

the CONNECTION



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Take a break from a week filled with questions, by attending a week filled with answers.

Automation Fair 2011

Chicago, Illinois

November 16 – 17, 2011

Wednesday: 8-5:30

Thursday: 8-4

af.kendallelectric.com

www.automationfair.com



Learn about the latest smart, safe, sustainable solutions to optimize production. Improve machine performance. Get all the answers at Automation Fair in Chicago, Nov. 16-17. Visit af.kendallelectric.com.

For the truly inquisitive, attend the Safety Automation Forum or Process Solutions User Group. Learn more at www.SafetyAutomationForum.com and <http://psug.rockwellautomation.com>



Where Did My HyperTerminal Go?

So you've just upgraded to Windows 7 and went to use Hyper Terminal – your trusty serial debugging tool that you've used forever in Windows XP (2000, 98, 95...) only to find that it is no longer there. And after searching the entire hard drive on your PC, you realize it is not anywhere to be found. What are you going to do?

Don't sweat it. All you need is to get ahold of a computer that is running Windows XP and copy the following files:

- C:\Program Files\Window NT\hyperterm.exe
- C:\Program Files\Window NT\htrn_iis.dll
- C:\WINDOWS\system32\hyperterm.dll
- C:\WINDOWS\system32\hticons.dll

C:\WINDOWS\Help\hyperterm.exe
C:\WINDOWS\Help\hyperterm.hlp

Store them in a folder on your Windows 7 Computer and now anytime you need it, simply run the hyperterm.exe file and you are off and running.

So why did Microsoft decide to leave it out of Windows 7? Your guess is as good as mine. Maybe better!

If you don't have a Windows XP computer available, simply visit the Kendall Electric ftp site at ftp:\\12.192.249.152 and snag a copy. Look for the Hyper Terminal Folder under the Info folder.

Cognex DataMan Software Handy Dandy Decoder Ring

Due to some confusion in regards to Dataman software compatibility with various DataMan models, Kendall Electric has tried to compile a matrix of versions, the models they work with, communication protocols supported and specific functionality. This list should be

fairly accurate, but at least this will provide some information to you as to what version of software you may need. Please contact your local KE vision specialist for any questions.

Hand Held	Fixed Mount	Reader Family Software Version	
		Version	Version
	DMR100	Version 2.1rc3	
	DMR200		•
	DMR500		•
	DMR710/750S/750	Version 2.2.1	
	DMR75XD	Version 3.01	
	DMR8000	Version 3.1	
	Industrial Comm Protocols	Version 3.1.1	
		Version 3.3rc2	
		Version 3.3.1	
		Version 3.4.1	
		Version 3.5	
		Version 3.2.4	
		Version 3.5 CR1	
		Version 3.5.1	
		Version 3.6rc4	
		Version 3.6.0 CR1	
		Version 3.2.6	
		Version 4.0	
		Version 3.7.0	
		Version 4.0.1rc1	
		Version 3.5.0 CR8	
		Version 3.6.1	
		Version 3.5.1 CR8	
		Version 3.6.2	
Notable Software Enhancements		Includes validation capabilities (COD, ISO), improved 1D code reading, expanded data formatting, presentation mode	
		Multi language version of the initial release of the software for the DMR-100	
		Supports DMR100 and DMR75XD, new symbologies, new features including Burst Mode, self trigger mode, validation reports, match string, multiport for DMR100, DMCC Codes.	
		Supports the DMR750, DMR710 and DMR100 including the S model. Improved 1D and stacked code performance for handhelds, improvements to Burst and Self Triggering modes for DMR100, live image display. English only.	
		Multi language version of Version 3.1	
		Supports DMR200	
		Supports DMR500	
		Includes QR Code speed and perspective improvements, CSI validation and formatting, continuous trigger mode, offline image analysis, multi-code sorting, improved trigger debounce, PDF verification/validation reports and additional data formatting.	
		Includes 1DMax, Ethernet/IP protocol with AOP, industrial USB driver for improved USB connections, improvement to IDQuick for 2D code speed and yield, supports new QL models and DMR200 C-mount.	EIP
		Includes stability improvements to USB and USB keyboard wedge for the corded readers and stability improvements for communications from reader to the base station for cordless readers.	
		Adds Profinet communications for the DMR200	Profinet
		Multi language version of 3.5	EIP
		Supports DMR8000 series	
		Supports Ethernet/IP and Profinet communication protocols for DMR8000 Ethernet models	EIP Profinet
		Improvements to the aimer and supports all DMCC commands	
		Supports the DataMan 500	
		Supports Motion Activated Presentation Mode on DMR8000 (does not include EIP or Profinet add-ons), Windows 7 64 bit support.	
		Includes Ethernet/IP and Profinet communication protocols, improvements to Master/Slave functionality and external illumination. Recommended upgrade for all DMR500	EIP Profinet
		Adds Profinet communications protocol for DMR200	Profinet
		Contains new default settings for DMR8000 readers	
		Supports Mitsubishi MC Protocol for DMR200	MC
		Bug fixes for Ethernet Communication (No Protocols included). Recommended upgrade for readers with 3.6.1 firmware	

