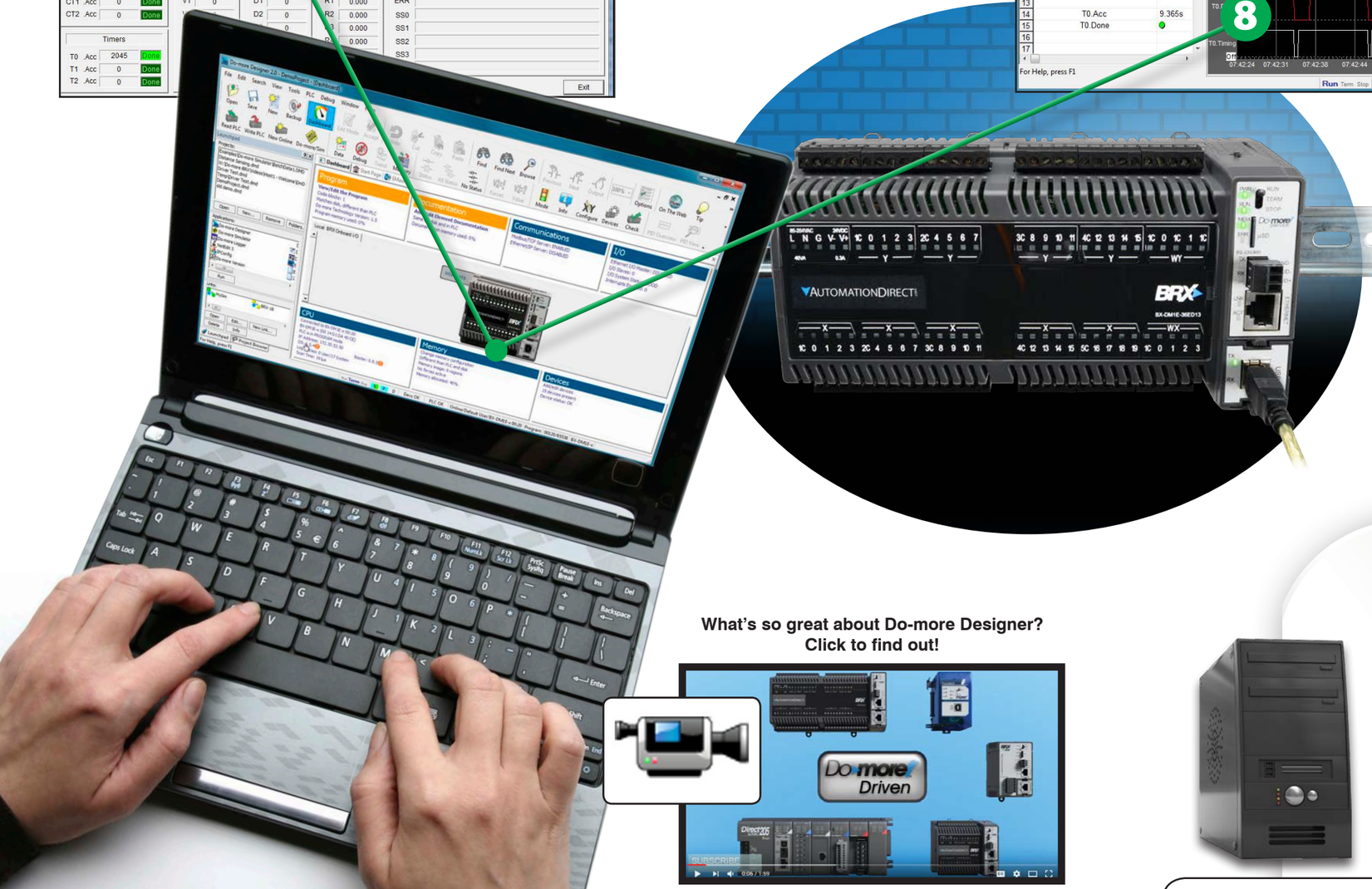


Trouble-free troubleshooting

When problems arise, fix them fast with the easy-to-use troubleshooting tools designed into the Do-more Designer software. See real-time trending data with the Trend View, execute the program one step at a time with the Debug View, or get diagnostic data remotely anytime via the embedded web server. These and other integrated software tools help save you troubleshooting time and alleviate frustration.

www.BRXPLC.com

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



9 Industry 4.0 and IIoT ready!

With Industry 4.0 and the IIoT, today's modern systems are more connected than ever before. BRX PLCs' numerous built-in connectivity options allow you to access the tons of data on the world wide web and harness this wealth of information using HTTP(S) and JSON Parse/Build instructions.

BRX controllers' Rest API also provides easy integration with corporate-level IT systems so plant-floor data can be compiled and analyzed with data from other departments, like procurement or logistics, for a bird's eye view of the complete production process, from start-to finish.

HTTP(S)

MQTT

API

INDUSTRY IIoT 4.0

Web Servers, Cloud Servers, IT Databases, IIoT Platforms, etc.

What's so great about Do-more Designer? Click to find out!

For the latest prices, please check AutomationDirect.com.

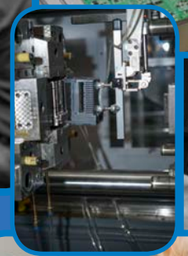
10 ways it's better with BRX PLCs!

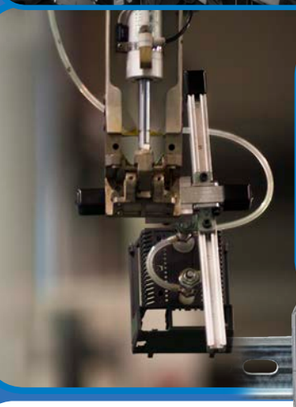
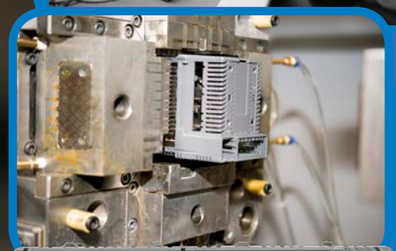


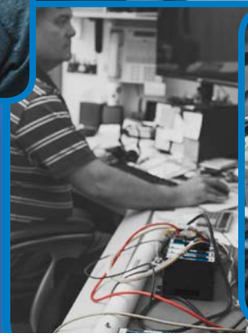


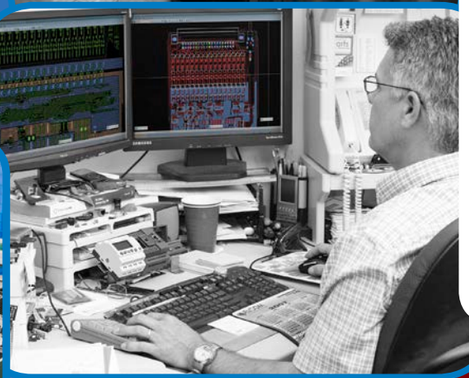




"Designed with American ingenuity, built by your neighbors, and supported at home, it doesn't get any better! "

BRX

BRX PLC — Designed, Manufactured, Supported in the USA

10 Fortified with American Pride

The BRX PLC hardware is built to last and is engineered, manufactured and supported right here in America by industrial automation veterans. With hardware design and fabrication facilities located in Tennessee and Florida, the BRX PLC platform delivers the quality you expect but at a price you won't.

But that's just half of the story!

The *FREE* Do-more Designer programming software was developed and is also supported in the US by expert developers with years of experience at the Host Engineering facility in Jonesborough, Tennessee.

Designed with American ingenuity, built by your neighbors, and supported at home, it doesn't get any better!

Host ENGINEERING, INC. — Solutions Designed with Spirit

JONESBOROUGH, TN

Host Engineering was created in 1992 with the mission to create DirectSOFT, the first Window based micro-PLC programming package, which supported the 1994 launch of PLCDirect by Koyo, 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 in 2017, this partnership has produced the Do-more! based BRX PLC platform with a multitude of new features that are both innovative and affordable.

www.hosteng.com

AutomationDirect

Suburban ATLANTA, GA

AutomationDirect.com, originally founded as PLCDirect in 1994, has quickly grown from a tiny PLC company to a well-recognized name in the industrial automation market. As the first industrial controls company to successfully use a direct sales catalog for PLC products, AutomationDirect.com has grown from 200 products to tens of thousands, all with affordable prices and industry-recognized service and support.

www.automationdirect.com

FACTS engineering

TRINITY, 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, HMI, power, and signal conditioning products. FACTS often collaborates with AutomationDirect on new products, like Productivity2000 and BRX PLCs, that are designed to exceed customer needs.

www.facts-eng.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 BRX PLCs. We want you to be satisfied with your purchase, and paying extra for software just isn't that satisfying!

Download the fully-functional (no demo) software at www.BRXPLC.com and try it out. You'll be surprised at how robust FREE can be.

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 Do-more Designer specific topics.

For the latest prices, please check AutomationDirect.com.

CUSTOMER FEEDBACK

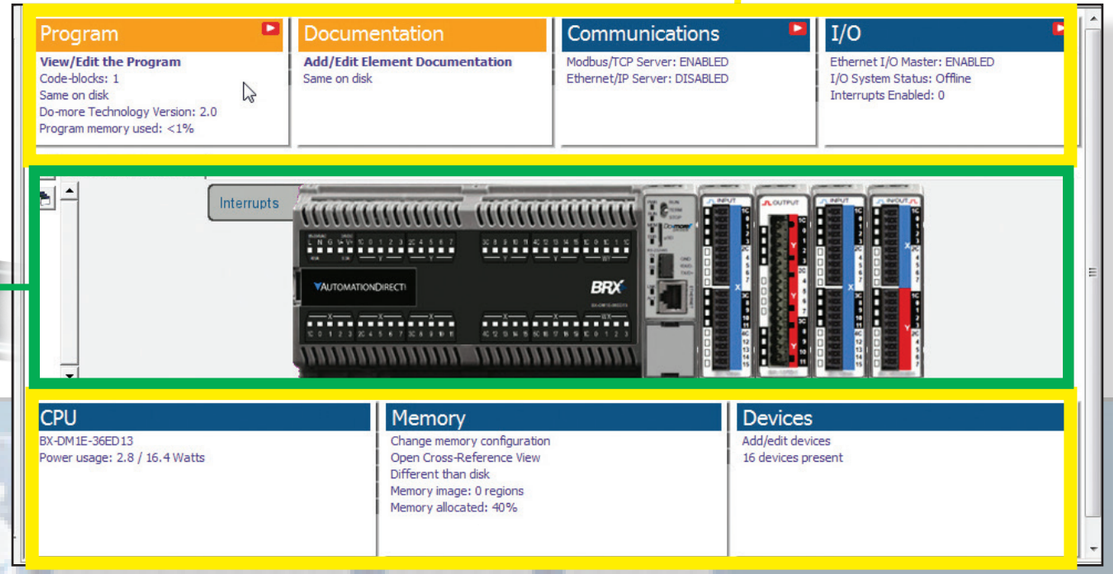
"The Do-More software is more user friendly than any I have ever used before. PID, Modbus communications, Filters etc... All very easy to use!"

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.

The Dashboard is divided into 7 major sections (Program, Documentation, Communications, I/O, CPU, Memory and Devices). Each section has real-time status and configuration information with easy hyperlinks to the configuration screen or monitor tool you need.

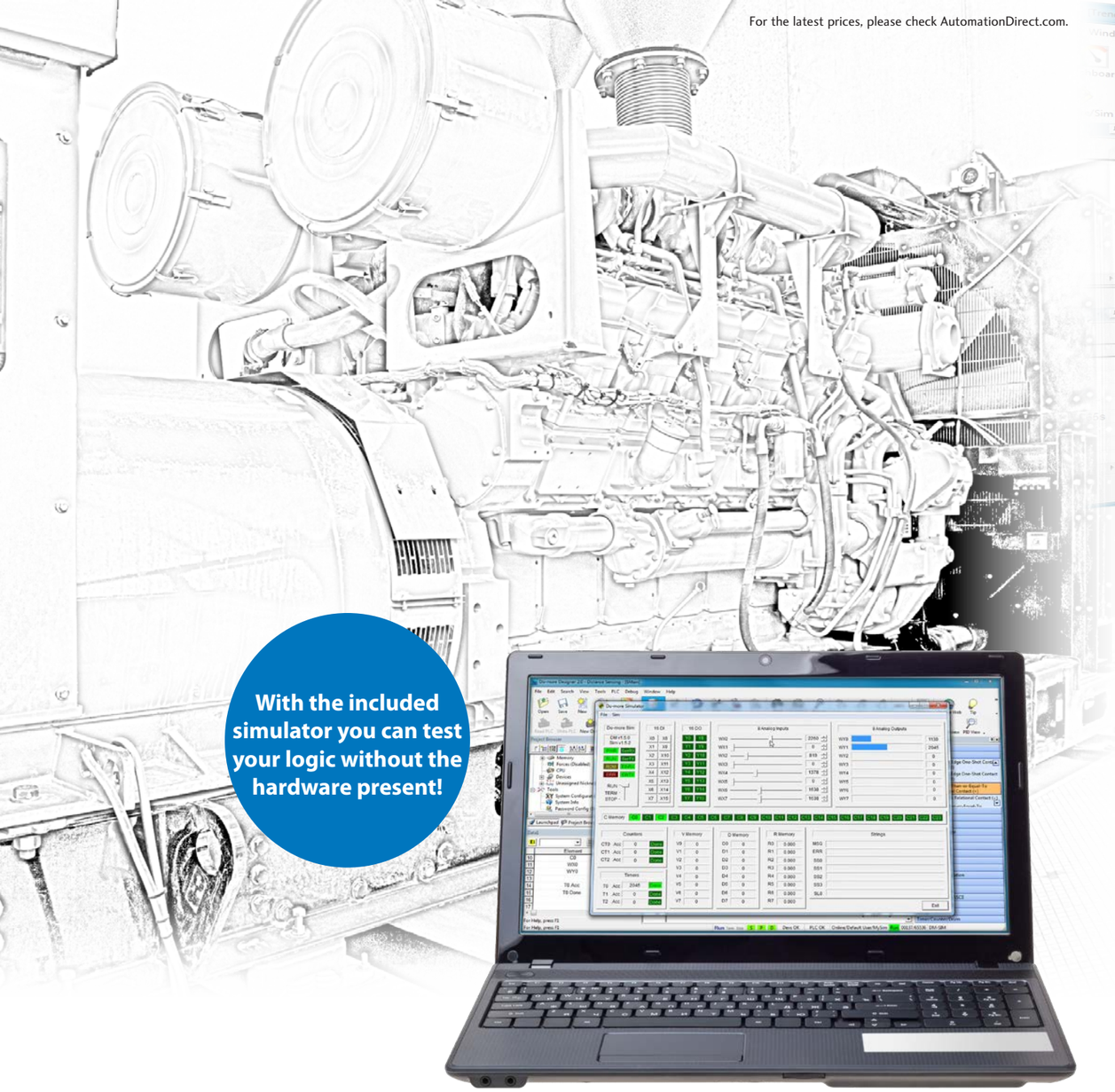


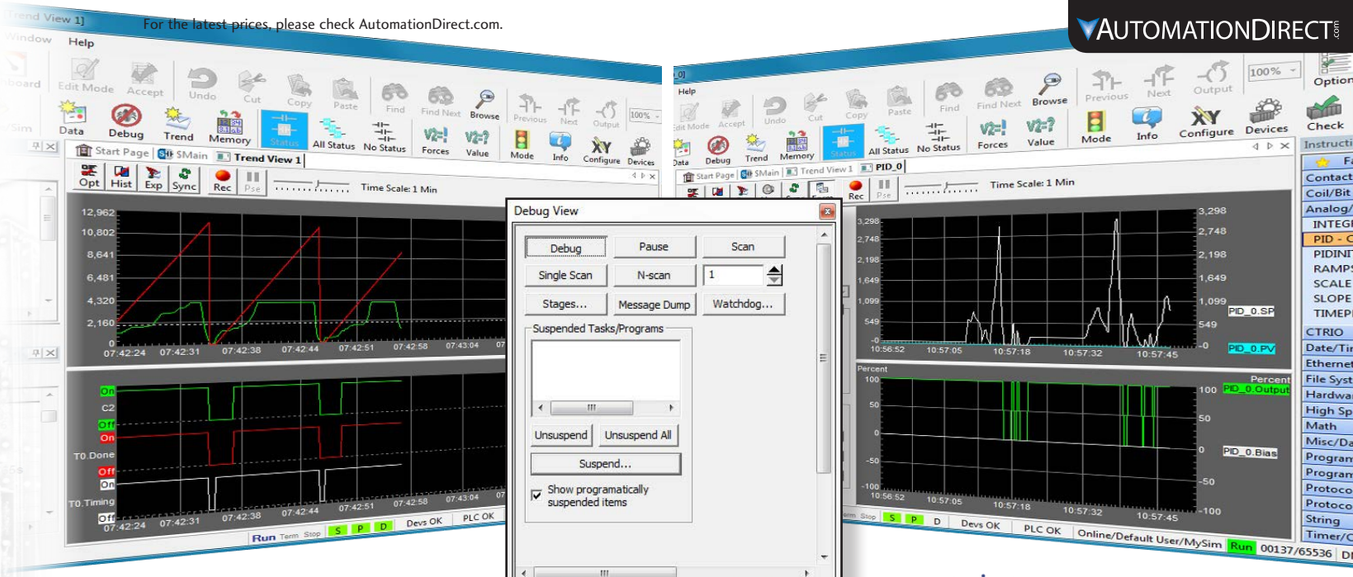
The center section contains a series of graphical representations for the PLC system's components. The leftmost selection is the local base with the CPU. Any time the mouse cursor is in the center section orange outlines (hotspots) will appear on the PLC system to indicate there is status information available or configuration that can be done for that area.

Onboard Analog I/O

WX0: 4-20mA, Scaling enabled (WX0: 6553-32767 => RX0: 0.0-500.0)
WY0: 0-5VDC, No scaling

For the latest prices, please check AutomationDirect.com.





Find it, Fix it, Fast

Easy-to-use troubleshooting tools are built into the BRX programming software to help you resolve unforeseen issues quickly. The Trend View allows you to see exactly how the system is responding over time, the PID View displays the real-time status and values of your control loops, and the Debug View gives you control over program execution - suspending or isolating suspected code sections. These features and others allow you to easily hunt down even the dreaded intermittent fault in no time and keep your operation running smoothly.

Do-more DRIVEN

If it ain't broke, simulate it

When programming, there's nothing worse than implementing an obvious improvement only to realize that another function was inadvertently broken in the process. Don't let that happen to you. With Do-more Designer, you get a PLC simulator that you can use in conjunction with the Data View to test code modifications before a simple improvement becomes a time-critical malfunction.

The time-saving 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. You can even test your communication configuration using the host PC's comm ports to ensure there are no surprises.

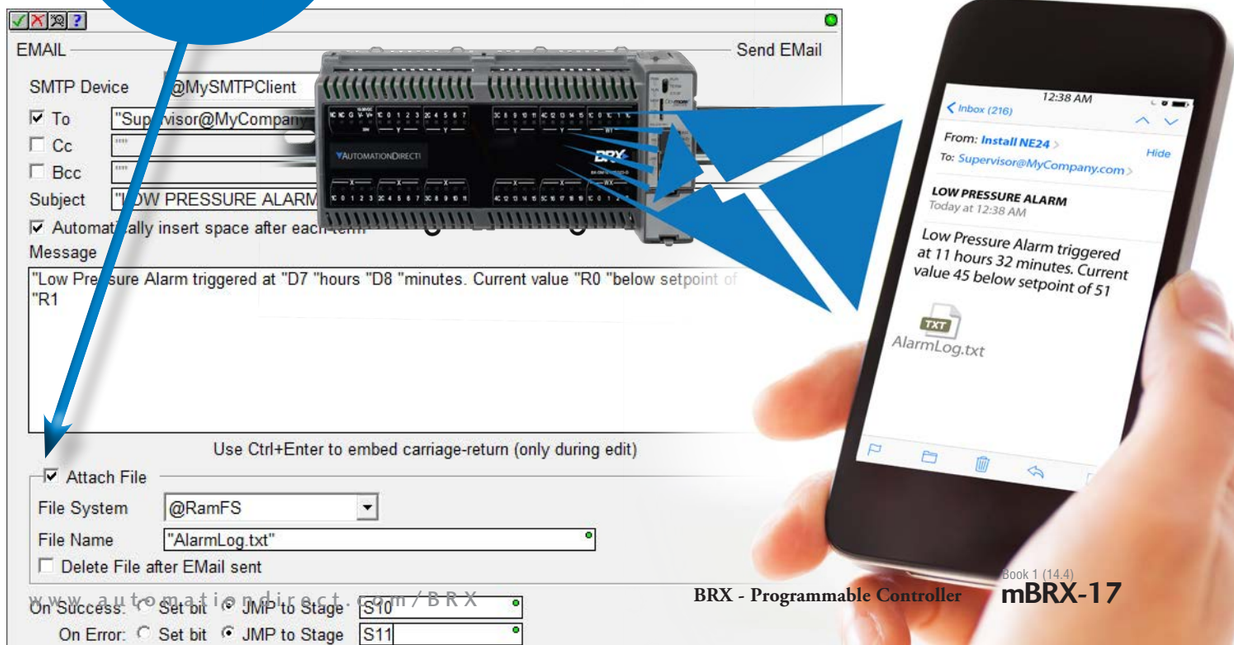
www.BRXPLC.com

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

Email vital data securely with SSL/TLS encryption!

Attach data logs to outgoing emails and get the information you need when you need it most.

