



## Rockwell Automation extends PlantPax process automation system

PlantPax process automation system optimises user uptime and improves profitability by integrating motor control devices into a plant-wide control system

Rockwell Automation has extended the reach of its PlantPax process automation system to integrate critical rotating assets, such as compressors, pumps, turbines and fans, giving users the ability to manage plant-wide operations with a single platform. The PlantPax system combines the company's core process automation capabilities and technologies with those of partners and acquisitions to deliver an integrated control and information solution for customers.

Users now can tie intelligent motor devices into this unified-control architecture, making an immediate and measurable impact on asset availability, operational efficiency and energy management. The tight integration between process automation and motor control is especially beneficial in heavy industrial applications with considerable mechanical investments, such as metals, mining, cement, power, oil and gas, water/wastewater, and pulp and paper applications.

PlantPax system users will have access to diagnostic information on any device in the system from any location – including motor control centers, drives, compressors, pumps, fans and instrumentation. Leveraging the EtherNet/IP network, engineers can monitor process conditions such as electric motor current, vibration signatures of key rotating assets and torque signatures of variable speed drives. This allows plant engineers to predict potential problems and help

avoid equipment downtime – resulting in improved productivity and reduced maintenance costs.

“To improve plant performance, our customers prevent unplanned shutdowns while protecting expensive machinery,” said Andrew Sia, Process Solutions Manager, Rockwell Automation. “Leveraging a single-network architecture to bring operational information from motor control devices into the control system helps engineers extend the life of their mechanical assets and improve their overall configuration, operation and maintenance experience.”

Unlike other distributed control systems that require users to manually map data from motor control devices to the control system, the PlantPax system mirrors the device memory, making data automatically available within the control system. Users can also setup applications in the PlantPax system to collect and archive performance data from motor control devices into databases for analysis.

This convenient data acquisition provides cost savings throughout the lifecycle of the equipment. For example, bringing intelligent motor control devices into the PlantPax system is useful in managing the performance of energy-intensive assets. Furthermore, since EtherNet/IP is the delivery mechanism for the PlantPax system, users can avoid electrical hazards by accessing information remotely, helping personnel safely monitor, troubleshoot and diagnose motor control centers and other equipment. This saves time associated with suiting up with personal protective equipment and helps protect personnel from

exposure to hazardous conditions.

According to the ARC Advisory Group, “The PlantPax system helps lead the trend in the convergence of power and process automation systems, which will result in improved productivity and energy efficiency for end users in metals, mining, cement, power, oil and gas, and pulp and paper industries.”

In addition to integrating motor control devices into the control system, other key features with the PlantPax system include:

EtherNet/IP network support for redundant systems and Device Level Ring network topology that provides a highly available EtherNet/IP network without any additional infrastructure costs.

Improved device integration and asset management as drives, for example, are now exposed via icons and faceplates in the visualisation layer, and managed in the asset management layer to provide disaster recovery, automatic backup and restore of drive configuration, and change auditing.

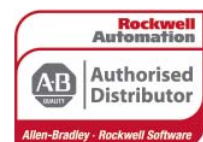
Accelerated design engineering with initial sizing and architecture design, the creation of reusable engineering and template objects, and engineering and deployment tools for objects and diagnostics in the PlantPax library.

**For more information, visit:**  
 PlantPax Process Automation System <http://www.rockwellautomation.com/solutions/process/systems>



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## Delivering New Dimensions of Scalability with Integrated Architecture

The new CompactLogix™ programmable automation controllers (PACs) are designed to meet the growing need for a higher performance controller in a compact and affordable package. As part of the Rockwell Automation Integrated Architecture™ system, the controllers use the same programming software, network protocol and information capabilities as all Logix controllers, providing a common development environment for control disciplines.

Cost-saving features of these controllers include support for Integrated Motion on EtherNet/IP™; Device Level Ring network topologies; built-in energy storage that removes the need for lithium batteries; reuse of existing 1769 I/O; and kinematics that removes the need for additional robot controllers and software.

In addition, the new family features a removable 1 GB secure digital card that improves data integrity and flexible memory options up to 3 MB. The No Stored Energy (NSE) version of the family offers additional features for hazardous environments found in industries such as mining and oil and gas. What's more, an open socket capability allows support for Modbus TCP as well as devices such as printers, barcode readers and servers.

The PACs deliver affordable control suited for applications ranging from small, stand-alone equipment to high-performance indexing tables, process skids, case packers and erectors, and packaging.

**For more information, visit:**  
<http://ab.rockwellautomation.com/Programmable-Controllers/CompactLogix>



## Cost-Effective Coordinated Motion System

The Allen-Bradley Kinetix® 350 single-axis servo drive provides motion scalability. It connects and operates with the new family of CompactLogix™ controllers, supporting Integrated Motion on EtherNet/IP™.

CIP Sync and CIP motion technologies provide real-time, closed-loop motion control on standard Ethernet. This topology-independent network provides a simplified integration of the entire control solution on one network, including programmable automation controllers (PACs), human-machine interface, I/O and motion.