Legend:
rc = Release Candidate - General release of a version of software
CR = Customer Release - Specific functionality released for general use

EIP = Ethernet/IP MC = Mitsubishi MC Protocol



Rockwell Automation's Installed Base Evaluation

by Kevin Feltner - Account Manager, Kendall Electric - Benton Harbor

Imagine that you are the head of maintenance and your production manager has just told you that the plant is going to start a 7-day a week production schedule or your boss has told you "no overtime". Think of the questions you may start asking yourself: How do I control down time? How do I keep up with my preventative maintenance?

The answer could be Rockwell Automation's IBE. What is an IBE? It is an Installed Base Evaluation. Rockwell Automation will send a Field Service Tech into your facility to look at every control panel and whatever products you would like them to, even including other manufacturers' automation equipment. The field service personnel will also look at what you are carrying in your crib.

Some questions may come to mind. Do we have the right material in our crib if a machine or line goes down? Do we have old automation equipment that is obsolete or silver series that we might not be able to get from Kendall Electric or Rockwell Automation?

Once the audit of your panels are finished you will receive a report from Rockwell Automation that will give

you a better handle on what you have in stock and in your processes. This information can be used to put a plan together on upgrading your equipment or keeping the correct number of items on the shelf. This will help keep that downtime to a minimum, saving you money in the long run.

I have just completed an IBE with one of my customers and his response to the service he received was amazing. He was satisfied with the PowerPoint presentation he was given so he can show management what needs to be addressed and how quickly they need to move on things. We are also working on a plan to make sure that he has what he needs to keep the downtime at a minimum.

This program can also be linked to other programs that Rockwell Automation provides, such as Lifecycle Service Agreement, Parts Management Agreement, Repair Shield Services, and RAAMP Programs. This makes sure you have what you need, when you need it for all your automation needs. So when you need to do some planning, contact your Kendall Account Manager and ask for more details.



Upgrading your SLC-500 Hardware to Logix

by Eric Paquette - Automation Specialist, Kendall Electric - Grand Rapids

Have you ever wanted to replace that "blue hose" RIO cable with Ethernet cable? Have you ever wanted to upgrade that SLC-500 with a Logix Controller without upgrading all the I/O and wiring?

Currently your options are limited, but by the end of this year or perhaps early next year a new option will be available. I'm talking about an Ethernet/IP Adapter for the SLC-500 I/O Platform (1747-AENT).

This adapter has been a long time coming, but it is about to become reality. Replacing 1746 I/O has been an obstacle for customers that have a large installed

base of SLC-500s and wish to move to the Logix platform. But in continued Rockwell fashion, they support their products for years and always try to ease the pain of migration with the introduction of products such as this. In the spirit of easy migration, SLC-500 users who want to be Logix users rejoice!