"Temperature exceeds allowable range"... "Tank level approaching overfill"... Getting critical messages like these emailed directly to you from your PLC may not be a new feature for you, but receiving these secure emails with data files attached probably is. The Do-more Designer software now has the ability to attach data log files to an outgoing email. That way you'll know in an instant that the temperature has not only exceeded its range, but by how much and for how long. Or, not only that the tank is overfilling, but how fast and if a shutdown was initiated. Information like this can be invaluable when failures occur and possible dangers arise.



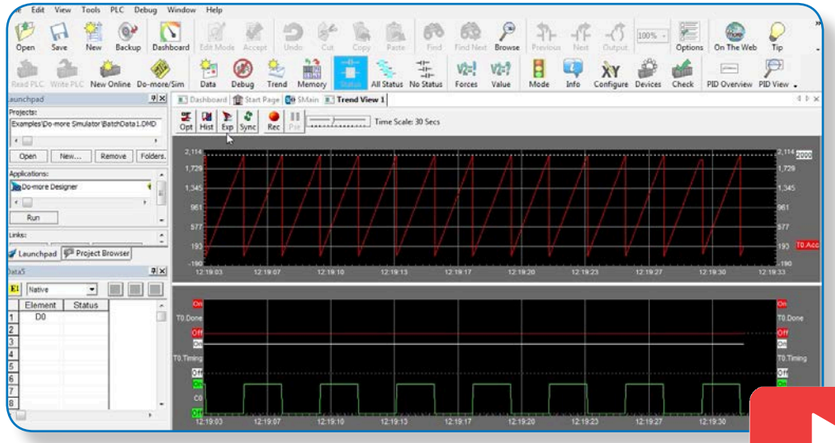
For the latest prices, please check AutomationDirect.com.

Quick-start videos, embedded directly in the software, get you up and rolling in minutes!

BRX

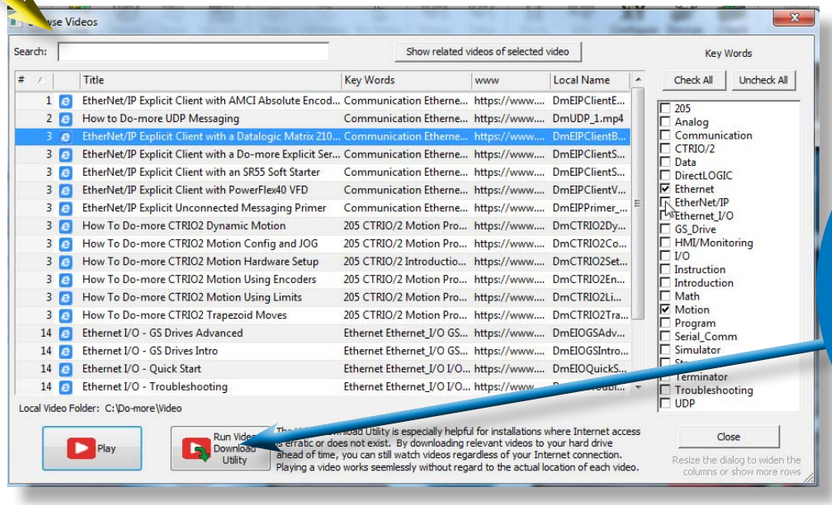
Five quick start videos embedded in the programming software help you get started quickly.

Plus! A huge ever-expanding online video library accessible from within the software



Get help in an instant with direct access to a huge video library

The Do-more Designer software includes a video help browser for quick access to our library of instructional videos. If you need help with EtherNet/IP, motion and many more topics, just filter the results, click the video, and get help instantly.



You can also download the videos you want and watch them whenever you choose. Perfect for job sites with no Internet access.

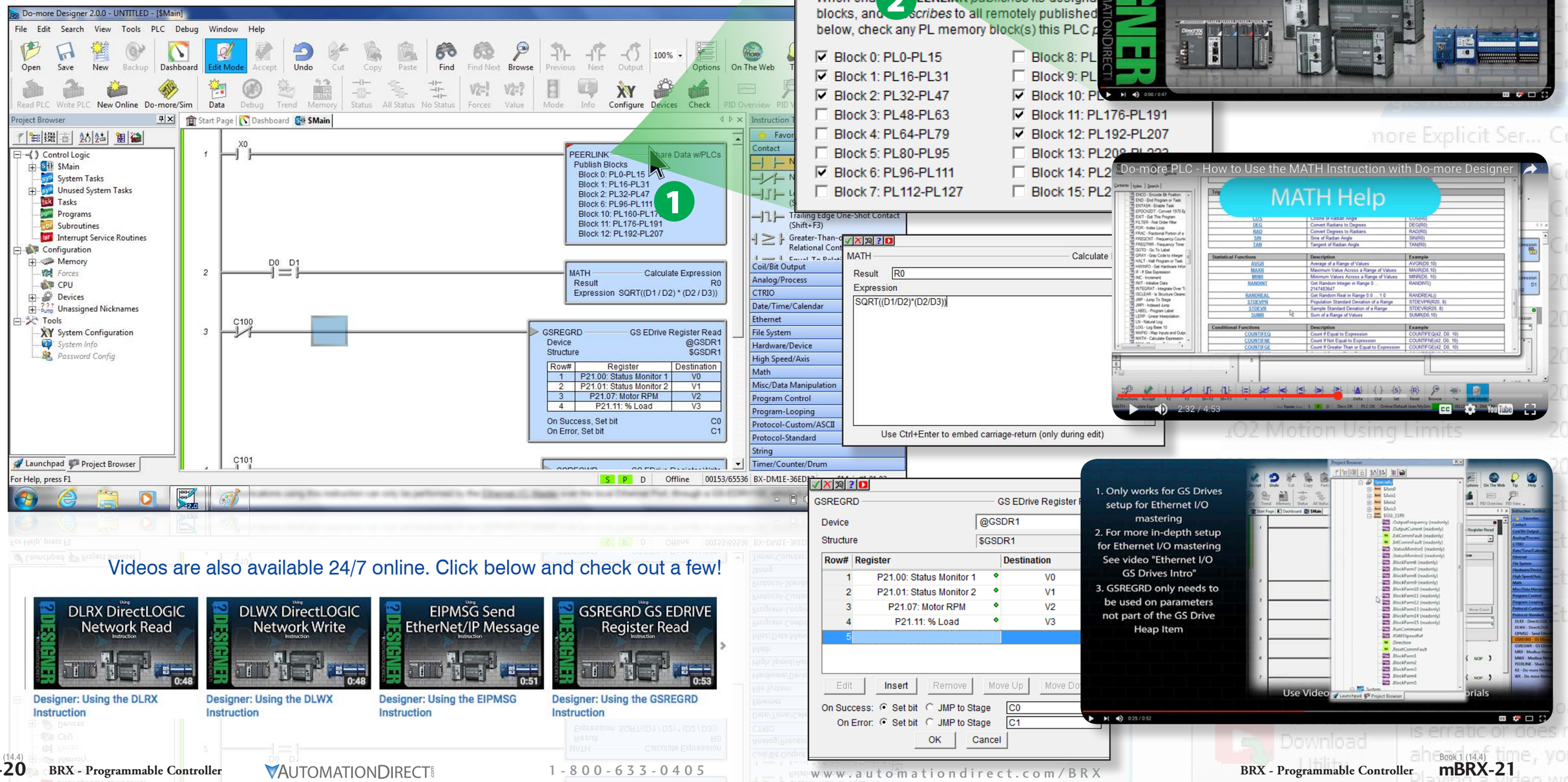
For the latest prices, please check AutomationDirect.com.

Let our instructional videos show you how

Enhanced video help has also been incorporated into the instruction set of Do-more Designer. If you need assistance with an instruction, now 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.

Short 30-60 second videos to help you when you need it.

1. Open Function Block Instruction
2. Click "play video" icon
3. Video will open and play (internet connection required)



Videos are also available 24/7 online. Click below and check out a few!

Designer: Using the DLRX Instruction

Designer: Using the DLWX Instruction

Designer: Using the EIPMSG Instruction

Designer: Using the GSREGRD Instruction

We want everyone to experience the Do-more difference!

Convert any DirectSOFT project to Do-more Designer and the BRX platform using the convenient migration tool.

Easy migration for DirectLOGIC customers

The Do-more! DM1 technology engine inside the BRX platform is a powerful, low-cost, next-generation solution for any application. We want everyone to experience the Do-more! difference, especially our DirectLOGIC customers. That's why we have included a program migration tool in the Do-more Designer programming software that helps provide a quick transition from DirectLOGIC to the Do-more! BRX family. This tool will guide you through the migration and greatly reduce the time needed for conversion.

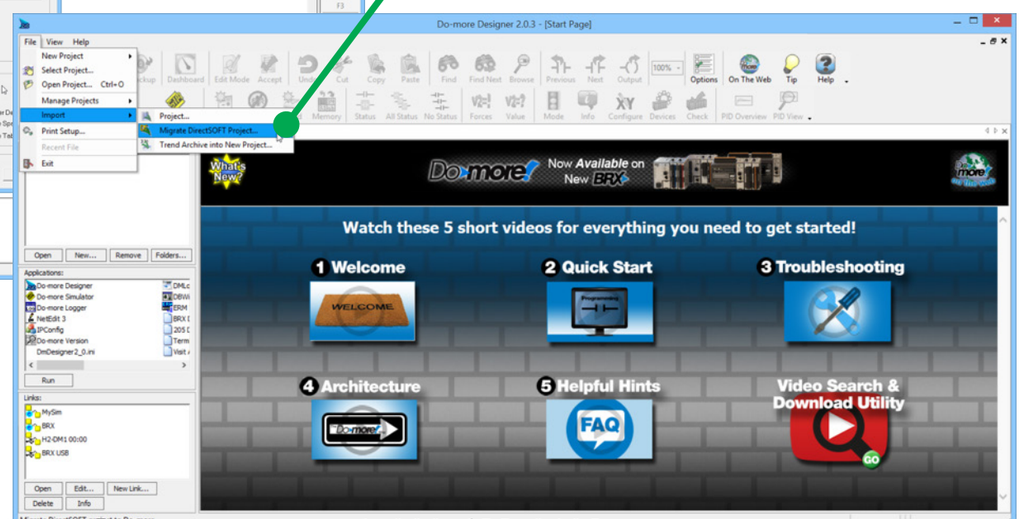
BRX

1 Export the project from DirectSOFT

Open the DirectSOFT project and export the project using the default settings. This will create a .TXT project file.

2 Import the project into Do-more Designer

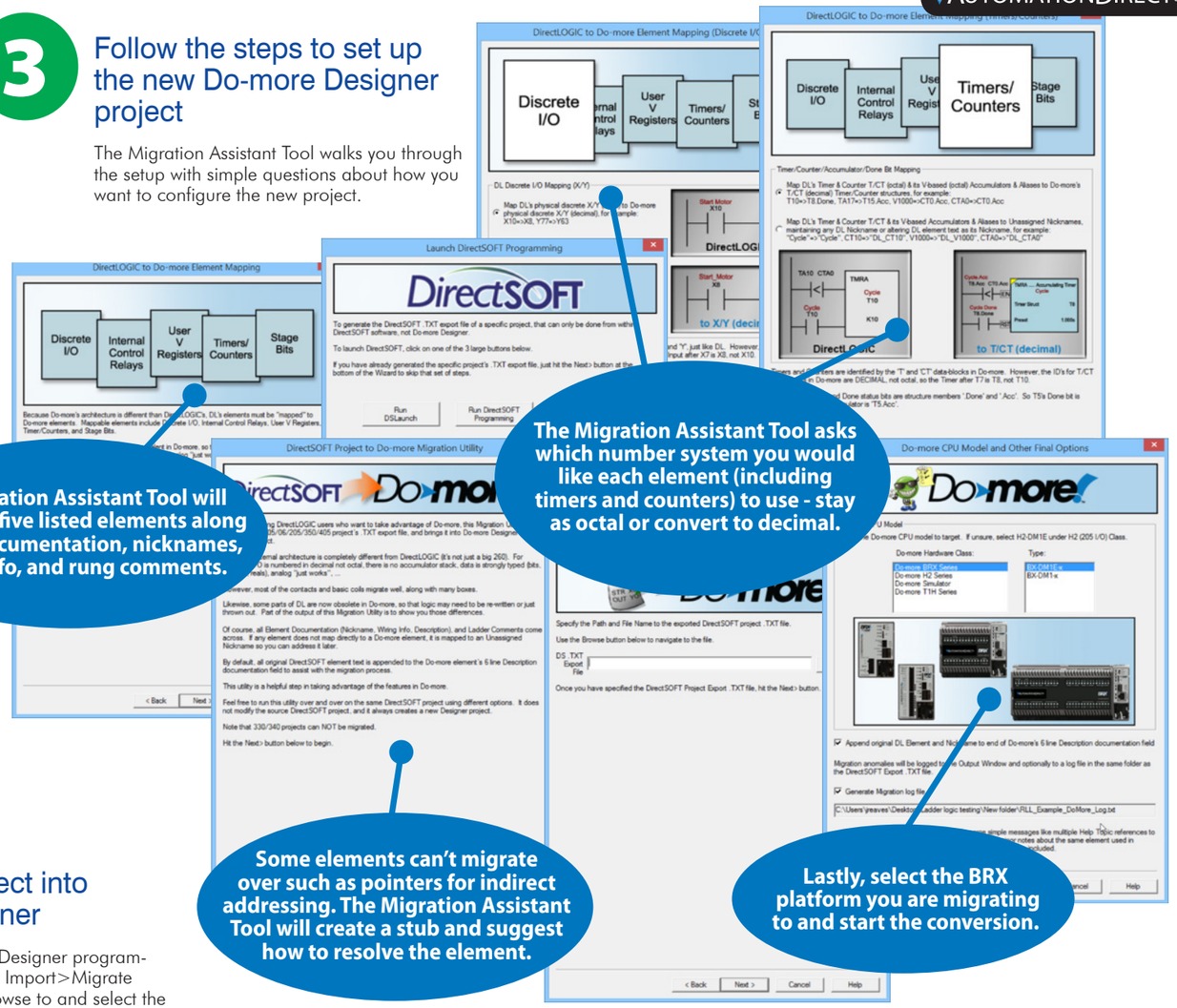
Open the free Do-more Designer programming software and select Import>Migrate DirectSOFT Project... Browse to and select the .TXT file saved from the previous step.



For the latest prices, please check AutomationDirect.com.

3 Follow the steps to set up the new Do-more Designer project

The Migration Assistant Tool walks you through the setup with simple questions about how you want to configure the new project.



The Migration Assistant Tool will convert all five listed elements along with all documentation, nicknames, wiring info, and rung comments.

The Migration Assistant Tool asks which number system you would like each element (including timers and counters) to use - stay as octal or convert to decimal.

Some elements can't migrate over such as pointers for indirect addressing. The Migration Assistant Tool will create a stub and suggest how to resolve the element.

Lastly, select the BRX platform you are migrating to and start the conversion.

Do-more! DESIGNER

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

CUSTOMER FEEDBACK

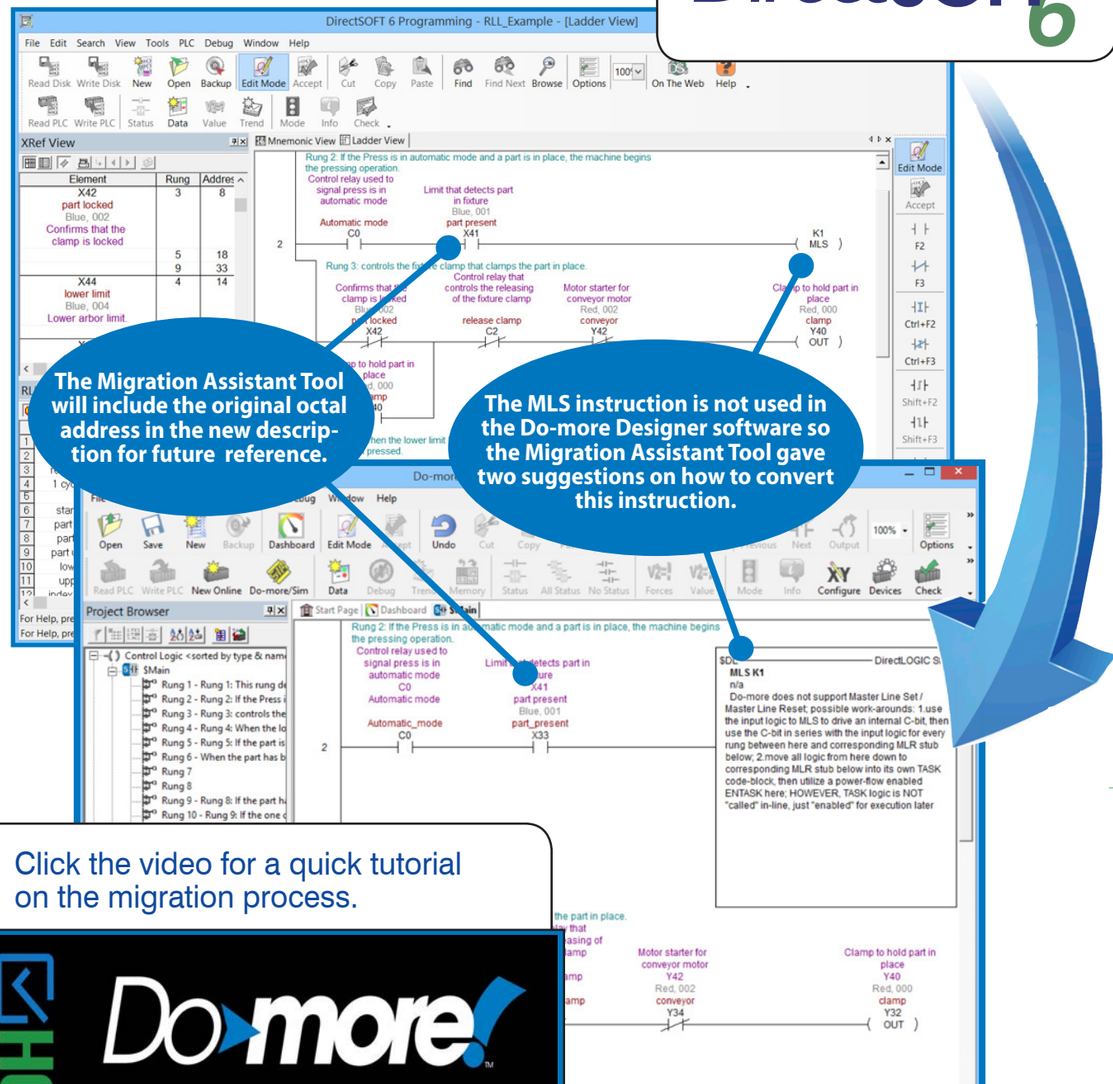
"...I recently converted a DirectLogic 205 system to Do-more. The added capabilities of this processor are unbeatable. It's hard to believe the communications, speed, instruction set and other goodies packed in here..."

Phil in BELLEVILLE, ON

4 Complete the Conversion

The Migration Assistant Tool will easily convert straight Boolean logic and its associated elements (timers, counters, etc.). Depending on your code's complexity, the conversion may be complete at this point or there may be some extra steps needed to fully convert the project from DirectSOFT to Do-more Designer.

DirectSOFT6



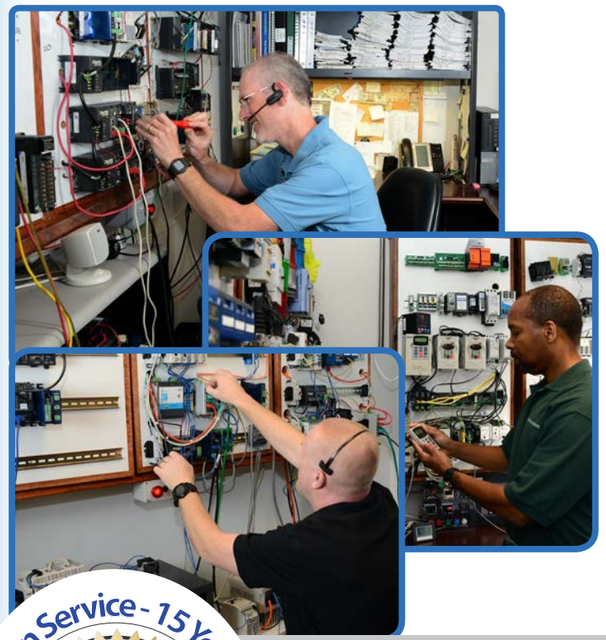
Click the video for a quick tutorial on the migration process.

Do-more DESIGNER

AUTOMATIONDIRECT.COM

When did *"How may I help you?"* become *"What's your subscription ID number?"*

You're never more than a quick phone call way from the best tech support in the business . . . and it's **FREE!**



Are you tired of calling a local distributor to discover their "product expert" is not in? How about waiting hours for technical service to return a message? Or paying for phone support service and then having to be on hold waiting for it?

It's no accident that our Tech Team routinely demonstrates the best attitude and manners in the industry!

We send our customers surveys to score our attitude, accuracy and timeliness then take these scores and use them as part of the Tech team's report card. The bottom line is that you get great service by design.

Over 85% of customers who have used our service and responded to surveys say it's better than what they have been getting from other automation suppliers. 91% say we are above average to excellent in accuracy, 90% say we are above average to excellent in thoroughness, 91% say we are above average in response time, and 96% rate us above average in courtesy. Isn't it great to get better service AND a better price?