With its compact design, the Kinetix 350 requires less panel space and can be connected easily. In addition, users can reduce design, installation and commissioning time by reusing code across the Logix control platforms.

Programmed with RSLogix™ 5000 software, the servo drive provides a scalable motion system to be used with ControlLogix® and CompactLogix PACs. What's more, it is equipped with embedded safe torque off.

Its scalable platform is optimized for lower axis count systems. The Kinetix 350 supports 100V and 200V single phase and 200V and 400V 3-phase class voltage models. Power ranges from 400W to 3kW. Users can reduce commissioning time with the automatic drive identification of the MP-Series™ and TL-Series™ motors and actuators.

**For more information, visit:**  
<http://ab.rockwellautomation.com/Motion-Control/Servo-Drives>

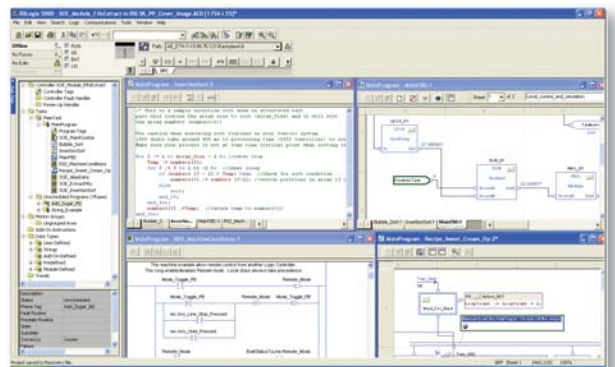


## Rockwell Automation RSLogix 5000 Software for New Scalable Controllers

Rockwell Software RSLogix™ 5000 software provides a single development environment for design, configuration and maintenance for the Allen-Bradley ControlLogix® and CompactLogix™ programmable automation controllers (PACs) and the Kinetix® 350 servo drive on EtherNet/IP™.

Using RSLogix 5000 V20 in combination with scalable, right-sized control system components allows machine builders and end users to scale from 48 to 10,000 I/O using a single control platform and common user experience. It brings integrated motion on EtherNet/IP to the CompactLogix controller family for a high performance yet compact and affordable packaged solution.

**For more information, visit:**  
[www.rockwellautomation.com/rockwellsoftware/design/rslogix5000/index.html](http://www.rockwellautomation.com/rockwellsoftware/design/rslogix5000/index.html)





## Connect the Allen-Bradley PowerFlex 750 Drives to the Profibus Network

The **PowerFlex® 750-Series Profibus DPV1 module** enables users to integrate the Allen-Bradley PowerFlex 750-Series AC drives with the Profibus network.

The optional module mounts inside the PowerFlex 753 and 755 AC drives to save panel space and offers V1 services beyond the standard VO services. Various tools can be used to configure the module and connected drive(s) including the Enhanced PowerFlex 7-Class HIM or drive configuration software such as DriveExplorer and DriveExecutive.

Features of the module include:

- **I/O Messaging:** Used to transfer time-critical information, including data that controls the drive. The module can send and receive logic command/reference, logic status/feedback and datalinks (read and write up to 32 parameters simultaneously).
- **Explicit Messaging:** Involves non-time critical information that is typically triggered by the application (for example, ladder program in the controller). The module supports reading/writing of drive parameters, reading the drive fault queue, and reading/writing of option or other peripheral parameters.
- **Configuration Switches:** The module has a binary-coded decimal switch for setting the node address (01-126). Alternatively, the switch can be disabled (00 – all off), allowing the node address to be set using a configuration parameter. There is a dedicated switch setting that allows for byte swapping on the network depending on the controller that is selected to communicate with the module.
- **Network Operating Mode Jumper:** Allows users to set the operating mode of the module from either standard Profibus or ProfiDrive, providing network flexibility and convenience.
- **Standard D89 Connector:** Connects to a Profibus network, greatly simplifying the connection point and increasing longevity of the wiring system by providing strain relief.

The module can be flash-updated in the field using Drive Explore, DriveExecutive and ControlFLASH.

**For more information, visit:**

[http://literature.rockwellautomation.com/idc/groups/literature/documents/pp/750com-pp001\\_-en-p.pdf](http://literature.rockwellautomation.com/idc/groups/literature/documents/pp/750com-pp001_-en-p.pdf)



## Redundant I/O Increases Availability of Critical Applications

The **1715 Redundant I/O platform** requires no user programming code or add-on instructions, special wiring or additional hardware to operate. It supports multiple configurations and applications, in standard and extreme environments, with a single product.

Unlike other I/O platforms, 1715 I/O lets users put redundancy where they need it. It offers the flexibility of simplex (non-redundant) or duplex (redundant) module operations.

Modules offer native device intelligence in that they can monitor their own health with internal diagnostics. The modules perform multiple samples of a single signal using different criteria to alert users to issues such as open and short circuits, unexpected rate of change and thresholds. In addition, the 1715 platform includes redundant Ethernet adapters for greater fault-tolerant capabilities.