Plan now to attend Rockwell's Automation Fair in November to get more information and get a glimpse of this product and many other new products from Rockwell that make using their products more cost effective and easier. Or contact your Kendall Electric Account Manager.

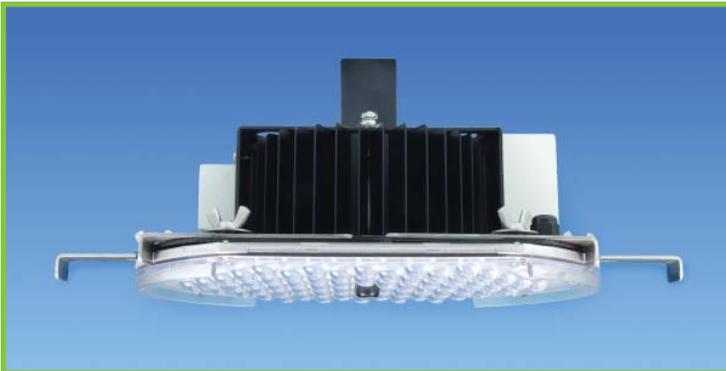


Sylvania LED Solutions

by Rick Krogel - Account Manager, Kendall Electric - Benton Harbor

Sylvania has discovered many ways to reduce your wattage consumption and continue to give you optimum light outputs where most needed. In the past 4-5 years Sylvania has discovered what LED lighting can provide. Sylvania has worked side by side with our residential, commercial and industrial customers, providing them the most cost effective and quality LED products, along with the technical support that backs up their studies.

Just recently I discovered that one of our local Health Care Facilities had been struggling with their parking structure. They had a number of 175 watt metal halide fixtures that were costing them a great deal of problems. Each time there was a power outage they would lose a number of fixtures once the power had been restored. This would result in hourly labor costs, lamp and ballast replacement cost, along with dealing with safety issues.



Sylvania had recently come out with their D11 Area Light LED Retrofit Kit. Which is an alternative to high intensity discharge (HID) lamps. This was the perfect

solution to the problems they were experiencing with the HID lamps. With the D11 only consuming 40 watts of power, and a 50,000 hour plus life span, we were able to accomplish a great deal of cost savings as you will see in the comparison chart below.

	Current System	Proposed System
	175 Watt Metal Halide	LED D11 Conversion
Wattage	201 (w/ ballast)	40
Energy Cost/yr	\$38,032	\$7,456
Cost to maintain/yr	\$2,538	---
Total	\$40,390	\$7,568
Savings per year	\$32,822	

This resulted in a 4.2-year payback to the customer, with the Sylvania D11 life span of 5.7 years this resulted in a Net savings of over \$187,000.

The environmental impact from the proposed system is also greatly reduced. In an analysis performed by Sylvania, over the life of the product, assuming coal electrical generation, the total kWh saved are 2,378,000. 3,650,230 pounds of CO2 are saved, along with a reduction in other poisonous gases. Installing the proposed system would be equivalent to taking 20.6 cars off of the road for 10 years.

To learn more about how Kendall Electric and Sylvania can help you lower your utility bill using LEDs and other lighting products, please contact your Kendall Electric Account Manager.



Hubbell's Circuit-Lock Motor Disconnect Switch

by Blair Crawley - Account Manager, Kendall Electric - Grand Rapids

Hubbell Wiring Systems announces a new improved CIRCUIT-LOCK Motor Disconnect Switch designed to enable safe, reliable switch operation when used with Variable Frequency Drives (VFDs) found in today's manufacturing environments. Additionally, this product helps prevent downtime from out-of-sequence equipment shutdowns.