READERS' CHOICE AWARDS 2019 control design

- Software, PLC Programming
- Controller, PLC
- Controller, PAC
- Operator Interface
- Software, HMI
- Stack Light Tower
- Terminal Blocks
- Input-Output, Machine-Mount

Voted Best in Service - 15 Years Straight

VOTED Best in SERVICE 15 YEARS

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. The survey indicates we consistently provide top-notch support to our customers. This is in addition to several other industry awards from independent publications.

Thanks to all who voted, we'll continue to put customer satisfaction as our #1 priority.

The bottom line is - when you call, we can help

With top service scores in numerous product categories over the last 15 years (cumulative list below), we've proven that we have the knowledge to help you make your control system installation a success.

- PLCs
- PLC programming software
- Operator Interface Terminals
- Stepper motors
- Relays
- HMI software
- Terminal Blocks
- I/O systems
- Encoders
- Servo motors
- Presence sensing
- Power supplies
- Electric motors
- Motor starters
- Stack light towers

Want to discuss using our products with like-minded customers?

http://forum.AutomationDirect.com

Is our Customer Forum, where tens of thousands of active customers come to ask questions and share their knowledge with peers

Want to watch some videos to learn more about our products?

www.AutomationDirect.com/videos
www.youtube.com/automationdirect

Is where we have hundreds of helpful videos posted, from new product overviews to detailed tutorials on topics such as PID and motion control

For the latest prices, please check AutomationDirect.com.

Starting at **$202.00** (BX-DM1-10AR-D)

BRX

Your low-cost link to the Industrial Internet of Things (IIoT)

INDUSTRY 4.0 IIoT

With the BRX PLC's low price you can afford to connect any machine/process to the IIoT for a whole new world of possibilities!

Discover new opportunities

Data collection has become an important part of any control system. With quality data, system performance can be improved and inefficiencies eliminated. Ethernet communication and the Industrial Internet of Things (IIoT) have opened up industrial data collection to new frontiers with better access and analysis. With the integrated data logging capability and robust communication available with the Do-more! BRX platform, you can not only collect the process/machine data you need and store it locally, but also deliver real-time OT data to upstream IT systems for detailed analysis.

Each BRX CPU includes 1MB of internal RAM data storage with an optional 32GB of external microSD data storage.

Up to 32 GB

Log the values you want, when you want (by event or by time interval) without purchasing anything extra, or use the optional Ethernet communication to send data to external systems for storage and analysis. Now you too can discover new opportunities, which data can deliver, with low-cost BRX PLCs.

Here is just a sample of what data can do for you:

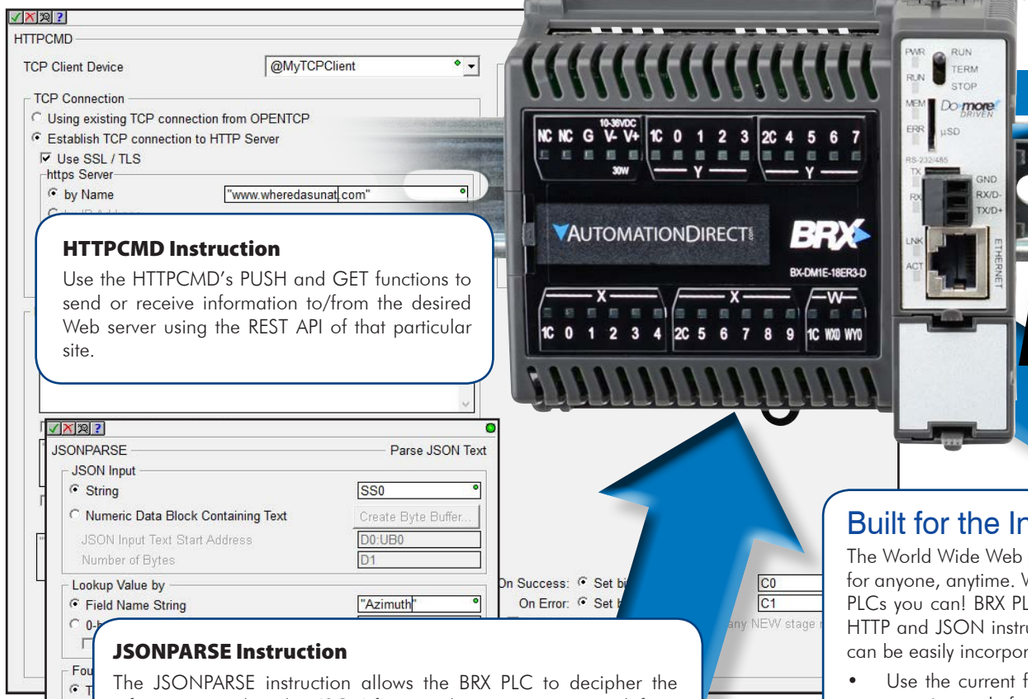
- Process improvements
- Diagnostics and predictive maintenance
- Quality control
- Energy efficiency enhancements
- Production forecasting
- Environmental compliance
- Expense tracking
- Research and development

Date	Time	Tank1Temp
2/22/2017	12:35:49.538	79.4000
2/22/2017	12:35:50.467	79.4000
2/22/2017	12:35:51.468	78.9000
2/22/2017	12:35:52.468	78.8000
2/22/2017	12:35:53.468	78.9000
2/22/2017	12:35:54.468	79.5
2/22/2017	12:35:55.468	79.4000

MQTT

Do-more! BRX controllers support the lightweight MQTT and the secure MQTTS protocols used in many machine-to-machine (M2M) and IIoT applications. With user-friendly Publish and Subscribe instructions, BRX controllers are the perfect low-cost edge device to get you connected.

For the latest prices, please check AutomationDirect.com.



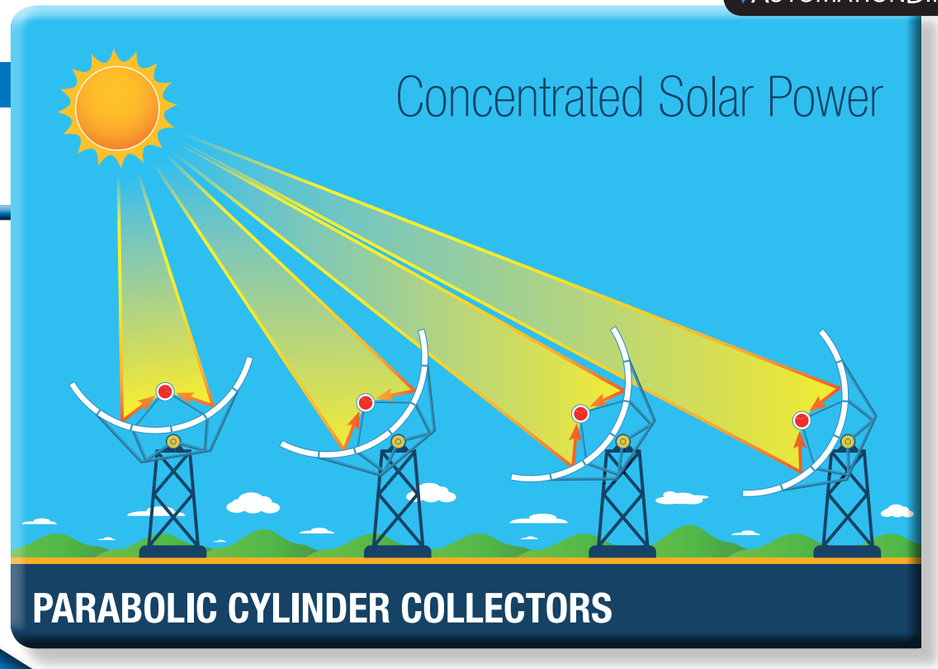
HTTPCMD Instruction

Use the HTTPCMD's PUSH and GET functions to send or receive information to/from the desired Web server using the REST API of that particular site.

JSONPARSE Instruction

The JSONPARSE instruction allows the BRX PLC to decipher the information within the JSON-formatted responses received from many Web servers. This instruction looks up a value based on a field name or a 0-based array index within a JSON input record. Once found, the value can be returned as text or as numeric or bit values.

Collector Position Adjustment



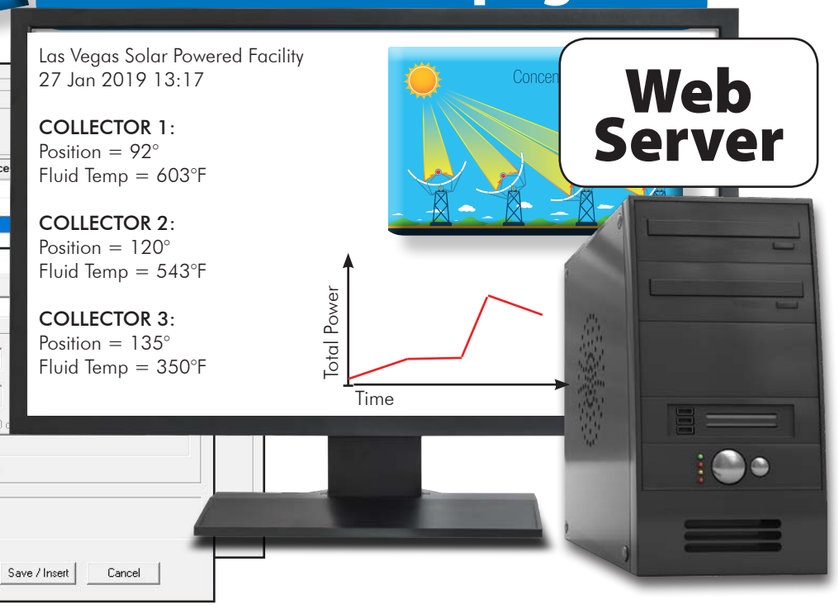
Built for the Information Age

The World Wide Web is full of valuable information that is instantly available for anyone, anytime. Why not put that information to work for you? With BRX PLCs you can! BRX PLCs allow you to communicate with web servers using HTTP and JSON instructions. The data that BRX can pull from these servers can be easily incorporated into your application's control strategy:

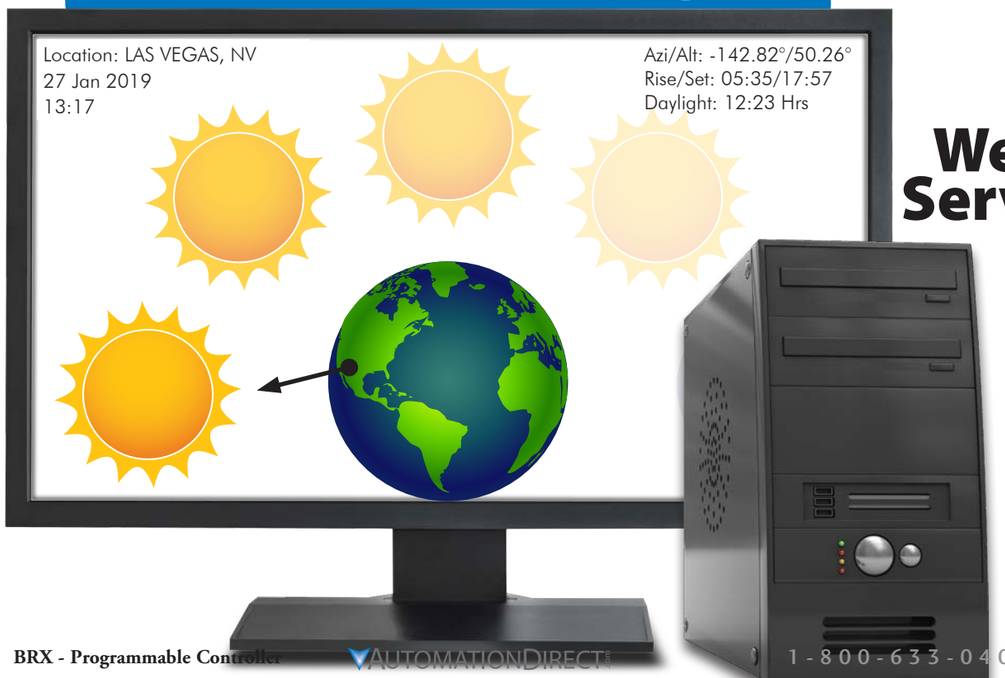
- Use the current forecast from your favorite weather site to control the watering cycle for your crops
- Take the sun's azimuth and altitude from a sun tracker site and use it to determine solar collector positioning
- Build you own custom webpage to interface with your remote PLC

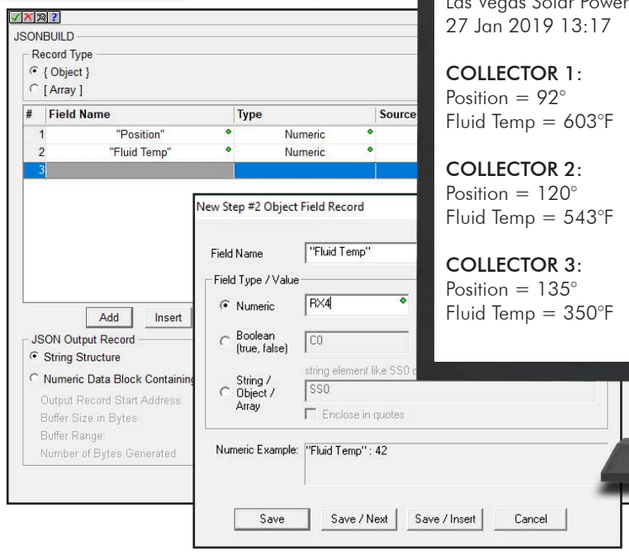
With BRX PLCs, the control possibilities really are endless!

Custom Webpage



Sun Tracker Webpage





JSONBUILD Instruction

Easily build JSON-formatted records to send to your MQTT broker or your own custom webpage. With the BRX PLC's fill-in-the-blank JSONBUILD instruction, converting your desired values into a JSON-formatted record is a cinch!

Do-more! DRIVEN

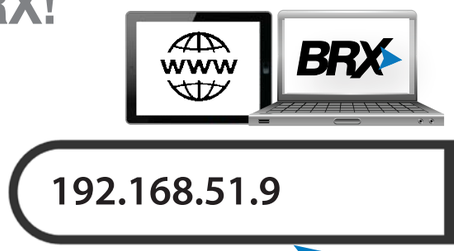
For the latest prices, please check AutomationDirect.com.

Build your BIG DATA with BRX!

On the cutting edge

The gap between plant-floor systems and front-office operations is closing at a rapid pace. Data sharing between logistics, accounting, maintenance, production, and other departments provides "big-picture" oversight, which results in better planning, reduced waste, and higher efficiency.

Modern-day PLCs, like the Do-more! BRX, have adapted to the demand for higher-level data exchange. BRX has advanced data logging and communication features, including an embedded Rest API and native MQTT(S) protocols, that allow it to easily take on the role of an edge device - gathering, refining and delivering control system data to upstream IT collection and "BIG DATA" analysis programs.



Convenient Web server

With BRX's embedded Web server, you can instantly access system status and diagnostic information, as well as, monitor memory usage from any Internet-ready device. Simply type the BRX PLC's IP address in the URL of your preferred browser and you're connected in a flash.

FREE Software!
No license or key needed.
Click here to download.

Powerful Data Management

BRX PLCs are built with the Do-more! engine making them programming powerhouses that feature an impressive instruction set for refining raw data into usable metrics. BRX controllers also offer several data storage options and the Do-more Designer software has numerous data manipulation tools to retain and fine-tune your vital data.

Must-have IIoT Protocols

In order to communicate freely with the growing number of IIoT platforms and cloud computing services, BRX controllers utilize industry-standard IIoT protocols. With both MQTT(S) and FTP protocols on board, BRX controllers can easily fill the role of data liaison to these high-powered IIoT solutions.

BRX PLCs can seamlessly integrate with many asset management/IIoT platforms including:

IBM Watson®
Microsoft Azure®

IIoT
platforms

CLOUD
computing

HTML5

MQTT(S)

FTP

HTTP(S)

WEB SERVER

REFINED DATA
PRODUCTION RUN TIME
SYSTEM HEALTH
TOTAL BOTTLE COUNT
CONSUMPTION RATE

PLC DATABASE

REST API

PSI
RAW DATA

Modbus EtherNet/IP ASCII

Rest API

The BRX Rest API handles all HTTP requests for PLC data. Once a request is received, the Rest API with gather the required data from the internal PLC memory and reply with the data in JSON format. The Rest API allows BRX to work hand-in-hand with flow control tools like Node-RED in order to supply high-level IT systems with the plant-floor operational data they need.

Node-RED

Salesforce®
MySQL®
Microsoft Dynamics®
MATLAB® Simulink®
PI System®
QuickBooks®

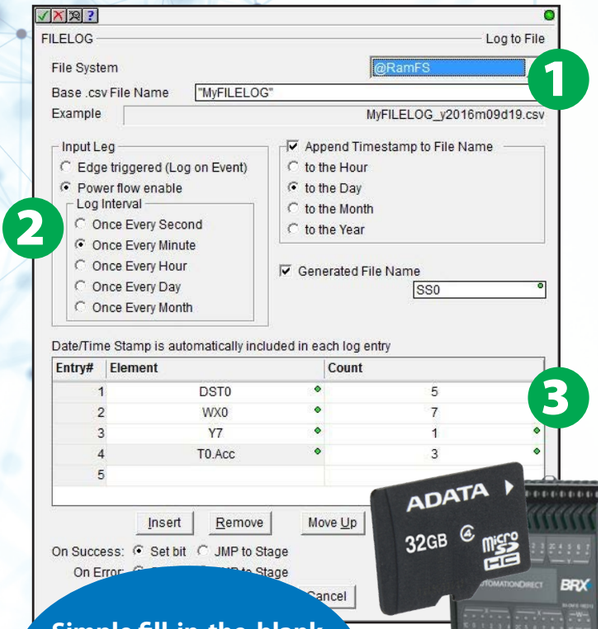
Coporate Databases,
IT Systems, and Data Analysis Software

INDUSTRY IIoT 4.0

A Multitude of Data Gathering Options

It all starts here! With BRX you have many I/O options to choose from for your process data collection. Built-in high-speed I/O, universal analog and temperature modules, robust fieldbus communication, and a vast assortment of expansion I/O, allow BRX PLCs to gather raw data from a single machine or the entire factory floor.

For the latest prices, please check AutomationDirect.com.



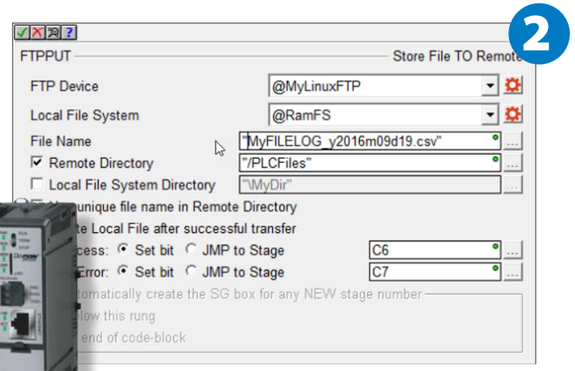
Simple fill-in-the-blank function block instruction for 3-step data logging!

Simple 3-step Data Logging

Data logging with the Do-more! BRX platform couldn't be easier. The integrated data handling instructions configure your data logs in three easy steps:

1) Name your file
2) Select how often to record the data
3) Add your data elements

....and that's it! The data is stored and available to aid in troubleshooting efforts or to be transferred via FTP for additional analysis.



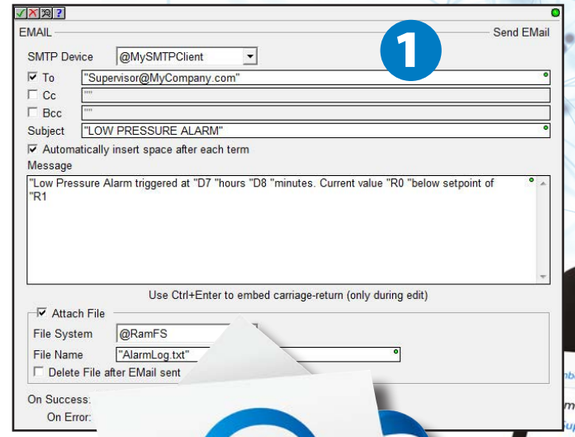
Data...delivered!

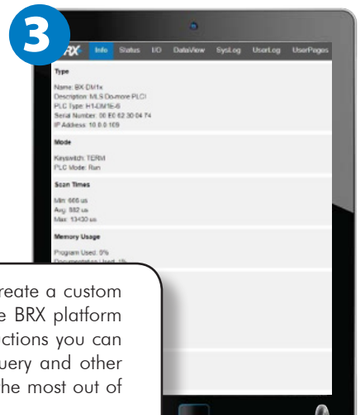
1) Let the BRX PLC keep you informed daily of metrics like production run rates or down-time statistics with the improved Email instruction. Attach data log files to, or include data in the body of, any outgoing email.

2) Transfer your valuable plant-floor data to high-level data analysis systems using the BRX PLCs FTP protocol.