**For more information, visit:**

[http://literature.rockwellautomation.com/idc/groups/literature/documents/pp/1715-pp001\\_-en-e.pdf](http://literature.rockwellautomation.com/idc/groups/literature/documents/pp/1715-pp001_-en-e.pdf)

## Portable Data Collector for Predictive Maintenance and Diagnostics

The real-time, multi-channel, **Fast-Fourier Transformer (FFT) signal analyser and data collector** is used for predictive maintenance and machinery vibration diagnostics. It measures, processes, displays and stores a range of analysis functions.

The data collector includes:

- A high-performance computing platform running Windows CE 6.0
  - A sunlight-visible color LCD
  - Suitability for harsh environments with a Mil 810 spec drop rating, IP65 sealing and an operating temperature range from -10C to +50C
- The combination of the Dynamix™ 2500 data collector with Emonitor® software provides users with tools for predictive maintenance using noise and vibration analysis. The data collector can also be used in other applications such as balancing or bearing analysis.



**For more information, visit:**

<http://www.rockwellautomation.com/solutions/conditionmonitoring/portable.html>

**VISIT ROCKWELL AUTOMATION AT THESE EVENTS: JANUARY - JUNE 2012**

DATE	EVENT	LOCATION
21–23 February	RSTechED 2012	Auckland, New Zealand
21 February	Manufacturing Operation Management in CPG	Auckland, New Zealand
22–24 February	AOG 2012	Perth WA, Australia
6–7 March	RAOTM	Melbourne VIC, Australia
15–18 March	APPITA 2012	Melbourne VIC, Australia
2–3 May	RAOTM	Sydney NSW, Australia
22–23 May	RAOTM	Brisbane QLD, Australia
22–23 May	Resources & Energy Symposium	Broken Hill SA, Australia
6–7 June	RAOTM	Perth WA, Australia

**PRODUCT** FOCUS

## Allen-Bradley PowerFlex 755 AC Drives Power Range Extended

New high-power drives provide users with expanded application flexibility, additional voltages and common DC bus option for energy savings. Building on the foundation of the Allen-Bradley PowerFlex 755 high-power models, Rockwell Automation has extended the power range of its PowerFlex 755 AC drives to 900 kW and added 690 volt ratings. The new drives, well-suited for a variety of heavy industrial applications, provide users with increased application flexibility, advanced diagnostics and a common DC bus option.

“We’ve expanded the horsepower range and added new features to bring the benefits of the PowerFlex 755 family – advanced diagnostics, a convenient roll-out design and control options – to a broader range of motor control applications,” said Andrew Hoch, Solution Architect Power Control, Rockwell Automation. “This helps heavy industrial users reduce costs through enhanced flexibility, reduced downtime and low meantime to repair.” The common DC bus option allows users to connect the PowerFlex 755 AC drive to a common DC bus

configuration, which takes advantage of different drive cycles to share energy. In this configuration, a DC bus acts as a common energy source that feeds energy from a generating load to a motoring load. Managing energy from a shared source increases overall system performance and reduces losses – ultimately improving the application’s energy efficiency.

Like all PowerFlex 755 drives, this latest frame size includes an embedded Ethernet port and five option slots, so users can tailor it to their application. Option modules include I/O, feedback, safety, additional communications and an auxiliary power supply. A convenient roll-out design allows easy access to the drive for fast installation and maintenance. The drive’s converter and control pod can remain in the unit while the inverter is rolled out, so control wiring can remain connected. In addition to the extended power range, a firmware upgrade for all PowerFlex 755 drives will contain the following new features and benefits:

Interior Permanent Magnet Motor Control – Delivers increased application flexibility and high energy

efficiency.

“Stop Dwell” feature – Helps prevent a motor from coasting to a stop.

Ideal for converting applications, it allows users to preconfigure the motor to perform a controlled stop to protect valuable motor investments.

The next version of Rockwell Software RSLogix 5000 software, planned for later this year, will include an automatic device configuration feature. Rather than manually configuring a replacement drive, this feature allows Logix controllers to automatically configure the drive upon installation. Users can quickly and easily replace drives without programming – ultimately improving uptime while reducing time and money spent on installation.

**For more information, visit:**

<http://www.ab.com/drives/powerflex/755>



## Guard I/O

Guard I/O provides all the advantages of traditional distributed I/O for safety systems.

It reduces wiring costs and start up time for machines and cells, as compared to in-chassis I/O. You can use Guard I/O with any safety controller that communicates on DeviceNet or EtherNet/IP networks. Several Guard I/O blocks variants are available, with a variety of features for both in-cabinet and

on-machine mounting.

Rockwell Automation has a well-established reputation for helping manufacturers improve productivity. We’re also one of world’s largest safety system providers. By understanding global safety standards and practices as well as your manufacturing applications, we can help you achieve both operational excellence and a safe working environment.



**For more information, visit:**

<http://ab.rockwellautomation.com/safety/io>