VFDs used in many manufacturing and industrial environments control the speed, torque, direction, and horsepower of motors. The HBLDS3VFD integrates a verified break-before-break auxiliary contact that interfaces directly with VFDs. When a motor disconnect is turned off in a low frequency state, disconnect contacts can po-

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tentially be damaged. This can cause potential risk of injury to workers and equipment malfunctions, resulting in costly downtime and repairs. Through extensive testing, Hubbell found that the use of an early break auxiliary contact safely disconnects the power by signaling the VFD that the motor disconnect is being turned off. The VFD then executes a coast-to-stop, preventing damage to the disconnect switch and VFD output device. When the CIRCUIT-LOCK handle is turned to the 15-degree position, a signal is immediately sent back to the VFD before the switch can be fully opened. This signal takes the VFD out of a potentially damaging low-frequency state. In evaluating other manufacturers' early break contacts, not all had the same level of performance.

To educate customers about the importance of enabling safe, reliable switch operation when using VFDs, Hubbell has launched an educational product video. Available on

the Hubbell website at www.hubbell-wiring.com/video.aspx, the video provides detailed information about VFDs, NEC disconnect switch requirements, and how the new CIRCUIT-LOCK Motor Disconnect Switch effectively prevents any damaging low-frequency current from reaching the switch.

The new Hubbell CIRCUIT-LOCK Motor Disconnect Switch, part number HBLDS3VFD, includes a break-before-break auxiliary contact that is pre-installed in the device. The auxiliary contact device, part number HBLAC2, can also be purchased separately and easily installed by the customer on existing CIRCUIT-LOCK Motor Disconnect Switches and Mechanical Interlocks.

For more information about the new improved CIRCUIT-LOCK Motor Disconnect Switch for VFDs, contact your local Kendall Electric Account Manager.



Cooper Wiring Devices' Combination USB Charger

by Willie Taylor - Account Manager, Kendall Electric - Holland

Have you noticed the surge of portable electronic devices that must be charged using a USB connection? Cooper Wiring Devices' recent innovation of a combination USB charger with tamper resistant receptacle is ideal for residential, commercial, educational, municipal, and hospitality applications. The device provides a permanent and energy-efficient charging alternative to bulky adapters and computers. This device also saves up to \$31 per year in electricity costs (2 devices, 8 hrs/day, \$0.12kWh) when charging a cell phone versus a traditional charger.

The device's USB charging ports supports any electronic product that is capable of being charged via a 5V power adapter. An LED light indicates that the device is charging, and an automatic grounding system eliminates the need for a bonding jumper in grounded metal enclosure. This products injection molded housing and PVC resin offers great durability, and a zinc-plated steel mounting strap offers added corrosion resistance. The receptacle features UL approved tamper resistant shutters that ensure compliance with 2011 National Electric

Code (NEC) Article 406.12, which states that all 15 and 20 amp, 125 volt receptacles installed in dwelling units must be tamper resistant. The USB charger with a tamper resistant receptacle has convenient patented built-in wire strippers and a tri-combo screws that offers greater installation flexibility. The device features triple wipe blade contacts and double wipe ground contacts that ensure long-term plug retention to withstand regular use.



Once again, Cooper Wiring Devices has provided the marketplace with innovative products that address the needs of today's consumers and property owners. To learn more about Cooper Wiring Devices' USB charger with a tamper resistant receptacle, please contact your Kendall Electric Account Manager.



Automation Fair 2011

Chicago, Illinois

November 16 – 17, 2011

Wednesday 8:00 AM to 5:30 PM

Thursday 8:00 AM to 4:00 PM

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Visit af.kendallelectric.com
to register for the show or
one of our one or two night
hotel packages.

Celebrate the 20th Anniversary of Automation Fair!

Join us in Chicago as we celebrate the 20th Anniversary of Automation Fair. A great opportunity to explore a wide variety of smart, safe, sustainable manufacturing solutions geared towards improving your business profitability.