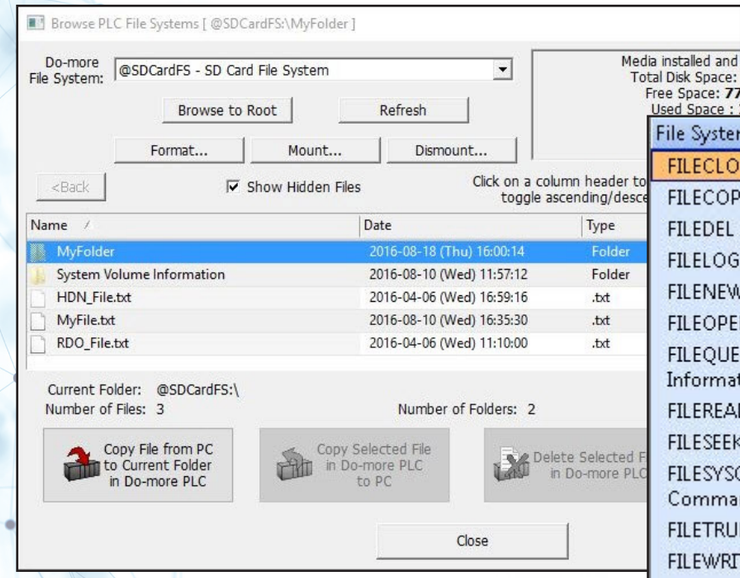
3) Use the integrated web server (BRX Ethernet-capable PLCs) to access system data from anywhere. The on-board Rest API will automatically build web pages that can be displayed in any web browser.

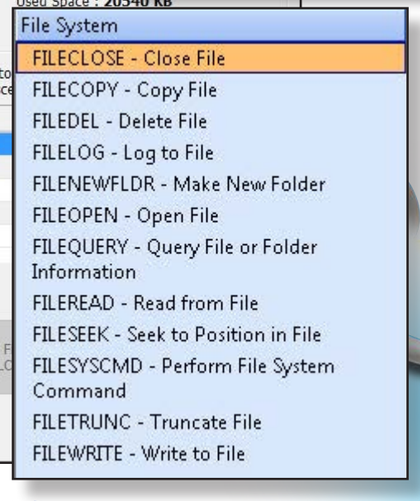
Just a few more ways BRX delivers your data, your way.





If simple data logging isn't enough and you need to create a custom data file or you want more control over the data, the BRX platform also offers a file browser and many file handling instructions you can use to manage your files. File Open, Read, Write, Query and other data-centric instructions are available to help you get the most out of your data.





For the latest prices, please check AutomationDirect.com.

Decades of affordable innovations have made us the #1 VALUE IN AUTOMATION!

We opened our doors in 1994 and from day one our focus has been providing you with quality products, great prices and outstanding service.

Affordable Innovation? What the heck is that?

Sometimes a better way of doing something isn't just one added product feature or a short term price discount. It's a combination of several product enhancements, better long term prices and service capabilities that are out of the norm for our industry. We're always up for a challenge!

1994

1st Direct Seller of PLCs
"You can't sell PLCs from a catalog, nobody does that?!" **WE DID**. Shorter path between product and purchaser means less markup.

1st Windows-based programming package for small PLCs
"Where's the command line?" To help make PLC users' programming task easier, we developed software that was easier to use.

DirectLOGIC (DL) PLC line is introduced.
Our company turns a profit in the fourth month of operations, making us a viable alternative in the industrial controls market.

We introduce the DL105.
With 14 built-in I/O, it is the first brick PLC under $200 on the market.

1st Direct ONLINE Seller of PLCs & Industrial Controls
"You can't sell PLCs from a Web site, nobody does that?!" **WE DID and STILL DO**.

1st $99 PLC in the market
DL05 brick PLC is introduced with expansion slot at a ground-breaking price.

19

94 94 94 96 99 99

2001

AutomationDirect is Voted #1 in Service
Caught the industry by surprise but not our customers. They've known since day one, we've got their back.
And we've gotten top honors for 15 years straight

NEW! DL06 PLC supports up to 100 I/O in its small footprint.

Leading the way again
Our online video library launches

And again
Our online i-catalog launches

$69 PLC
CLICK series, our most versatile and expandable brick PLC, is introduced.

Productivity3000 PLC is introduced.
Featuring a high-performance CPU and advanced control capabilities, it easily becomes one of the best values in the market.

20

01 02 07 07 08 09

2010

The Do-more H2 PLC is introduced.
It adds speed and greater funtionality to the time-tested DL 205 line.

The Do-more T1H PLC is introduced.
It adds control capability to the dependable Terminator field I/O line.

Productivity2000 PLC is introduced.
This feature-packed PLC with enhanced capabilities and a slim, even more affordable design!

BRX familiy of PLCs and the Productivity1000 PLC are introduced.
Innovative design and value reinterpreted with affordable choices for our customers.

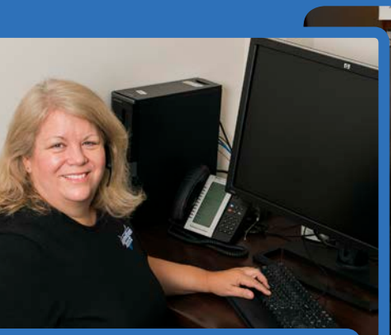
Productivity®Open UL/CE-certified open-source CPU is introduced.
MAKER IN - INDUSTRIAL OUT Industrial-Grade CPU (Arduino-Compatible)

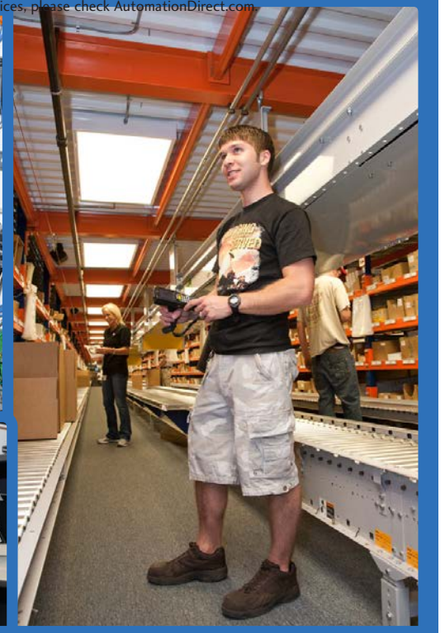
What's Next?
"You can't _____, nobody does that?!" **WE WILL . . .**

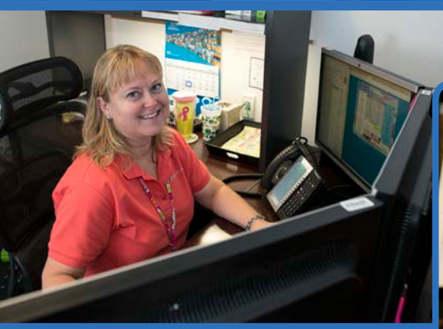
20

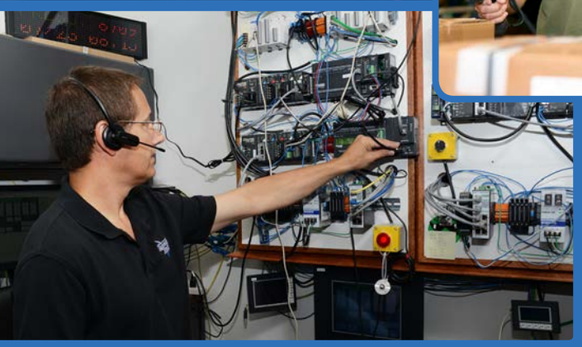
12 13 15 17 20 20

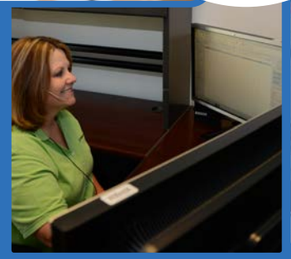
For the latest prices, please check AutomationDirect.com.











Voted #1 in service since 2001:
www.automationdirect.com/awards

Voted #1 mid-size company to work for in Atlanta:
www.automationdirect.com/workplace

What our current customers think:
www.automationdirect.com/reviews

AUTOMATIONDIRECT.com

This ".com" is powered by ".awesomepeople"

Check us out for our prices, keep coming back for our service.

For over twenty years our sole focus has been customer service. That takes many forms: great prices, fast delivery, and quality products. But regardless of our product selection and other tangibles like pricing, the intangible value of customer service is something that cannot be faked, replaced by machinery or glossed over with a free lunch from a visiting sales rep.

Our team members here at AutomationDirect.com approach every day with this one goal in mind - serve the customer. It's a simple philosophy that many companies forget or make too complex and then fail at it. If the answer to any decision is "Yes, this is good for our customers", then we do it.

It's that simple.

"Should we have real upfront pricing online and realtime stock availability?
Yes, this is good for our customers."

"Should we have FREE tech support before, during, and after any sale instead of charging yearly fees for tech support?
Yes, this is good for our customers."

"Should we offer FREE software on many products instead of charging licensing fees?
Yes, this is good for our customers."

"Should we have all our documentation online for FREE so people can access anytime, even before they choose to purchase?
Yes, this is good for our customers."

"Should we offer more selection by consistently introducing more new quality products with great prices monthly, sometimes weekly?
Yes, this is good for our customers."

"Should we offer FREE shipping for orders over $49?
Yes, this is good for our customers."

"Should we be fiscally responsible and run an efficient business so customers can rely on us decade after decade after decade?
Yes, this is good for our customers."

All these are discussions we've had internally and all have had certain aspects of "can we do that?", "that will be hard to accomplish", "no one else is doing that, how can we?". But if you bring it back to the simple answer, "Yes, this is good for our customers", then the perceived obstacles really don't matter.

Our company has evolved dramatically since 1994 and it's this type of decision making by all our team members over the years that keeps our customers coming back and new customers checking us out daily.

If you're a current customer, we sincerely thank you for your business. We wouldn't be here if it wasn't for you and promise to do our best for you every day. If you're new and checking us out for the first time, we hope you give us an opportunity to serve you.

For the latest prices, please check AutomationDirect.com.

Better communication through innovation

Communication that adapts to your needs...and your budget

PLC communication is an ever-changing landscape with Ethernet and USB being the latest additions. Modern PLCs need to provide the ports and protocols required to easily navigate the communication choices available. But how do you accommodate PLC communication that keeps evolving? The BRX platform has a practical solution, the CPU Pluggable Option Module or POM.

Besides the built-in RS232/485 serial port and the built-in Ethernet port (on all BX-DM1E models), all of the BRX CPUs have an optional slot for an additional user-selected POM. These hot-swappable POMs are currently available with RS232 (with and without flow control), RS422, RS485, USB 2.0 and Ethernet options. Add the extra communication port you need now and change it if your needs change. Serial now but USB later, or USB now and Ethernet later - the choice is yours, now and in the future.

Don't want to pay for communication ports you won't use? With the Do-more! BRX PLC platform and the innovative POMs, you won't. In addition to the built-in ports, the POMs allow you to configure your CPU for the exact communications you need when you need it. Need just one extra serial port? How about a dedicated Ethernet programming or HMI port? Or maybe you need a single USB connection? With BRX PLCs you get more communication options for better savings and overall satisfaction.

Popular Ports and Protocols

The BRX PLC platform has everything you need to communicate in today's industrial environments. Whether your network is "old-school" serial or modern-day Ethernet, BRX has got you covered!

Connecting OT with IT and bridging legacy systems with modern processes

BRX PLCs have a growing list of serial and Ethernet protocols that will allow secure data sharing at any level in your organization.

BUILT-IN COMMUNICATION PORTS:

- Classic serial (RS232/RS485 software selectable)
- Fast Ethernet 10/100BaseT (BX-DM1E models)

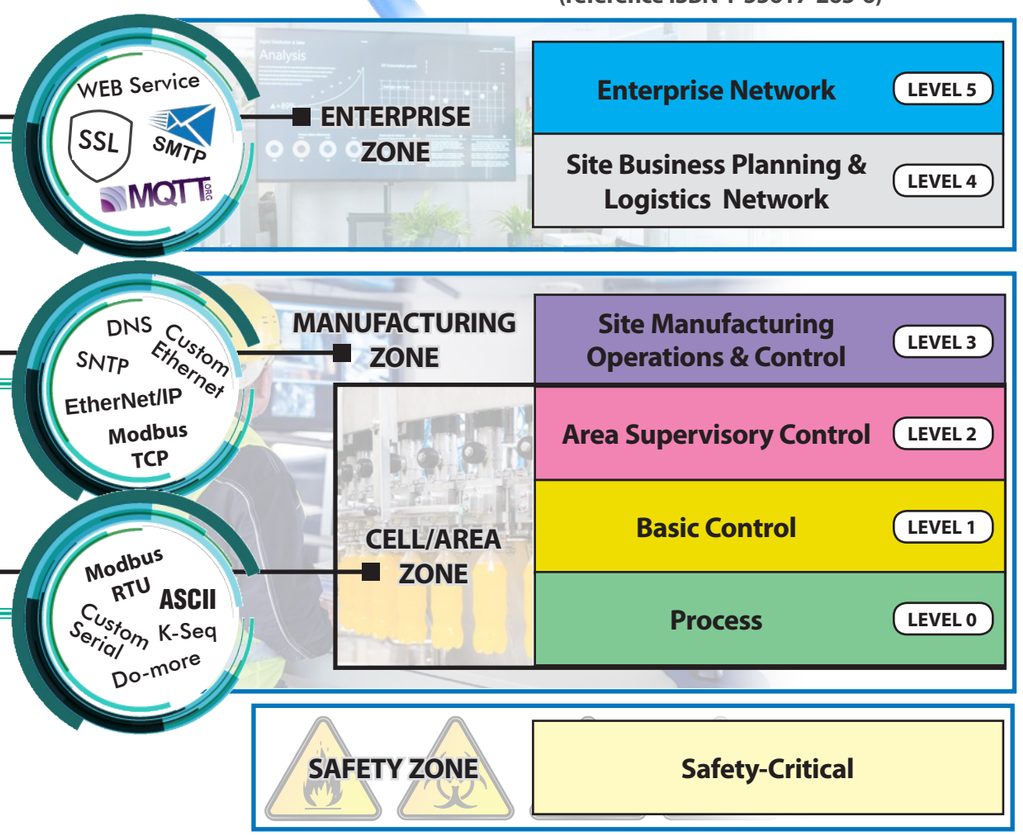
OPTIONAL POMS:

- Plug and Play USB
- Additional RS-232 serial port (with or without flow control)
- Additional RS-485 serial port
- RS-422 serial port
- RJ45 Ethernet port 10/100BaseT with Do-more protocol and Modbus TCP support
- RJ45 Ethernet port 10/100BaseT with MQTT, FTP, Do-more protocol, Modbus TCP, EtherNet/IP and Ethernet Remote I/O support (for use with Ethernet CPU's only)

SUPPORTED PROTOCOLS:

- EtherNet/IP (Explicit (Client, Server), Implicit (Server))
- MQTT/MQTTS
- HTTP/HTTPS
- DHCP
- FTP (Client)
- Modbus RTU (Master/Slave)
- Modbus TCP
- Ethernet remote I/O
- SNTP (Time Server)
- SMTP (Email)
- TCP/IP
- Legacy support for K-Sequence (DirectLOGIC)

PURDUE MODEL FOR CONTROL HIERARCHY
(reference ISBN 1-55617-265-6)



For the latest prices, please check AutomationDirect.com.

BRX PLC
Designed, Manufactured, Supported in the USA

Rock solid PLC hardware designed, manufactured and supported in the USA

2 YEAR WARRANTY

FREE Technical Support
Located in USA

BRX

Do-more! DRIVEN

Existing Do-more! projects can port over 100%

Starting at only $202.00 (BX-DM1-10AR-D) the BRX PLC family is an extremely versatile compact stackable system that you can customize to your specific controller needs. With four different form factors, built-in high-speed inputs, interchangeable communications port, on-board analog I/O, and many I/O expansion modules available, you can build the ideal controller for your application.

Removable terminal blocks
Large 5mm pitch

External power
12-24 VDC 120-240 VAC

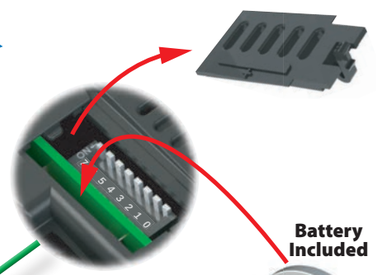
Customizable label window

Built-in high speed I/O
Dual-purpose discrete inputs/outputs included with up to 250kHz high-speed capability

*Additional high-speed I/O available with HSIO expansion modules

Built-in Analog I/O
Current or voltage (software selectable)

Pluggable Options Module (POM)
Add an additional Ethernet, Serial or USB port (hot swappable)



Data Logging w/ File Management
Log to microSD card or to internal RAM

Expansion port
BRX can be expanded with up to 8 expansion modules for an additional 256 discrete, 128 high-speed, or 128 local analog I/O points

Built-in serial port
RS232 or RS485 software selectable
Additional serial ports available with the BX-SERIO expansion modules

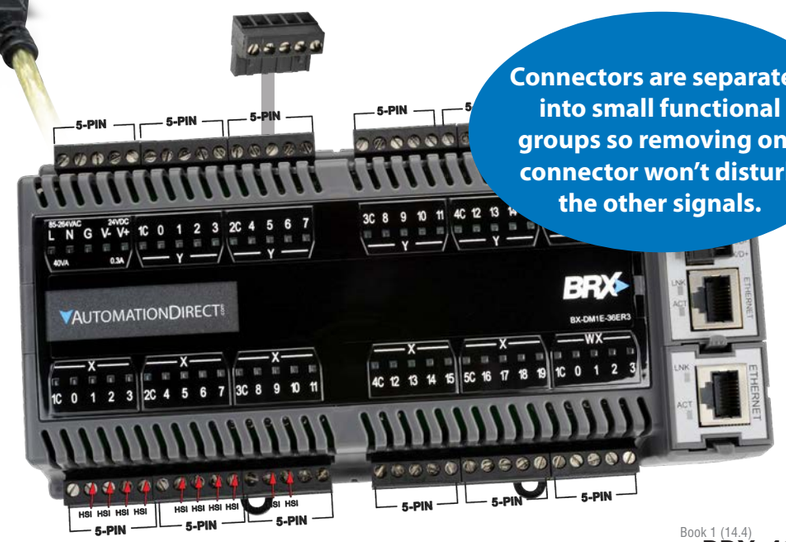
Built-in Ethernet port (select models)
10Mpbs Etherent port with Modbus TCP, MQTT/MQTTS, HTTP/HTTPS, EtherNet/IP capability and more

Panel or DIN rail mounting options

I/O terminal blocks sold separately in kits with spring clamp and screw options.

ZIPLINK™ connection system also available!

Connectors are separated into small functional groups so removing one connector won't disturb the other signals.



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BRX PLC
Designed, Manufactured, Supported in the USA

2 YEAR WARRANTY

BRX

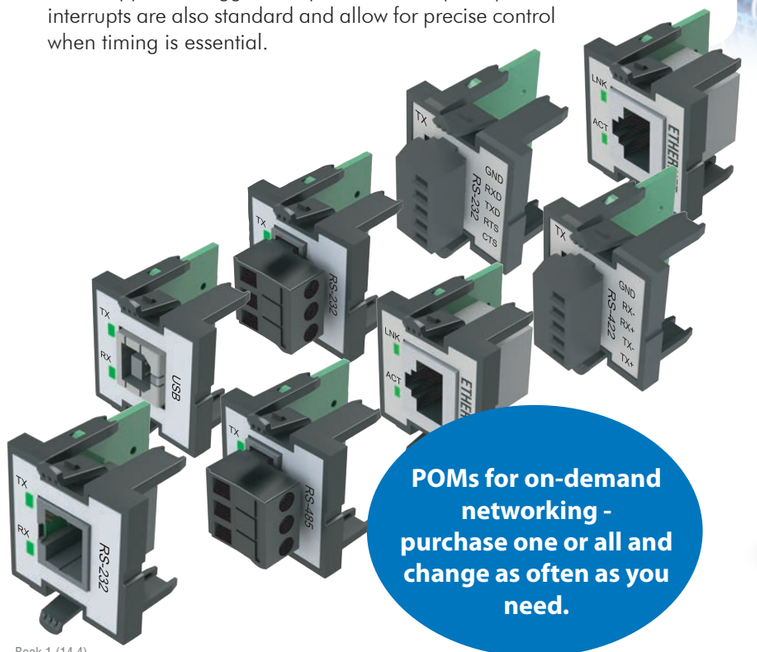
LEADERSHIP IN ENGINEERING
INDUSTRIAL AUTOMATION
PRESENTED BY Design World
2016 LEADERSHIP WINNERS

Over 25 years of PLC hardware design knowledge have gone into the BRX design.

Low cost options for any application

Whether your controller needs are simple or complex, the BRX platform has a cost-saving solution for you. With four form factors to choose from and many optional features available, you'll get exactly what you need at a price you didn't expect.

All BRX controllers can be DIN-rail or panel mounted and come standard with a software-selectable RS232/RS485 serial port, 1MB of internal data storage with 32GB of optional microSD storage, and a user-changeable, hot-swappable Pluggable Option Module (POM) slot. Built-in hardware interrupts are also standard and allow for precise control when timing is essential.



POMs for on-demand networking - purchase one or all and change as often as you need.

M Series starting at $296.00

M Series

The BRX M series is a simple (no built-in I/O) controller that can be used for a variety of purposes including machine data logging and Ethernet networking. If local I/O becomes a necessity, the M series can be expanded with your choice of up to 8 expansion I/O modules. With this series, you decide exactly how much and what type of local and remote I/O your controller needs.

10-point Series starting at $202.00

10-point Series

The BRX 10-point series includes all the standard features plus 10 built-in discrete I/O points (AC, DC and relay options available). With the exception of models with relay outputs, all of the on-board discrete I/O can be configured for current-protected high-speed functions up to 250 kHz. Relay output models have high-speed inputs only. Software-selectable analog I/O with your choice of 0-5VDC, 0-10VDC, +/-5VDC, +/-10VDC, 4-20mA or +/-20mA input/output ranges and a 10/100 Mbps Ethernet port are available on select units. The 10-point series is also expandable with up to 2 additional expansion I/O modules, giving you the flexibility to only add the local and remote I/O that your application needs.