Automation Fair is a must-attend event. It is the largest single exposition of automation hardware, software, services and support in North America. For two instruction-packed days, you'll gain valuable insight from your choice of in-depth technical sessions, workshops, hands-on labs and specialized industry forums. Automation Fair is the premier event to learn about automation and information architectures, safety, process, and services and solutions. As our economy continues to rebound we can help you prepare for the growth with new technologies and solutions. We'll show you ways to capitalize on your automation investments and address your sustainability objectives. For detailed class descriptions and an up-to-date list of exhibitors, go to www.automationfair.com.

Pre-Show Events

Process Solutions User Group (PSUG), Nov 14 & 15

Kick off the event by attending the Rockwell Automation Process Solutions User Group (PSUG) meeting November 14 and 15, 2011. Come to share ideas, experiences and knowledge. User experience provides Rockwell Automation with direct industry input on products and solution delivery.

The participation fee for the two-day event is US \$449 per person. This fee covers all sessions, meals, refreshments and the Monday night networking event and party. On-site registration will be available. An optional one-day registration, good for either day, is available for US \$275.

Safety Automation Forum – Nov 14 & 15

This annual event offers professionals the opportunity to join industry speakers and experts to learn about safety's continued importance within manufacturing, its affect on the top and bottom line and how changing standards can best be leveraged. Safety Automation Forum focuses on best practices and education for the next generation manufacturer. \$399 USD – Full Conference Program

Industry Forums give you the opportunity to hear experienced industry representatives share what they've learned from applying Rockwell Automation technology to optimize operations, improve productivity, increase throughput and meet quality levels and regulatory restrictions. You'll be able to ask questions and discuss real-world problems with experienced professionals.

- **Automotive, Energy Management, Food & Beverage, Global Machine Builder, Metals & Mining, Oil & Gas, Water/Wastewater**

Technical Sessions, Hands-On Labs and Workshops

This is your chance to meet with the solution experts, work with new products to begin developing ideas your next generation automation systems.

- **63 Technical Sessions, 16 Hands-On Labs, 16 Workshops to choose from**

Meet with Rockwell Automation & our Automation partners on the Show Floor

The Automation Fair® event is the best place to examine all the Rockwell Automation and complementary technologies and services in one place! The show provides you with a convenient and enjoyable way to talk to suppliers and peers, see product demonstrations and learn how these solutions can help improve your operations.

- **107+ Partner Companies, Machine Builders, and Solution providers**



How to Best Handle Product Obsolescence Risk

by Dan Sherburn - GMS Director, Kendall Electric - Grand Rapids

Our base of manufacturing equipment is aging and the obsolescence risk is growing. Obsolescence risk is not having the right part on hand when you need it. Nearly ¾ of the plants in the U.S. are more than 25 years old. The installed base of legacy automation systems reaching the end of their useful life is equivalent to \$65B. A recent ARC Advisory Group survey identified 68% of process automation users were running equipment well beyond the manufacturer's obsolescence date. Did you know the following product families are no longer produced?

- 1336 (Plus II, Impact, etc.)
- 1395 DC
- 1397 DC
- 1398 Ultra 100/200
- Panelview Standard and "E"
- 160 A.C. VFDs

What is "Silver Series"?

Rockwell Automation classifies products as to where they are in their respective product life cycles-Active, Silver, and Discontinued/Inactive products:

- Active: Current product being mass produced and supported
- Silver Series: Still being produced, but an inactive date has been announced. After that date, the products will no longer be offered for sale through normal channels.
- Obsolete: Products no longer being manufactured or offered for sale

Some products, after the Silver Series date may be available for sale through the "Custom Classics" program. As long as material is available, Rockwell will manufacture these products on a made to order basis. Products that are in the Silver Series can be identified by going to the website: <http://www.ab.com/silver/>

How to Manage the Obsolescence Risk

Kendall Electric, via Rockwell Automation, can offer solutions to mitigating the risk of obsolescence by offering the following services:

- Risk Identification
- Risk Mitigation
- Risk Elimination

Risk Identification

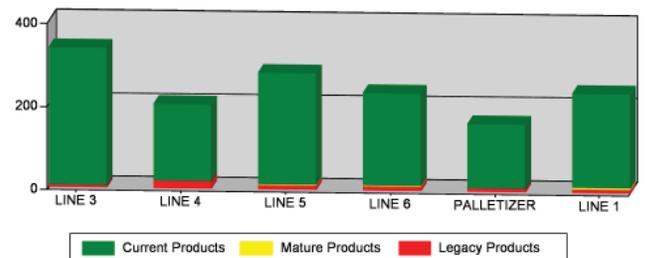
The Installed Base Evaluation with Life Cycle Evaluation is a site delivered inventory assessment. A Rockwell specialist will collect data as it relates to automation equipment being used on the plant floor. The study will compare this data to any available spares on hand. Utilizing a MTBF (mean time between failures) algorithm, Rockwell can make an accurate determination of what and how many spares should be on hand to support the production equipment. In addition, the product identified will be color coded as to where that product stands within its product life cycle. The red-yellow-green code will quickly indicate what products are current (green), silver series (yellow), and those that are obsolete (red). The real value in this type of report is that it serves as the foundation for developing a migration/support plan.

Risk Mitigation A Life Cycle Service Agreement is service

Plant Baseline: Lifecycle Analysis

Legacy Products by Location

Facility:	EXAMPLE COMPANY								10/28/2010
Location	Total	Mature & Legacy Products		Current Products		Mature Products		Legacy Products	
LINE 3	336	6	2%	330	98%	0	0%	6	2%
LINE 4	202	18	9%	184	91%	0	0%	18	9%
LINE 5	272	12	4%	260	96%	2	1%	10	4%
LINE 6	234	12	5%	222	95%	2	1%	10	4%
PALLETIZER	162	8	5%	154	95%	0	0%	8	5%
LINE 1	238	12	5%	226	95%	4	2%	8	3%
Totals:	1452	68	5%	1384	95%	8	1%	60	4%



contract designed to minimize the risk of running with obsolete Automation equipment until you have time to migrate to more current technology. Some examples of the Life Cycle Service Agreements include:

- Reserved Repair (or exchange when available). Insures parts (or exchange stock) will be available to repair a component on a Service Agreement
- Remote Support for Discontinued Product (Legacy

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- Tech Connect)
- On Site Services for Discontinued Product (Preventive Maintenance)
- Annual IBE Refresh
- Up to 5-year agreement options
- PMA (parts management agreement) includes new technology onsite as a "spare" or replacement for the older technology

Risk Elimination

Rockwell can offer a number of conversion services and tools to help convert from the older, obsolete technologies. These can range from complete, turnkey conversions

to software utilities to assist self migration programs.

Automation Fair

These and other programs will be discussed in detail at the 2011 Automation Fair November 16th and 17th in Chicago. Plan to attend Technical Session T37 "Maintenance-a proactive approach to Life Cycle management and product obsolescence".

For further information on how to best handle product obsolescence risk, please contact your Kendall Electric Account Manager.



Kinetix 350 E-net

by Tique Crespo - Automation Specialist, Kendall Electric - Lansing

At Automation Fair (AF2011) in Chicago, Rockwell Automation will be launching several exciting new products that are important to most Kendall customers. One of these existing new products will be the Kinetix 350 EtherNet/IP Servo drive. I don't want to ruin the surprise at AF2011 but by the same token I don't want you folks to miss out either so I'll spill a few of the beans and hopefully spark some interest.

The Kinetix 350 (or K350) looks very similar to the Kinetix 300 (K300) in appearance but its operation is based on the servo drive with fully Integrated Motion Control. The K350 will be configured, tuned, and controlled through a Logix processor program much like a Kinetix 6000 drive on SERCOS. This means that the K350 will be able to take advantage of the 32 motion instructions allowing the programmer to do motion from within their ladder logic. In RSLogix 5000 you can add this drive to the I/O tree under the Ethernet card as if were an I/O card or distributed I/O. Give the drive a name and an IP address and that's it. All the tags for the drive are automatically created for you.