For the latest prices, please check AutomationDirect.com.

18-point Series starting at $253.00

18-point Series

The BRX 18-point series has all of the benefits of the 10-point series plus an additional 8 discrete I/O points for 18 total. 14 of the 18 I/O points (on non-relay models) can be utilized for high-speed I/O applications up to 250 kHz. Ethernet communication and built-in analog I/O points are also options with this series. Depending on model, the 18-point series will allow expansion with 4 to 8 additional expansion I/O modules.

36-point Series starting at $306.00

36-point Series

The BRX 36-point series takes I/O count one step further with 36 onboard discrete I/O points, 18 of which (on non-relay models) are capable of protected 250 kHz high-speed I/O. Six user-configurable analog I/O points are available on the Ethernet capable units and the 36-point series can be expanded with 4 to 8 additional expansion I/O modules.

2 YEAR WARRANTY

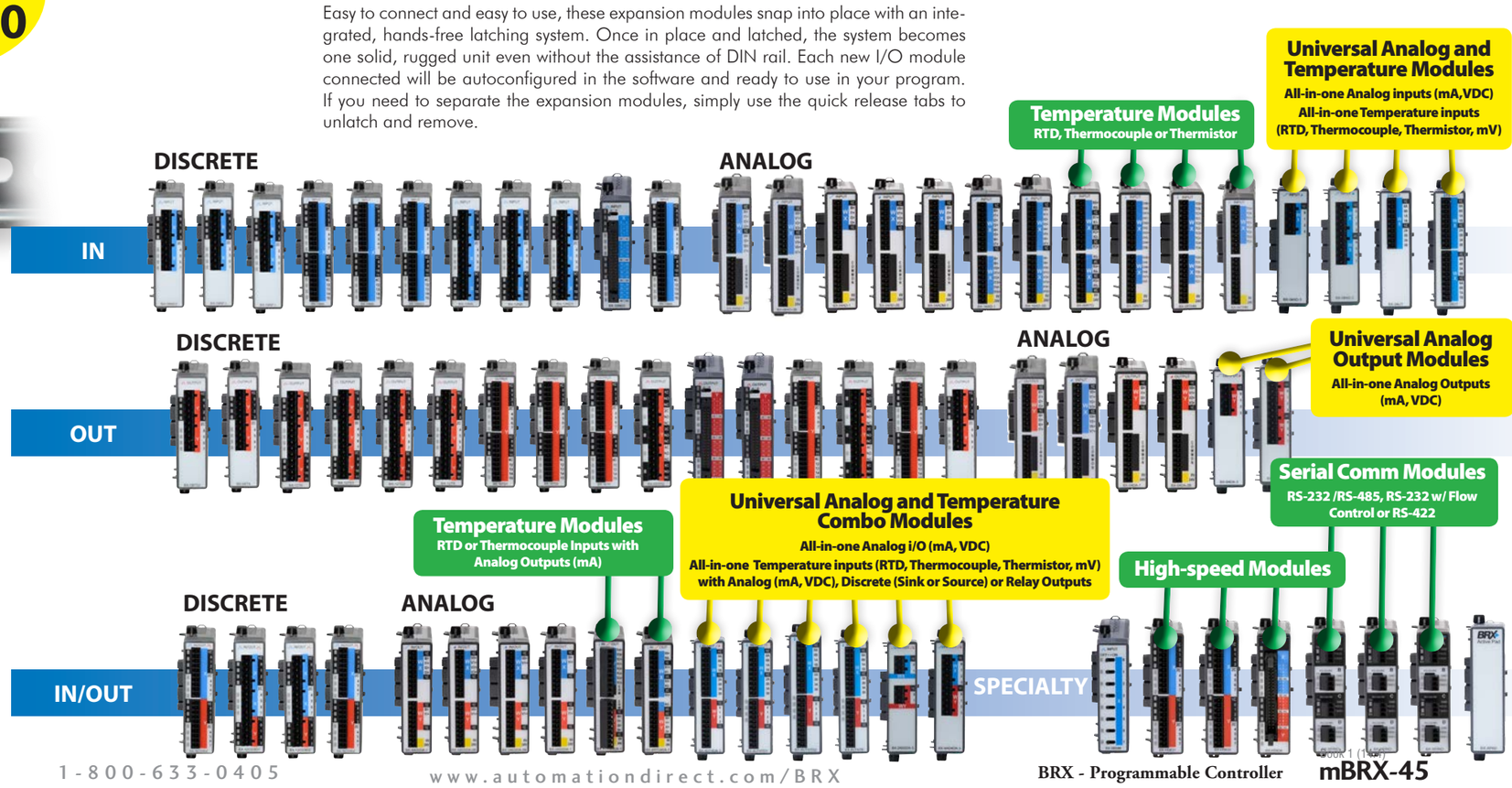
BRX PLC — Designed, Manufactured, Supported in the USA

Expansion Modules starting at $39.00

Expansion is a snap!

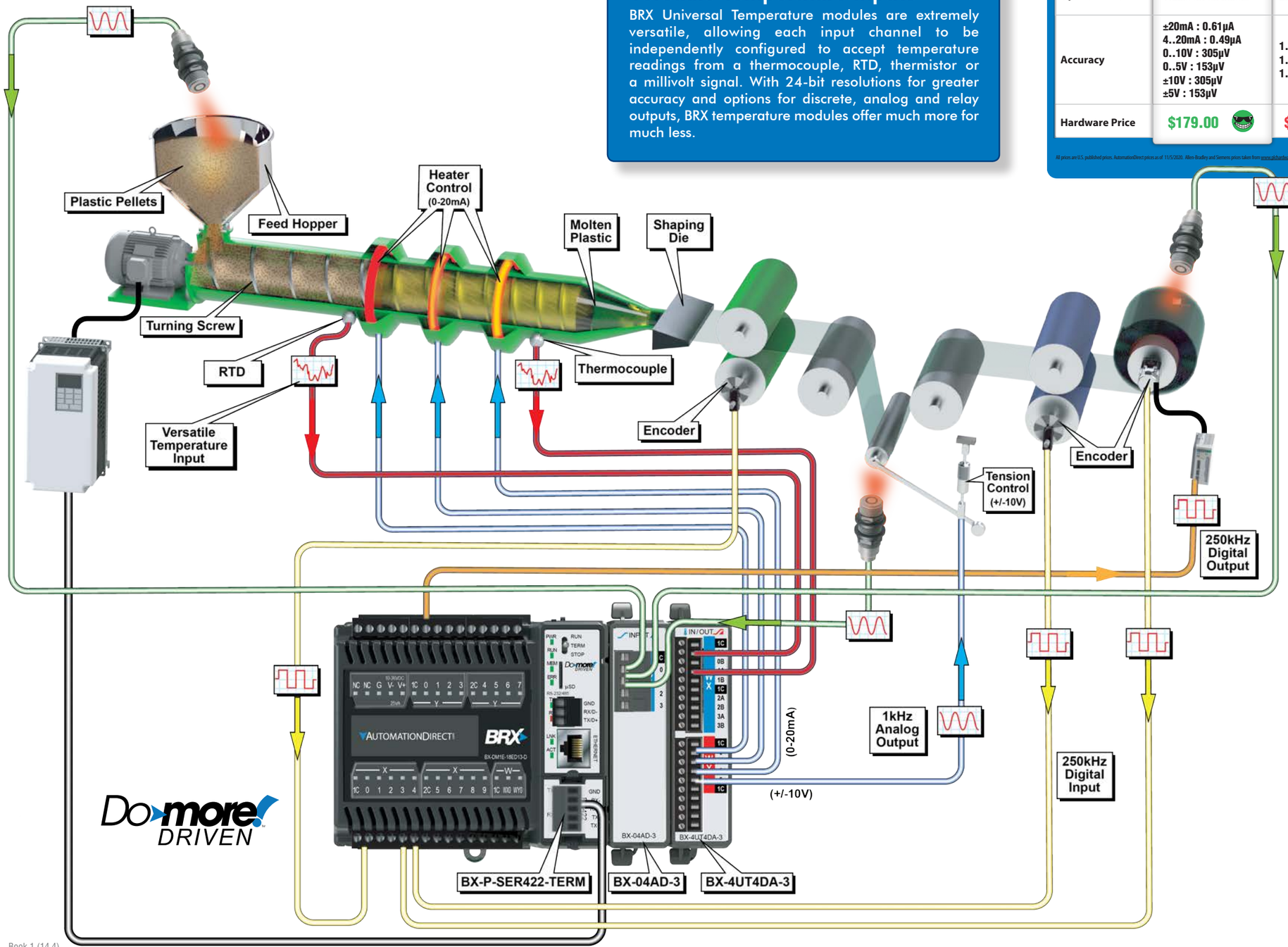
The BRX platform requires no base or backplane and the PLC units can operate as stand-alone controllers or be expanded with up to 8 additional I/O modules (depending on model). 36 discrete I/O expansion modules are currently available with 5, 8, 12, 16, and 32-point versions, allowing the BRX system to expand up to 292 local discrete I/O points total (with the 36-point series). 33 analog I/O modules are also available (including thermocouple, RTD and thermistor input modules) with up to 16 channels per module for a total of 134 local analog I/O points total (with the 36-point series). Universal temperature and analog I/O modules are available providing all-in-one temperature and analog signals. Specialty modules provide up to 128 of additional high-speed I/O points or up to 32 additional RS232, RS485, or RS422 serial communications ports. The stackable design of the BRX platform gives you the ability to purchase only the I/O required for your particular application.

Easy to connect and easy to use, these expansion modules snap into place with an integrated, hands-free latching system. Once in place and latched, the system becomes one solid, rugged unit even without the assistance of DIN rail. Each new I/O module connected will be autoconfigured in the software and ready to use in your program. If you need to separate the expansion modules, simply use the quick release tabs to unlatch and remove.



Not your everyday analog!

BRX analog expansion I/O modules offer unmatched capabilities and easily adapt to any application. Forget needing multiple I/O modules to handle different signal types, BRX analog modules are universal and can accept all standard analog signals. Read and/or write 0-5VDC, 0-10VDC, +-10VDC, +- 5VDC, 0-20mA, or 4-20mA all from the same analog module. The BRX universal analog modules will conform to your needs.



Versatile Temperature Inputs

BRX Universal Temperature modules are extremely versatile, allowing each input channel to be independently configured to accept temperature readings from a thermocouple, RTD, thermistor or a millivolt signal. With 24-bit resolutions for greater accuracy and options for discrete, analog and relay outputs, BRX temperature modules offer much more for much less.

Analog Input Comparison	Do-more BRX Analog Input BX-08AD-3	V/S. AB Micro850 2085-IF8	V/S. Siemens S7-1200 6ES7231-4HF32-0XB0	V/S. AB CompactLogix 5000 5069-IF8	V/S. Opto22 Groov EPIC GRV-IMAI-8
Resolution	16-bit	14-bit (unipolar) 13-bit (bipolar)	13-bit	16-bit (unipolar) 15-bit (bipolar)	20-bit
Range	±10V; ±5V; 0..5V; 0..10V; ±20mA; 4..20mA	±10V; 0..10V; 0..20 mA; 4..20mA (default)	±10V; ±5V; ±2.5V; or 0..20mA; 4..20mA	±10V; 0..10V; 0..5V; 0..20mA; 4..20mA	0..20mA; 4..20mA
Update Time	1.2ms all channels	2ms per channel	625µs	625µs per channel	11ms
Accuracy	±20mA : 0.61µA 4..20mA : 0.49µA 0..10V : 305µV 0..5V : 153µV ±10V : 305µV ±5V : 153µV	1.28 mV/cnt unipolar 1.28 mV/cnt bipolar 1.28 µA/cnt	N/A	±10.5V: < 320µV/cnt 0..10.5V: < 160µV/cnt 0..5.25V: < 80µV/cnt 0..21mA: < 0.32µA/cnt 3.6..21mA: < 0.27µA/cnt	0.02µA (20-bits)
Hardware Price	$179.00	$421.00	$445.00	$847.00	$995.00

All prices are U.S. published prices. AutomationDirect prices as of 11/5/2020. Allen-Bradley and Siemens prices taken from www.plchardware.com 11/5/2020. Opto22 prices taken from www.opto22.com 11/5/2020

High -performance Analog

Augment high-speed applications with fast analog input and output modules. These new modules have a 1.2 ms update time for all input channels and 1ms for all output channels. Combined with the BRX onboard motion controller, the fast analog I/O modules are ideal for timing-critical systems like winding applications.

Cost-saving I/O

Temperature is one of the most measured parameters in industrial automation. Temperature and analog I/O modules are also some of the most expensive. BRX Temperature Combo modules have both universal temperature inputs and discrete, relay or universal analog outputs allowing one module to perform two jobs at once. By monitoring and controlling temperature from the same module, you wont have to buy a separate analog output module which could save you hundreds maybe thousands.

4-ch Temp Input (2085-IRT4)	+	4-ch Analog Output (2085-OF4)	VS	Combo: 4-ch Temp Input w/ 4-ch Analog Output (BX-4UT4DA-3)
$529.98				$349

All prices are U.S. published prices. AutomationDirect prices as of 04/13/2020. Allen Bradley prices taken from www.plccable.com 04/13/2020.

For the latest prices, please check AutomationDirect.com.

Over 63,000 I/O points possible with BRX remote I/O!

DMIO Controller starting at $163.00

Do-more! I/O Controller (DMIO)

The BRX Do-more! I/O controller provides easy remote expansion for any Do-more! system. Add up to 16 remote I/O racks to your application using the DMIO controller, that's over an additional 4,000 discrete or over 2,000 additional analog I/O points. When using the DMIO controller, all I/O racks will be auto-discovered and seen as native I/O to the system allowing for instant configuration.

Supported protocols:

- Do-more! Ethernet Remote I/O - use with any Do-more! controller

EBC100 Controller starting at $255.00

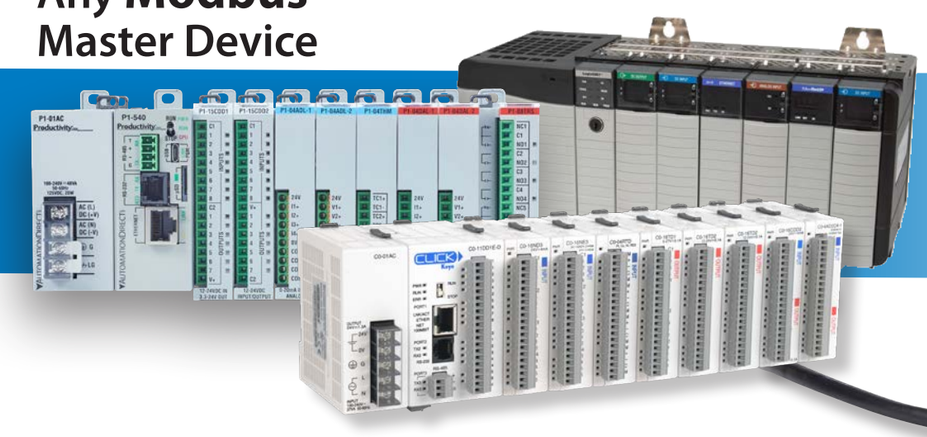
Ethernet Base Controller (EBC100)

The BRX Ethernet Base Controller can be used to expand any system using DirectLOGIC H2-ERM100s/H4-ERM100s, any Do-more! system, and can also be used as a Modbus TCP Server. Up to 16 remote EBC100 racks can be used with DirectLOGIC or Do-more! systems and 247 EBC100 racks can be added when using Modbus TCP. That is over an additional 63,000 discrete I/O points! The remote I/O will be seen as native to the system unless using Modbus TCP, then the Modbus Read/Write instructions are required for receiving/sending I/O data.

Supported protocols:

- Do-more! Ethernet Remote I/O - use with any Do-more! controller
- Host Ethernet Remote I/O - use with H2-ERM100s/H4-ERM100s
- Modbus TCP - use with Modbus TCP Client

Any Modbus® Master Device



MBIO Controller starting at $240.00

Modbus I/O Slave Controller (MBIO)

The BRX Modbus I/O slave controller allows any system with a Modbus master/client to expand its I/O capacity. Supporting both Modbus RTU and Modbus TCP protocols, this controller provides up to 31 additional Modbus RTU remote I/O racks and 247 additional Modbus TCP remote I/O racks. With the Modbus TCP option, over 63,000 extra discrete I/O points are possible. When using the MBIO slave controller, I/O data is sent to/from the master using Modbus Read/Write commands. The MBIO slave controller is great for remote expansion with other AutomationDirect PLCs or as a low-cost alternative for 3rd party controllers that support Modbus mastering.

Supported protocols:

- Modbus RTU - use with Modbus RTU Master
- Modbus TCP - use with Modbus TCP Client

For the latest prices, please check AutomationDirect.com.

ZIPLINK™
AUTOMATIONDIRECT.com

5-second wiring system for BRX!

ZIPLINK™
AUTOMATIONDIRECT.com

ZIPLink Modules

Save time by using pre-wired cables

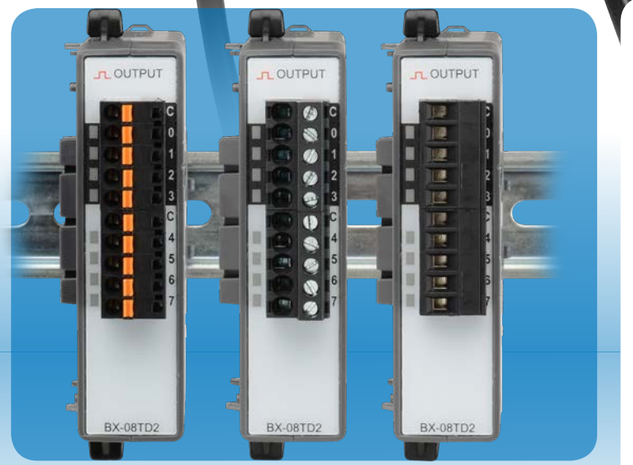
Why spend the time wiring each I/O point to a terminal when you can get them prewired? ZIPLink pre-wired cables and terminals save you valuable time, keep your installation clean and efficient, and use half the space at a fraction of the cost of standard terminal blocks.

Use the convenient ZIPLink selector tool to help you find the right ZIPLink modules and cables for your I/O connections.

ZIPLink

BRX

ZIPLink Modules starting at $22.00



180° Spring Clamp | 180° Screw | 90° Screw

Terminal blocks not included with BRX CPU purchase

Each variation of BRX terminal blocks can be purchased separately in kits to save time

Terminate frustration and wire the easy way...

The BRX PLC system components (excluding the BX-SERIO modules or any of the Temperature modules) do not ship with pre-selected I/O terminal blocks. This allows you to select the termination that best fits your application and allows you to only pay for the termination you use.

The BRX PLC platform offers several options when it comes to wire terminations. We want wiring to be as painless as possible, and by far the easiest route to take is our ZIPLinks pre-wired solution. ZIPLink modules and cables are available for most BRX system components and they not only provide tremendous wiring time savings but can also provide clean wireways with easy field-traceable connections, and confidence that your panel wiring is correct.

If you decide to use the standard terminal blocks with your BRX controller, they are available separately in easily-removable 90 and 180-degree screw clamp or 90-degree spring clamp versions.

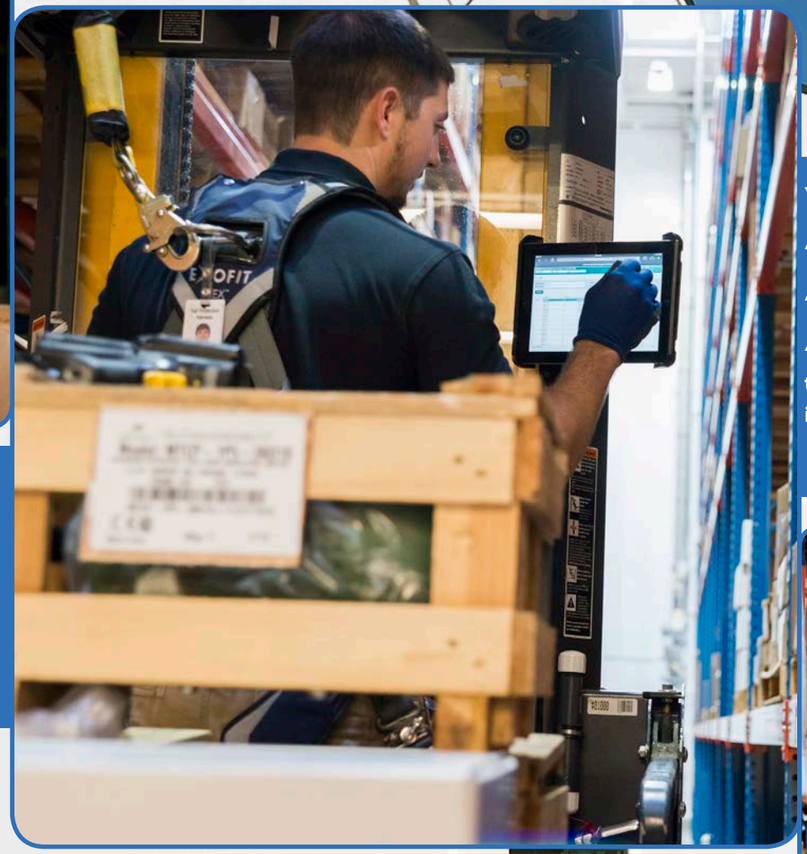
With the larger BRX PLCs (18 and 36-point units) and the expansion modules, a wider (5mm) spaced connector is provided for easy insertion of large MTW wires. Don't cram your bigger gauge wires into PLC clamps that are too small ever again. With BRX, even wiring is better!