The ability to control a servo over EtherNet/IP requires the processor to talk to the servo in real-time. You can't

tell a servo to move at a certain time and then wait while the communications get the message to the drive, it has to happen now. The power of CIP Sync and CIP Motion communications back and forth are synchronized to both the Logix processor and the servo processor. Each packet of information will carry a time stamp as it travels over the Ethernet/IP standard connection CAT 5e/6 UTP or STP media. This is big! This means Servo drives on Ethernet can coexist with other Ethernet products allowing them to be seen and controlled on one network.

The K350 power structure is based on an individual branch circuit for each drive. Input voltages will range from 120vac to 480vac and the power range will be 400 watts to 3 kilowatts. The small compact design will allow for smaller panel space requirements and with the Ethernet connection it will allow you to mount the servos in multiple panels if you like. The K350 will have embedded Safe Torque off features providing a SIL 2 PLd rating.

When you team up a K350 with the new Logix processors, also being introduced at AF2011 this year, you'll have a scalable system for complex servo motion in an inexpensive, easily integratable and compact design. Please join us this year in Chicago...Check it out at AF2011!



Allen-Bradley's Stratix 8000

by Derek Humphreys - Automation Specialist, Kendall Electric - Kalamazoo

If you are going to Automation Fair in Chicago this year, make sure you check out Booth 343 to see what's coming to Network Architecture.

Powered by Cisco Technology, the Stratix 8000 can now boast of Static VLAN Routing capability. The 1783 Stratix 8000™ Modular Managed Base Switches include the following options:

- Available in a 6-port or 10-port version
- Includes two 1G ports
- SFP slot supports 100 Mbps and 1 G fiber optic transceivers
- Each base switch supports up to two expansion modules
- Provides switch configurations of up to 26 ports

The Stratix 8000 is the choice of both IT professionals and Automations Engineers, as it can be configured by either the Command Line Interface (CLI) or RSLogix 5000™ Add-On Profile for premier integration into the Rockwell Automation Integrated Architecture.

With Static VLAN routing, you can create a secure segmented network. Designing a segmented network provides benefits such as ease of maintenance, simplified security management, improved performance, and scalability.

Coming soon to a network near you, the Stratix 7000 is an entry level switch supporting 6 to 20 ports, with up to 4 fiber connections. It includes a built in option for network address translation (NAT). Among other things, NAT would allow you to integrate your common machine design with duplicate IP addresses and combine them into a larger network. It is also powered by Cisco technology, so again you can configure it with the Command Line Interface, or the Integrated Architecture tools you already use.

If you can't make it to Automation Fair, be sure to speak to your local Kendall Electric Account Manager for more details on the Stratix 8000.



Integrated Architecture - CompactLogix Road Map

by Dan Strachan - Automation Specialist, Kendall Electric - Lansing

I would like to take a moment and talk about the upcoming changes in the Compact Logix family. Rockwell will be launching significant performance and functionality enhancements to meet those more, complex, Mid-Range machinery requirements of today, as well as provide solutions for the small compact applications.

So let's start with the Enhanced 1769-L3 controller and what its focus will be as we move forward. The goal of the Enhanced 1769-L3 is to increase performance and functionality to meet the requirements of your complex Mid-Range applications. This product is scheduled to be available in Q4 of 2011. Some of the new features and capabilities are as follows:

- Utilizes 1769 I/O (up to 30 expansion modules)

- Improved performance 2 to 2.5X over current L3 platform
- Dual port EtherNet/IP w/full Device Level Ring support
- Up to 64 EtherNet/IP Nodes
- Built in USB Port
- No Battery required for memory hold (All models)
- Integrated Motion Support (Up to 16 Axis)