For the latest prices, please check AutomationDirect.com.

Our campus is located about 45 minutes north of Atlanta, GA, USA. **We're all here** - our sales and technical support teams, purchasing, accounting, and of course our huge warehouses and speedy logistics team.

Huge Inventory! Order Today, It Ships Fast!

Great people and automation go hand-in-hand to make it easier for you to get what you want, when you want it.



Get us your order by 6 p.m. EST and we'll ship in-stock items fast (depending on payment method and carrier requested; see Terms and Conditions online for complete details).

Most local distributors can't justify this degree of automation sophistication, or this amount of inventory.

You say -

"I ordered today, you shipped today. Doesn't get any better than that. Thanks."

"Outstanding service, amazed at the speed of delivery!"

"It's easier and faster to order from you guys than any other online merchant that I use. Not only that, deliveries are consistently accurate and delivery time is dependable ... both KEY factors in our JIT processes."

For the latest prices, please check AutomationDirect.com.

Get in motion...it's easy with BRX

All BRX PLC models with 24VDC I/O have high-speed inputs and outputs built in with an additional 128 250kHz or 128 TTL (64 differential) 2MHz local high-speed points possible through expansion. This high-speed I/O can be used to track rapid encoder pulses, drive stepper motors, or can be configured for other counter/timer, axis/pulse, pulse-width-modulated or table-driven functions:

- Timer/Counter: BRX PLCs can be configured to count input pulses, or measure the time between pulses, up to a 2MHz maximum pulse rate.
- Axis/Pulse: BRX PLCs can have up to three axis of control with an additional virtual axis for internal control and following applications.
- Pulse Width Modulation (PWM): The high-speed outputs can also be used to generate a carrier frequency with varying pulse widths.
- Table-driven: Tables of preset values can be used to turn the high-speed outputs ON and OFF based on the pulse count values of one high-speed input.

Ignore the noise...for accurate control

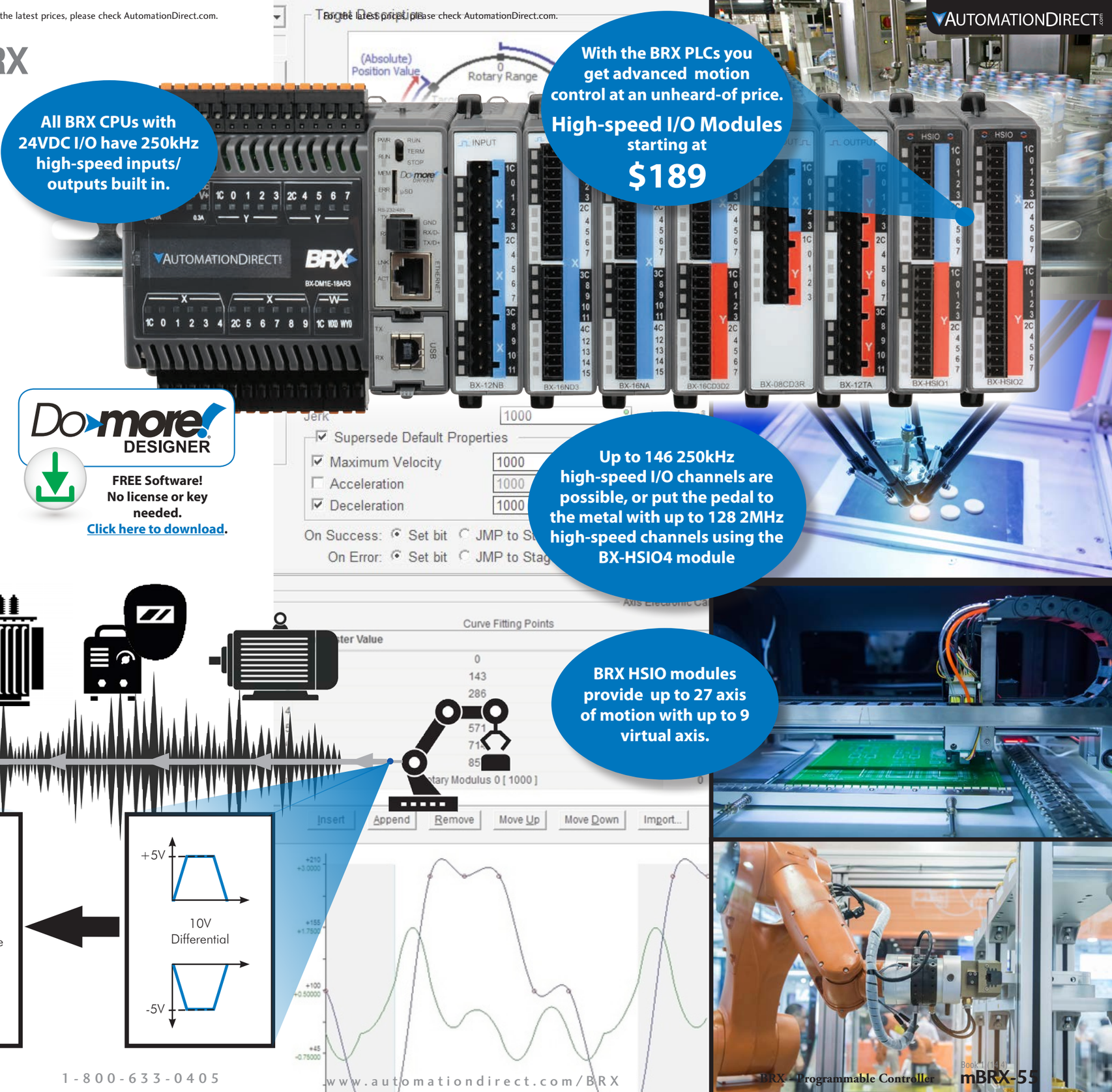
Single-ended signaling is the simplest, and in terms of wire cost, the least expensive method of transmitting high-speed electrical signals. With this type of transmission, one wire carries a voltage that represents the signal while the other wire is connected to a reference voltage, usually ground. This wiring method can pose a serious problem in industrial applications that are prone to electromagnetic interference from motors, compressors, power generation, etc. The noise induced on nearby wires from these devices can cause inaccurate counts, inconsistent positioning, or erratic motion profiles.

On the other hand, differential signaling ignores the noise that is induced on the line and focuses on the difference in the supplied signals. This type of transmission requires an additional wire, with one carrying the normal signal and the other carrying it's inverse. Any noise induced on the wires will affect both the normal and inverse signals the same, causing the difference between the signals, or differential, to remain the same as well. By focusing on the differential, the BRX HSIO4 module can effectively void any inaccuracies caused by noise.

All BRX CPUs with 24VDC I/O have 250kHz high-speed inputs/ outputs built in.

With the BRX PLCs you get advanced motion control at an unheard-of price.

High-speed I/O Modules starting at $189



Do-more! DESIGNER

FREE Software! No license or key needed.

Click here to download.

Up to 146 250kHz high-speed I/O channels are possible, or put the pedal to the metal with up to 128 2MHz high-speed channels using the BX-HSIO4 module

BX-HSIO4

The BRX HSIO4 module offers both TTL and differential I/O at 2MHz. Differential I/O can be used to prevent inaccuracies in high-speed signals caused by electrical interference from high-noise environments.

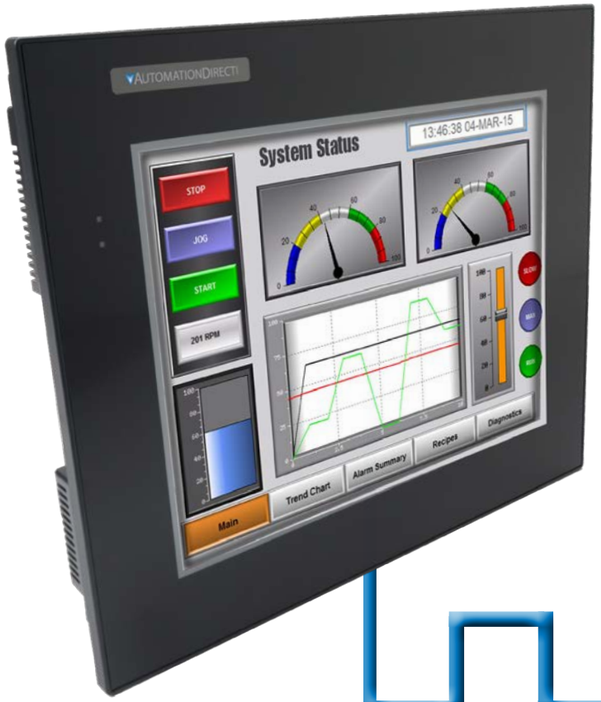
BRX HSIO modules provide up to 27 axis of motion with up to 9 virtual axis.

For the latest prices, please check AutomationDirect.com.

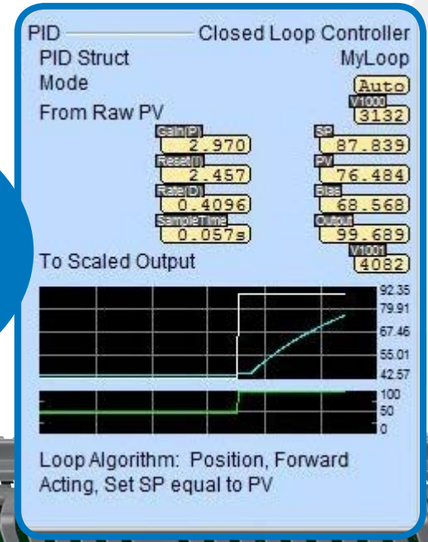
EASY PID with BRX!

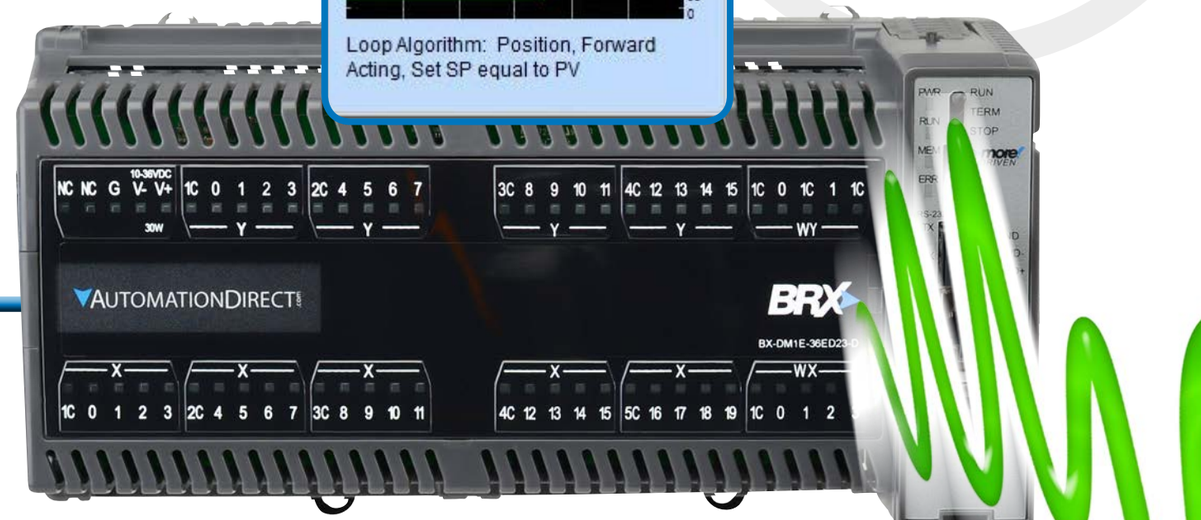
Do-more Designer's approach to control loop programming makes PID control an extremely smooth process. PID has never been a one-size-fits-all method so why do most controllers treat PID programming that way? With BRX PLCs, you get modular, interchangeable, independent and run-time configurable control loops to match your exact needs.

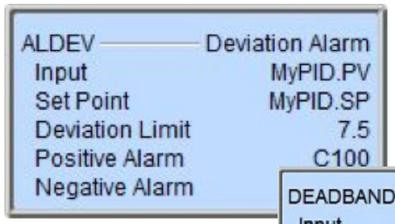
Rather than embedding all of the PID parameters like alarm handlers, filters, scaling and Ramp / Soak tables within the PID instruction itself, these are all handled by separate instructions allowing for easy customization for whatever control algorithms are used.

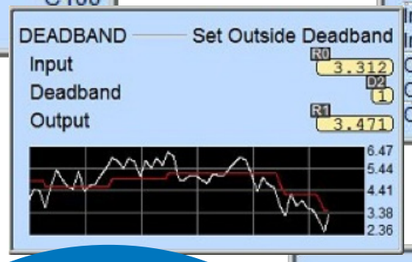


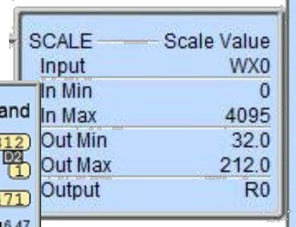
Simply define the PID structure by filling in the blanks of the PID Closed Loop function block and the structure elements (.SP, .PV, .GAIN, .BIAS, etc.) will be available to use in your program.



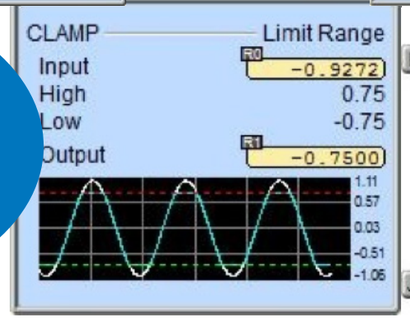


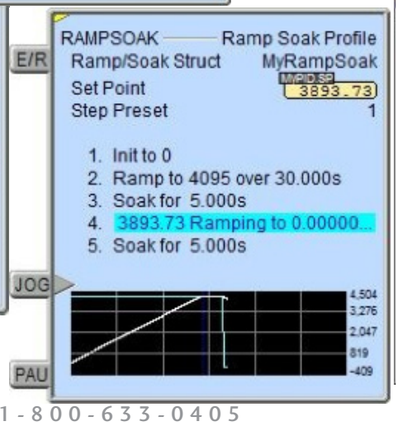


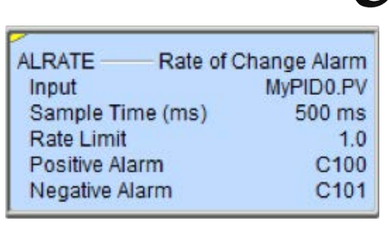


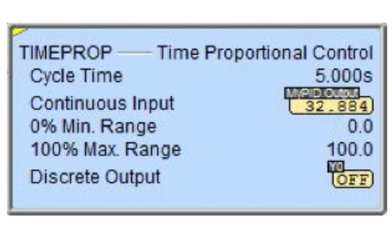


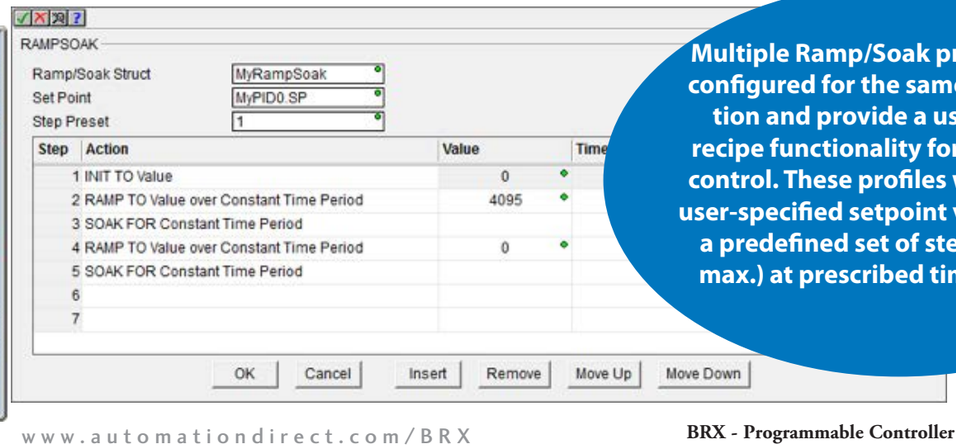
Most of the PID instructions have embedded trend views for a better understanding of the PID response and to aid in any troubleshooting efforts.











Multiple Ramp/Soak profiles can be configured for the same PID instruction and provide a user-friendly recipe functionality for the BRX PID control. These profiles will move the user-specified setpoint value through a predefined set of steps (50 steps max.) at prescribed time intervals.

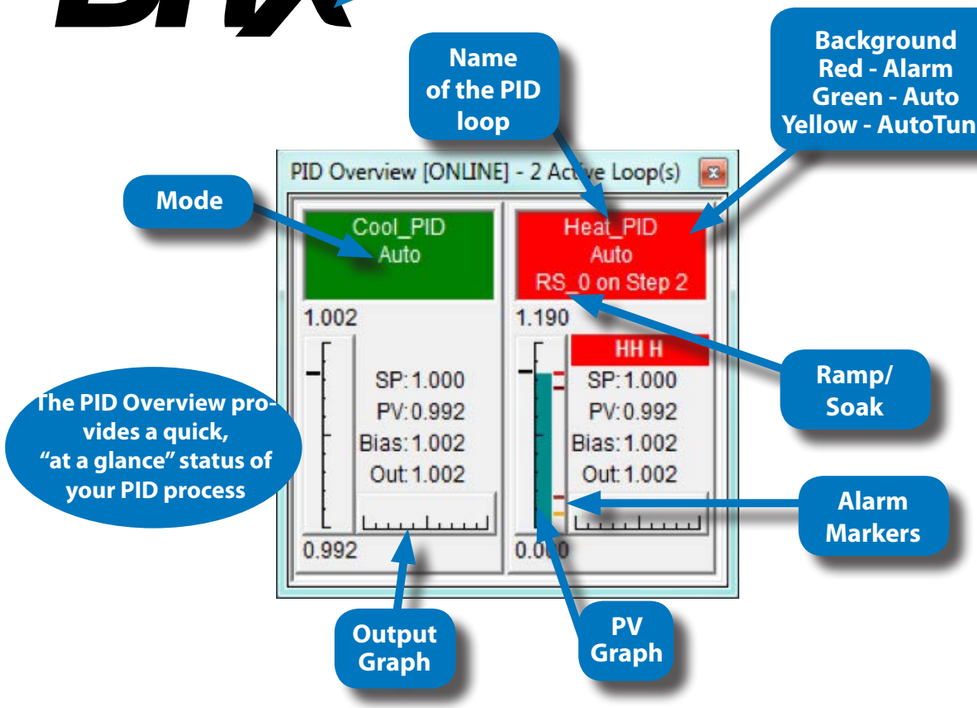
For the latest prices, please check AutomationDirect.com.

Multiple tools for accurate PID control

When you are ready to tune the loop, Do-more Designer has many tools like PID Overview and PID View with Auto-tune that you can use to quickly get your process tuned and operating properly.

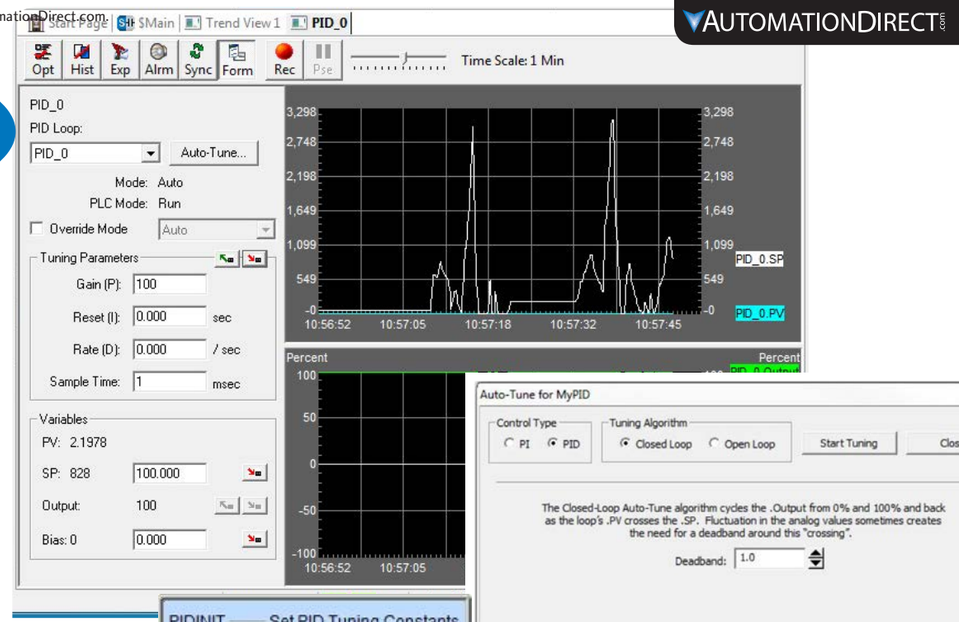
Do-more! DRIVEN

BRX



Tune your loop with a simple click of a button

Use the PID View with Auto-tune to monitor, record and tune your PID loops. The Auto-tune feature will set optimal values for the P, I and D terms in order to get the ideal response from the control system. It will manipulate the PID's output then measure the rate of change, overshoot and response of the process variable. You can then save the newly calculated constants to use in other loops or add to the PIDINIT instruction.



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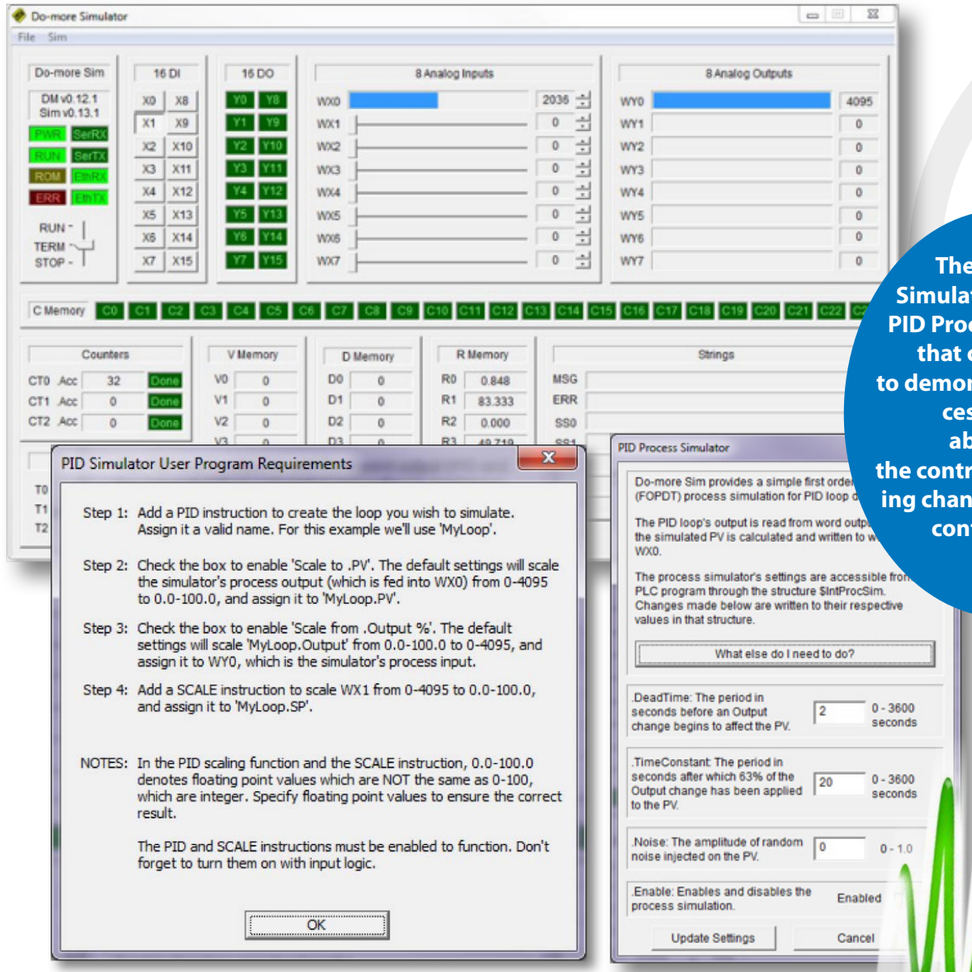
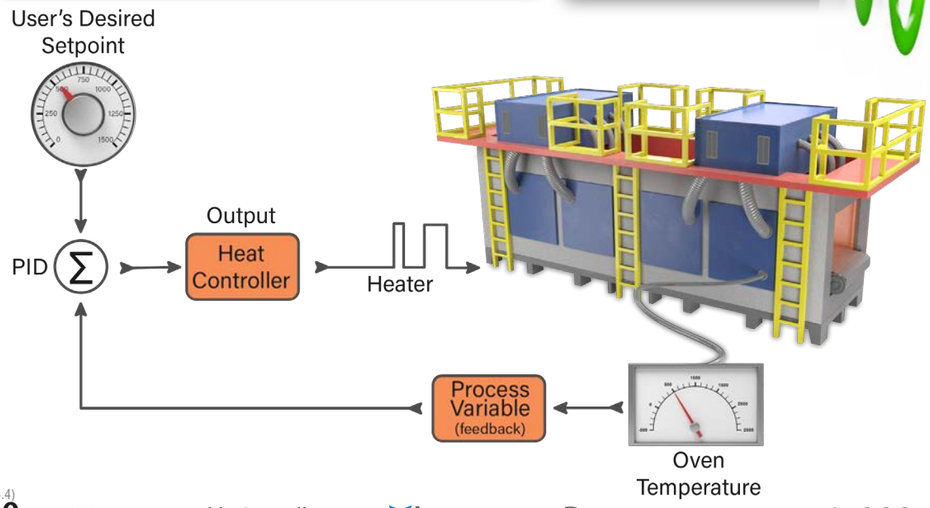
For the latest prices, please check AutomationDirect.com.

Multiple tools for accurate PID control

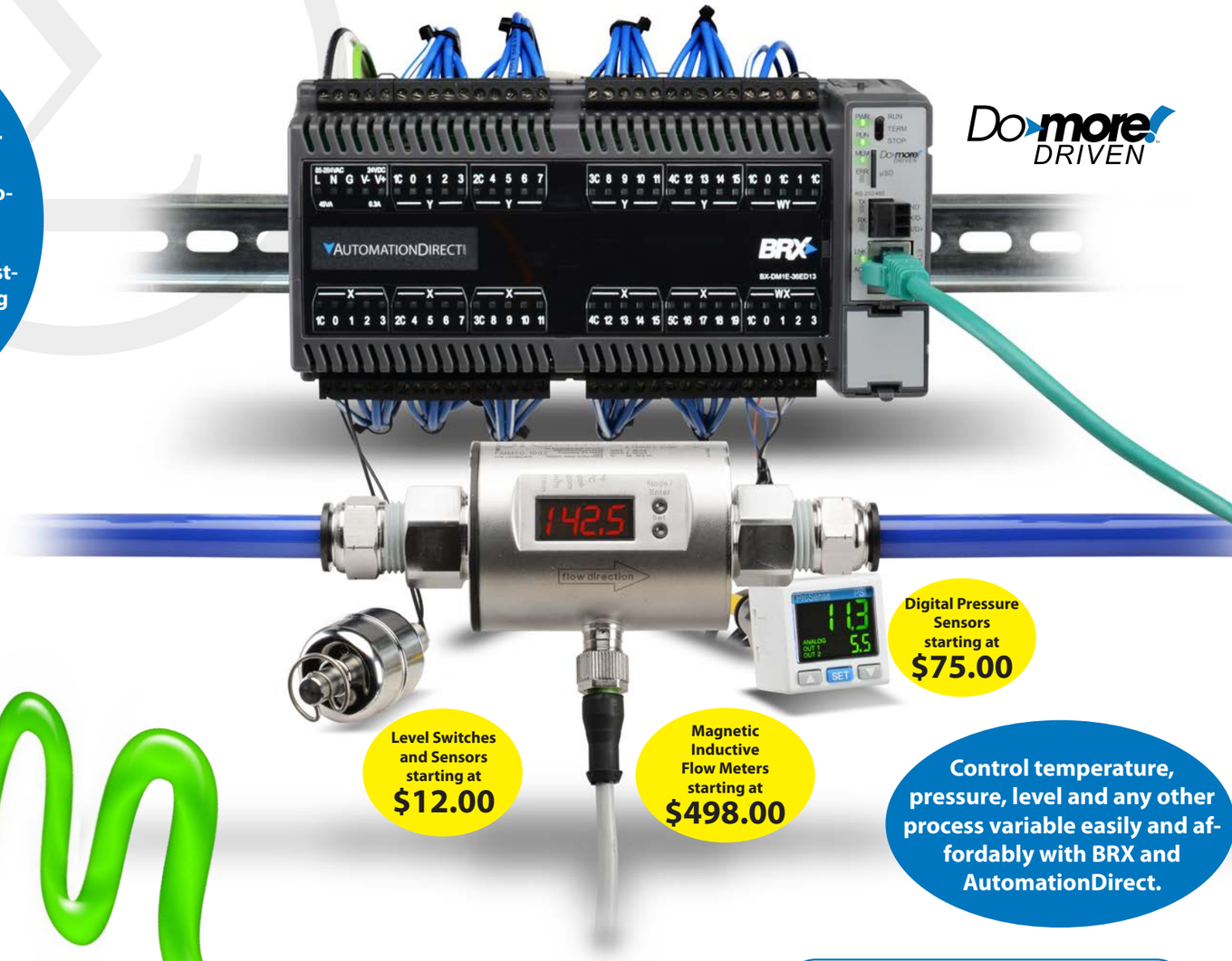


The Do-more Simulator includes a PID Process Simulator that can be used to demonstrate the process control abilities of the controller or for testing changes to existing control loops.



Close the loop with low-cost components from AutomationDirect.com

AUTOMATIONDIRECT.com BRX



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Digital Pressure Sensors starting at $75.00

Level Switches and Sensors starting at $12.00

Magnetic Inductive Flow Meters starting at $498.00

Control temperature, pressure, level and any other process variable easily and affordably with BRX and AutomationDirect.

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Multiple levels of security for peace of mind

Secure your software connections with sessions

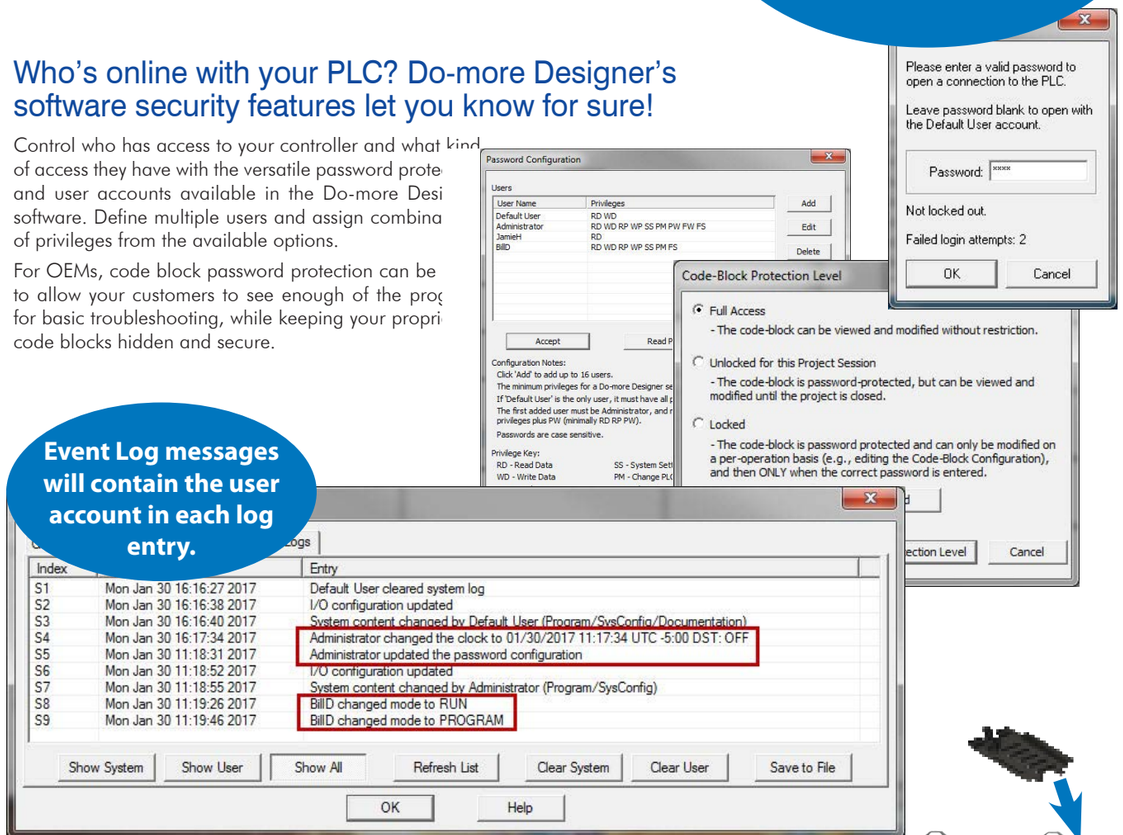
There is a vast array of communication networks in the industrial automation field, some with better isolation than others. To ensure that Do-more Designer programming software connections to the PLC are restricted to authorized personnel only, the BRX PLC platform utilizes session-based communication. By using sessions, each initiated communication request must contain a unique ID. If the ID is missing, the BRX PLC will discard the request. This guarantees that no unauthorized access will be granted and also prevents PCs from accessing the wrong PLC. Sessions will also time out if not utilized, closing the idle link between the programming software and the PLC which must be reestablished if needed.

BRX PLCs will lock out any online sessions for 30 seconds after 10 failed login attempts in a 2-minute window or 8 consecutive failed attempts.

Who's online with your PLC? Do-more Designer's software security features let you know for sure!

Control who has access to your controller and what kind of access they have with the versatile password protection and user accounts available in the Do-more Designer software. Define multiple users and assign combinations of privileges from the available options.

For OEMs, code block password protection can be used to allow your customers to see enough of the program for basic troubleshooting, while keeping your proprietary code blocks hidden and secure.



Event Log messages will contain the user account in each log entry.

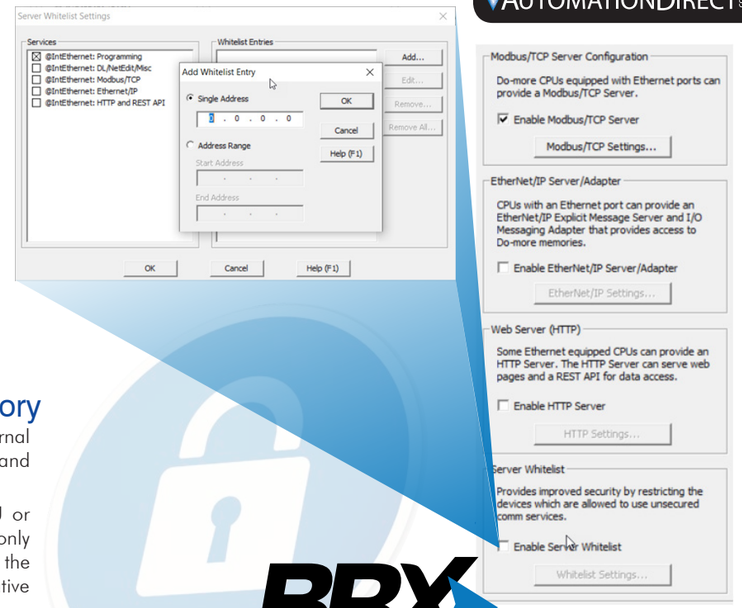
Lock down the operating system to keep your controller safe

All BRX PLC units have a block of 8 on-board DIP switches that are used to perform various debug and recovery operations. One of these switches enables/disables firmware downloads to the controller. Disabling firmware downloads will protect your CPU from unwanted operating system changes and keep you in control of if and when these changes are made.

For the latest prices, please check AutomationDirect.com.

Don't leave any doors open

BRX PLCs allow users to disable unused protocols and restrict access to protocols via IP addresses. By providing an easy way to turn off protocols that aren't in use, and providing a way to assign specific IP addresses, or IP address range, to specific protocols, BRX makes sure there are no loose ends or open doors that could be used to compromise your system.



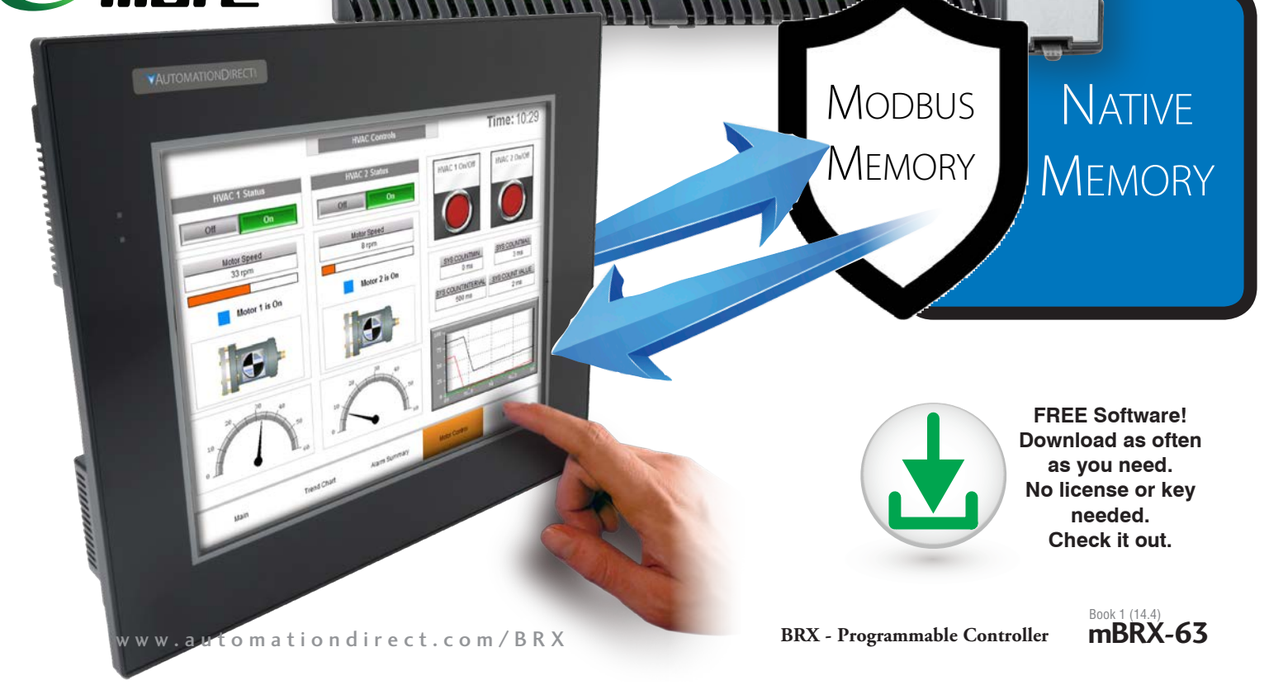
Shield your system with guest memory

Protocol-specific memory or guest memory prevents external devices from randomly accessing the BRX PLC's I/O and native memory.

When communicating using the Modbus protocol (RTU or TCP) or the DL protocol (K sequence), the BRX PLC will only allow the 3rd party Master to access the data stored in the CPU's Modbus or DL memory registers, keeping the native memory secure from unwanted access.

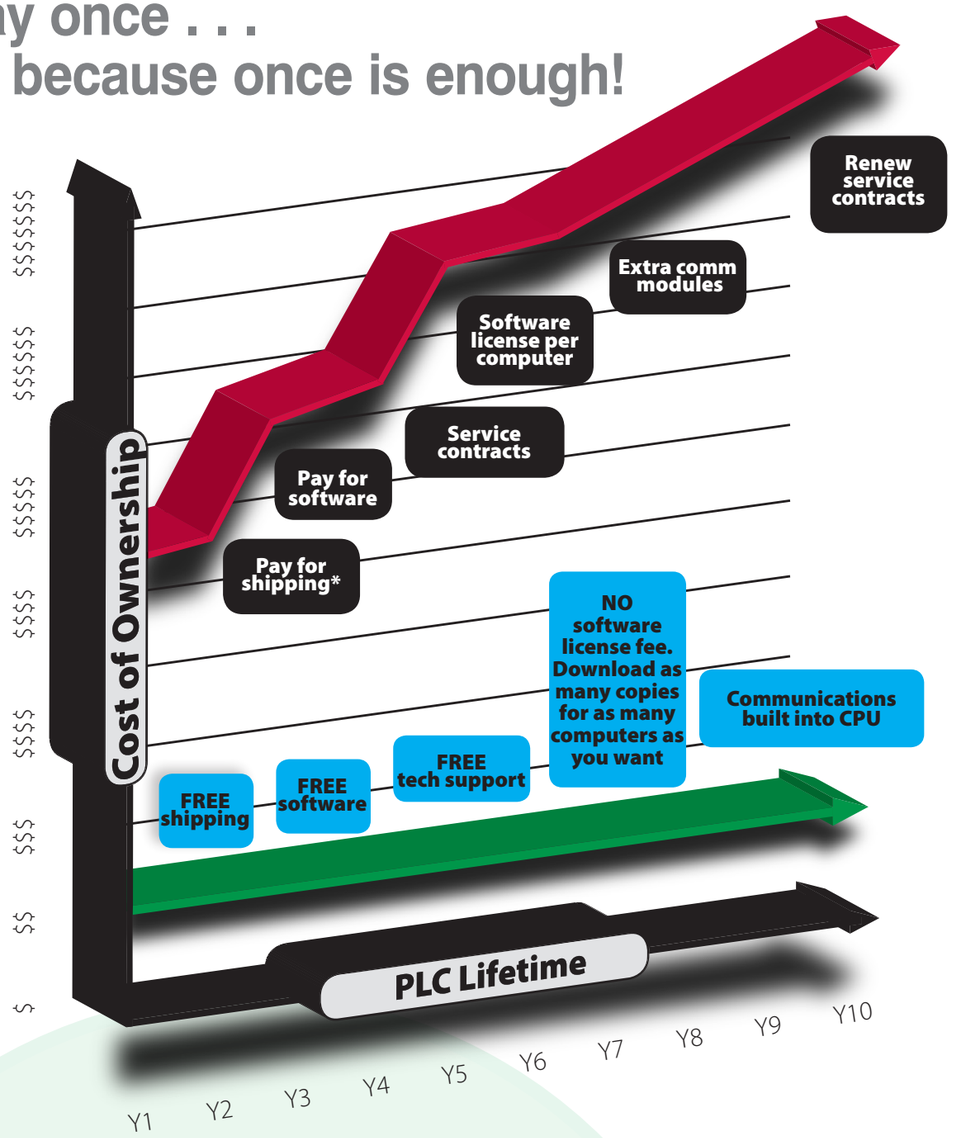
Secure email capabilities with SSL/TLS encryption

C-more®



FREE Software! Download as often as you need. No license or key needed. Check it out.

Just pay once . . .
. . . because once is enough!



Competitor PLC

$$$$+$+$+$+$ . . . .

BRX

$$$

Own it, don't owe on it!

So, how much should a PLC cost? Does a higher cost indicate greater functionality, better quality, or does it indicate more overhead, more expenses being off-loaded to you? Buying direct with us saves you money and cuts out the unnecessary costs that are incorporated into other brands' PLCs. If you need a PLC, then buy a PLC, not the overhead! With BRX PLCs, you get many standard features that you would pay thousands for elsewhere. These feature-packed PLCs start at $202.00 and I/O modules start at just $39.00.

So, ask yourself, what exactly are you paying for?

*for some suppliers

BRX

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For the latest prices, please check AutomationDirect.com.

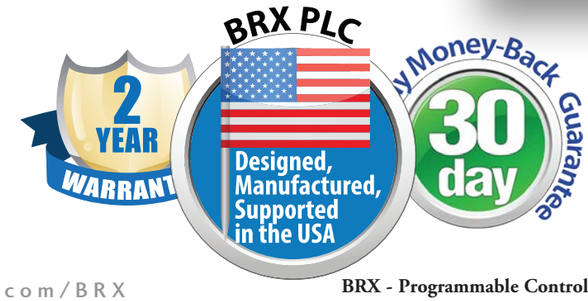
CPU and I/O Comparison	AutomationDirect BRX PLC	VS. Allen-Bradley Micro 800	VS. Siemens S7-1200	VS. IDEC FC6A
PLC Unit (with Ethernet)	$484.00 BX-DM1E-36ED13-D	$754.75 2080-LC50-48QVB	$1,300.00 6ES7 214-1AG31-0XB0	$700.00 FC6A-C40K1CE
(28) 24VDC Inputs	$39.00 BX-08ND3 (8-pt DC IN module + 20 DC IN on PLC unit)	Built-in (28 DC IN on PLC unit)	$720.00 6ES7 221-1BH30-0XB0 (16-pt DC IN module + 14 DC IN on PLC unit)	$125.00 FC6A-N08B1 (8-pt DC IN module + 20 DC IN on PLC unit)
(20) 24VDC Outputs	$46.00 BX-08TD1 (8-pt DC OUT module + 16 DC OUT on PLC unit)	Built-in (20 DC OUT on PLC unit)	$614.29 6ES7 222-1BH30-0XB0 (16-pt DC OUT module + 10 DC OUT on PLC unit)	$180.00 FC6A-T08K1 (8-pt DC OUT module + 16 DC OUT on PLC unit)
(4) Analog Inputs	Built-in (4 Analog IN on PLC unit)	$171.72 2080-IF4	$450.00 6ES7 234-4HE30-0XB0 (4IN/2OUT Analog combination module)	$460.00 FC6A-L06A1 (4IN/2OUT Analog combination module)
(2) Analog Outputs	Built-in (2 Analog OUT on PLC unit)	$102.61 2080-OF2		
Total System Price	$569.00	$1,029.08	$3,084.29	$1,465.00

All prices are U.S. published prices. AutomationDirect prices as of 11/5/2020. Allen-Bradley, Siemens and IDEC prices taken from www.radwell.com 11/5/2020.

$556.00!

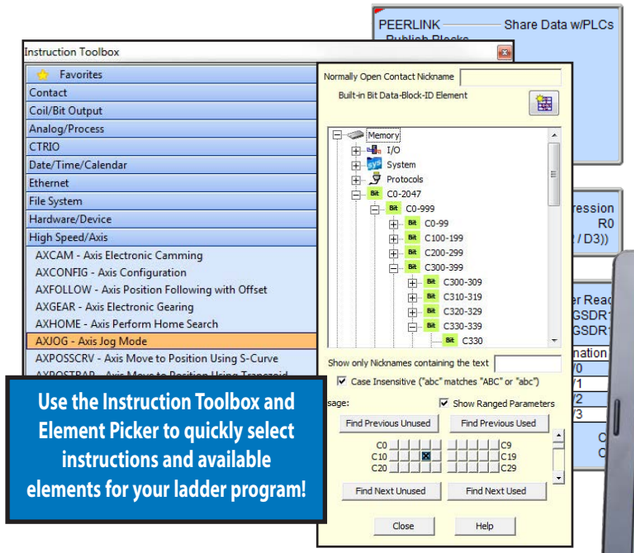
AND THAT INCLUDES:

- Low-cost edge device capability for the IIoT/ Industry 4.0
- Advanced motion control
- Data logging
- Onboard serial and Ethernet ports with support for Modbus RTU/ TCP, EtherNet/IP, MQTT/ MQTTS, HTTP/HTTPS, FTP, and more
- Discrete, high-speed and analog I/O
- Interchangeable communications port
- Integrated video help
- Free programming software (with simulator)
- Free technical support



For the latest prices, please check AutomationDirect.com.

Do-more Designer:
FREE Easy to use Software that actually *does more*!



Use the Instruction Toolbox and Element Picker to quickly select instructions and available elements for your ladder program!

Download the free software today and check out all these great features!

The Do-more Designer software is a free download at www.do-moreplc.com

To test your program, use the built-in simulator or connect to a Do-more PLC with your choice of a serial, USB or Ethernet connection.

Built-in simulator

The built-in simulator creates a virtual PLC so you can test your logic without a PLC present.

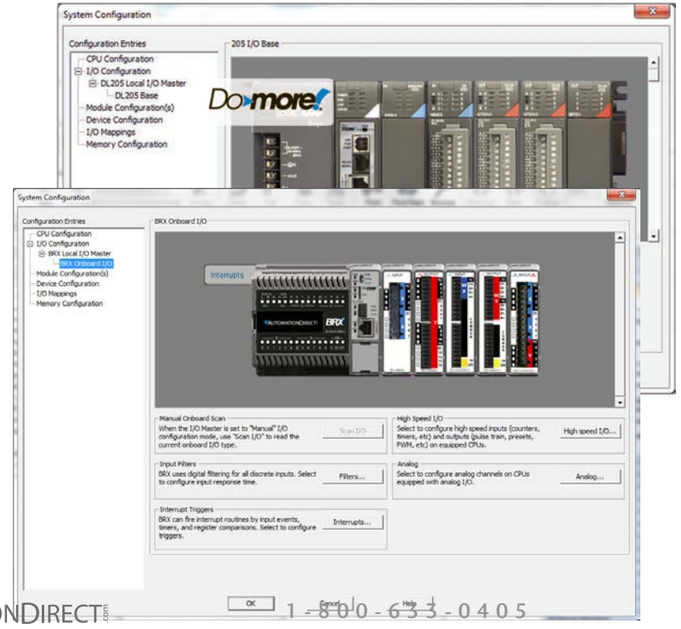
- Windows application uses the same code as the CPU firmware - for the most accurate simulation.
- Simulates discrete and analog I/O with access to timers, counters, control bits, etc.
- Simulate PID - Use the Simulator coupled with the Trend View for outstanding visibility into your PID processes.

New Software Features

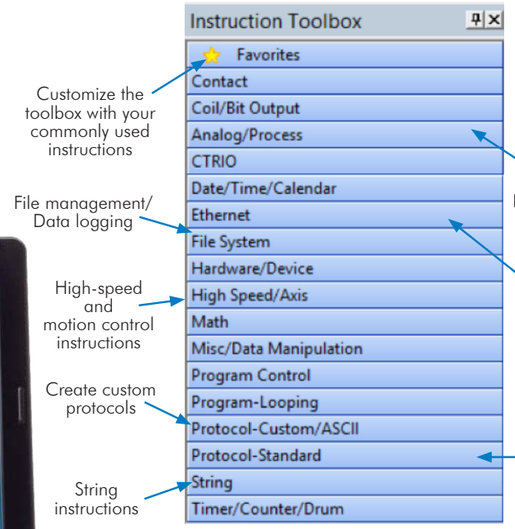
- **Rest API** - Allows for seamless data flow to high-level IT systems for plant-wide data analysis and process improvements.
- **Web server** - Provides access to PLC status and diagnostic information from any web browser.
- **AXSCRIPT Instruction (BRX only)** - Create simple to complex motion profiles using an easy-to-use scripting editor with intelligent boiler plate editing for all of the various script commands.
- **HTTPCMD/JSONPARSE/JSONBUILD Instructions (BRX only)** - Three new instructions that make it easy to communicate with data-rich web servers.
- **PWMOUT Instruction (BRX only)** - Control one of the Pulse Width Modulated high-speed discrete outputs on a BRX PLC with simple Frequency value in Hz, and Duty Cycle as a percentage.

I/O is automatically configured

Connect to your PLC, and visit the I/O Configuration window for full Auto-Discovery of your modules in the local or remote base (remote I/O auto discovery only available with DMIO and EBC100 remote base controllers).



Optimized instruction set - currently over 200 instructions and counting!



Customize the toolbox with your commonly used instructions

File management/ Data logging

High-speed and motion control instructions

Create custom protocols

String instructions

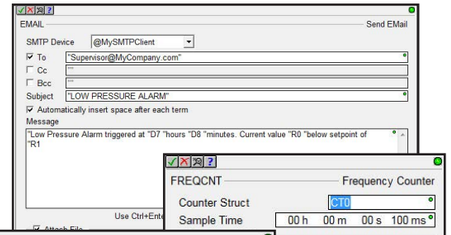
Process control PID Ramp/Soak profiles

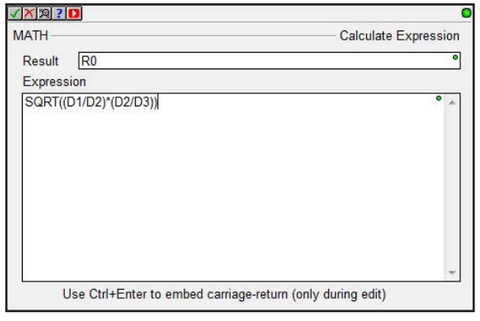
Email DNS Lookup Ping

ModbusTCP/RTU EtherNet/IP MQTT/MQTTS HTTP/HTTPS DirectLOGIC PeerLink GS-EDrive etc...

Click here for most up-to-date list

The Do-more instruction set was developed by listening to our customers' needs and requests, with flexibility and ease of use as our goals. Download the free software today and take a look at these powerful and easy-to-use instructions or click link above for entire list.



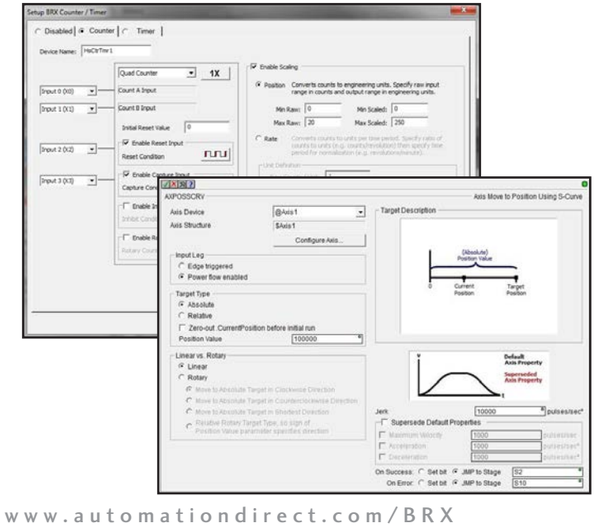


Intuitive math

The spreadsheet style MATH instruction allows mixing of data types* and it accepts formulas and variables. The MATH instruction also allows nesting with parentheses up to 8 levels, plus:

- Ten 'real' functions, including natural log, PI, square root, and conversions.
- All the standard trig functions.
- Eight statistical functions, including average, min & max, RANDINT and RANDREAL (to generate random values), standard deviation functions and more.
- Thirteen conditional functions, including six CountIF, six SumIF, and If/Else expressions with a full complement of binary operators.

If that's not enough, how about absolute value, time, memory, and indirect addressing? You even get access to system-level bits such as $IndexError, $OutOfRange, $Overflow, etc.



High-speed I/O and motion control: simplified

Dedicated instructions greatly simplify and improve the motion functionality of Do-more PLCs.

- Native support allows fill-in-the-blank motion profiles and high-speed counter configuration.
- Use the 'Axis Mode' instructions for dynamic positioning, jogging, and trapezoidal moves.
- Assign a logical name to each axis, and use that name throughout your code.

**** Note about data types: integer and real types are really all you need but Do-more does include a few BCD and octal conversion instructions for legacy data types.***

The software story just gets better and better!

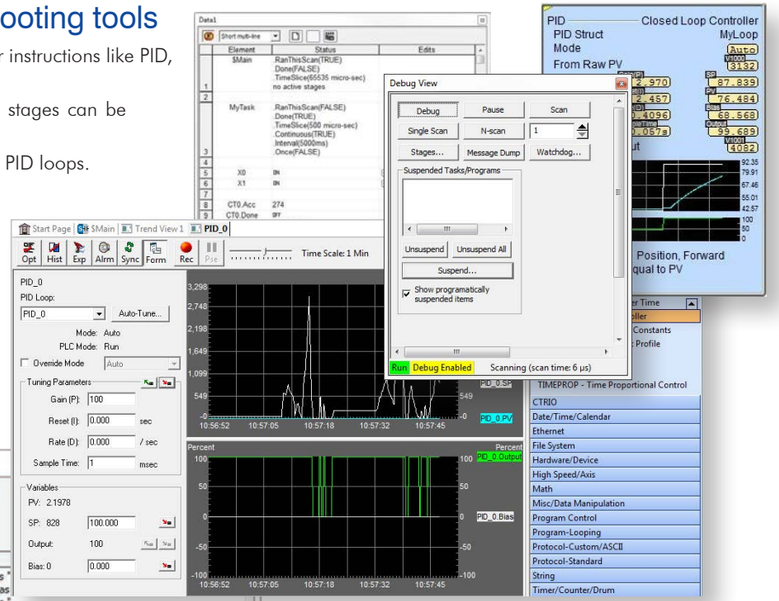
Insightful monitoring and troubleshooting tools

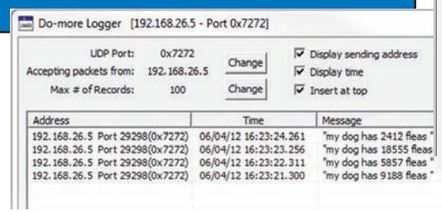
View Trend Data in its own view and within specific ladder instructions like PID, RAMPSOAK, and High/Low Alarm.

Tasks and Programs can be suspended to isolate code; stages can be enabled or disabled.

The PID Monitoring window allows precise tuning of your PID loops.

Use the Data View to monitor program elements and Program Status Bits for behind-the-scenes visibility into PLC internal operations.





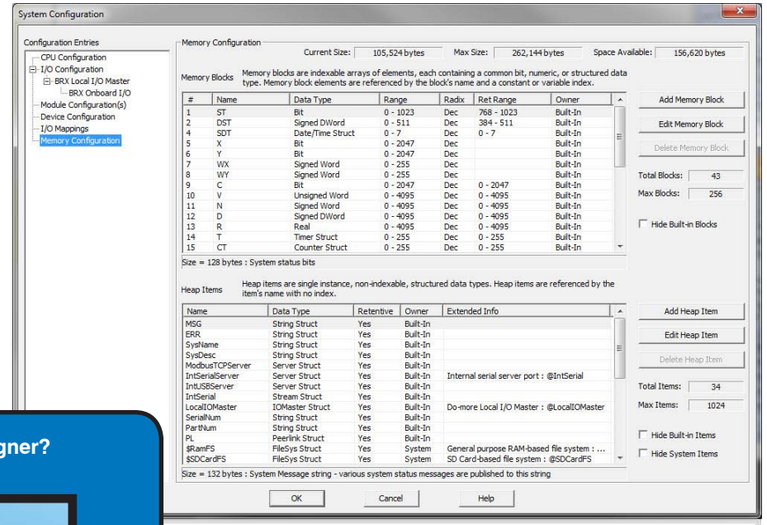
Turn on the Do-more Logger and receive custom error messages via the network message viewer (free Do-more Designer utility that runs on your PC).

Flexible memory management capabilities

Strong data typing keeps your data organized and protected. Data structures automatically put the important details at your fingertips.

Do-more can be as flexible as you need. You can allocate all the data memory the way you want it up to specific maximums (no more rigid, predefined blocks of wasted space!).

You can even define your custom memory addresses and assign a data type of your choice to improve the readability of your program.



What's so great about Do-more Designer? Click to find out!

For the latest prices, please check AutomationDirect.com.

Organize your code with outstanding program management tools

Do-more supports straight ladder logic, tasks, subroutines, and stage structures for a best-of-all-worlds approach that simplifies code and makes troubleshooting easier.

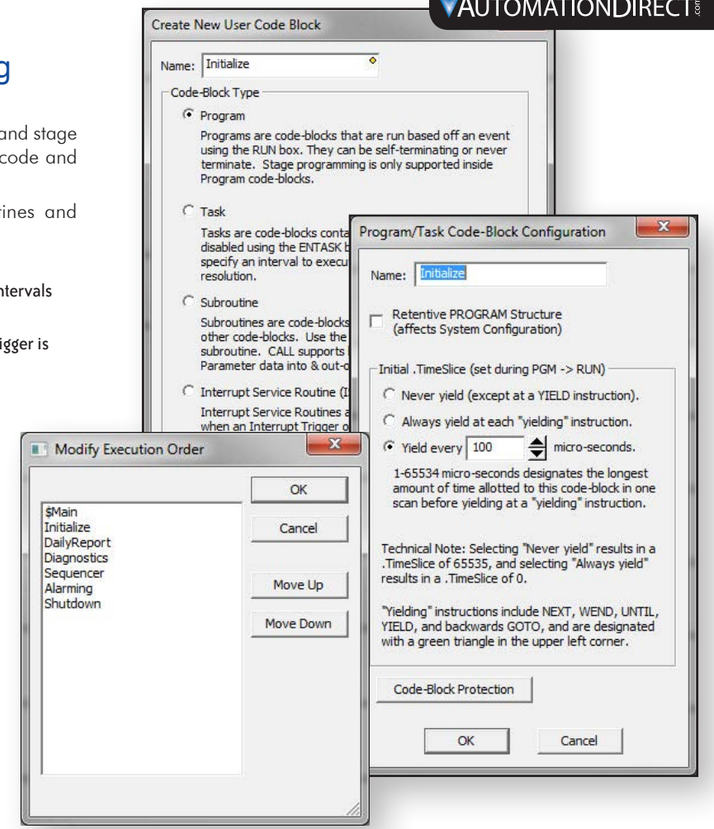
Code can be broken up into Programs, Tasks, Subroutines and Interrupt Service Routines:

- Programs run based on events
- Tasks run when called; once, continuously, or at user-defined intervals
- Subroutines are called from other code blocks
- Interrupt Service Routines (ISR) are called when an interrupt trigger is activated

Code blocks can be suspended to isolate code; stages can be enabled or disabled.

Get flexible, powerful control over your program code execution:

- Assign code blocks to a fixed timeslice
- Define "yield points" for logical pauses
- Define priorities and order of execution



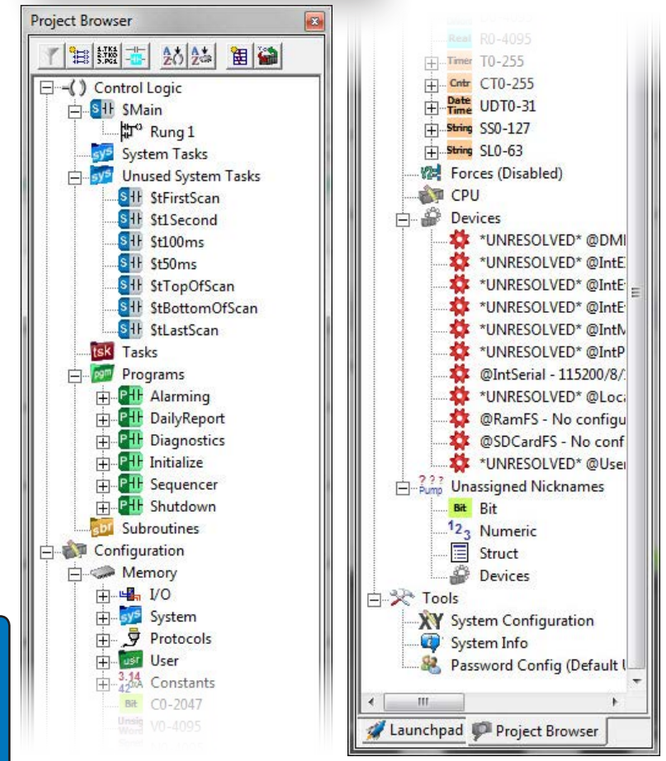
Convenient project browser

All project files are stored on board the CPU - no more searching for the old laptop with the most recent copy of the program before you can fix your machine!

You can also store your own files with the disk-based version of the project to aid future improvement or troubleshooting efforts. Store PDF, HTML or virtually any file format (up to 10Mb) that you want to keep with the project for reference, or information to assist your coworkers or customers whenever they open the project.

The Project Browser makes it easy to select the code block you want to view or edit. System tasks are predefined for many common actions. Jump directly to any part of your code with just a few clicks.

The Do-more Designer software even supports "restore points", which are basically previous versions of your program that you saved at known good operation. It's nice to know that you can easily "roll back" your project if your development goes awry.



'Bumpless' Run-time Edits

Do-more Designer can download a new version of your code into the Do-more CPU and seamlessly switch to it at the beginning of the next scan. There is no need for any pause (however brief) that can wreak havoc on the operation of your machine or process.

Visit www.do-moreplc.com for more details on all the hardware and software features, and to view all of the informative videos.

www.automationdirect.com/BRX