Next is the new kid on the block the 1769-L1. That's right, the 1769-L1 controller is on its way and I know a lot of you have been waiting for this processor to solve your small application issues. The goal of the 1769-L1 is to combine the power of the Logix architecture with the flexibility of Point I/O in a compact and affordable pack-

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age for small applications. This processor is scheduled to be available at the end of 2011. Some features and capabilities of the new 1769-L1 are listed below:

- Utilizes 1734 Point I/O (up to 8 expansion modules)
- Dual port EtherNet/IP w/full Device Level Ring support
- Up to 8 EtherNet/IP Nodes
- Built in USB Port
- No Battery required for memory hold (all models)
- Integrated Motion Support (up to 2 axis)

- Embedded 32 Points DC I/O

A common note to all the new compact controllers: RSLogix 5000 V20 is required.

To find out more about the new CompactLogix Controllers register today for Automation Fair coming up in November. Please contact your Kendall Electric Account Manager for Automation Fair packages provided by Kendall Electric.



New CENTERLINE 2100 Motor Control Centers

by Gary Eberly - IC/Safety/Sensor Specialist, Kendall Electric - Kalamazoo

Integrated, intelligent, and intuitive best describes the latest IntelliCENTER Technology offering for CENTERLINE Motor Control Centers from Allen-Bradley. IntelliCENTER Technology combines intelligent motor controls, embedded systems, and pre-configured software to help you enhance performance by getting an inside look at your motor control center application.

In addition to DeviceNet, CENTERLINE MCCs are now available with EtherNet/IP as one of its factory-validated and tested embedded systems. The EtherNet/IP helps to enhance integration, reduces your MCC setup time, increases the network speed, and allows you to quickly monitor, troubleshoot, and diagnose your MCC from anywhere on your network.

With the addition of EtherNet/IP, CENTERLINE MCCs provide an even more robust motor control capability that allows easier access to real-time data using a network that communicates with your entire enterprise. You can:

- Reduce the time you need to setup your Motor Control Center
- Increase your access to information without having to open an MCC door
- Enhance integration with your facility's corporate IT network
- Quickly monitor, troubleshoot, and diagnose your MCC...from anywhere

The EtherNet/IP embedded system in the EtherNet/IP IntelliCENTER uses an exclusive 600V Ethernet cable

specifically for use in demanding high-voltage industrial environments. This Allen-Bradley 600V cable is UL-Listed for power limited cable tray applications and meets and exceeds your communication needs. The new 600V cable is used in conjunction with the Allen-Bradley Stratix 6000 industrial EtherNet switch, which is specifically designed to perform in high noise industrial environments.



All of the above technology is combined and programmed with IntelliCENTER software, an intuitive software package customized for your MCC. Your EtherNet/IP IntelliCENTER MCC will be configured, programmed, and tested at the factory using IntelliCENTER software to ensure everything is working properly before shipment. This configuration assurance at the factory before shipment to your facility reduces installation time at your facility and the IntelliCENTER software allows for ease of use and troubleshooting during the life of your MCC.

Ask your Kendall Electric account manager for further information on the new Allen-Bradley EtherNet/IP CENTERLINE Motor Control Centers.

Allen-Bradley® Training Schedule

Because of the complexity of the industrial control that is currently being installed in factory automation, the need for a thorough understanding and knowledge of the equipment is imperative to keep your company productive and profitable. Training from Allen-Bradley can reduce downtime because employees trained on equipment can solve problems faster. It also maximizes utilization of equipment because personnel knowledgeable about all performance capabilities of the equipment will use those capabilities to the best advantage and potential. Additionally, Allen-Bradley's training increases worker participation towards your company's goals and objectives. Many productive suggestions for solving ongoing problems and for increasing productivity come from workers who fully understand control equipment.

Course Title	Course	Days	Cost	Troy	Wayland	Fishers	Fort Wayne	Burr Ridge (IL)
SOFTWARE PROFICIENCY SKILLS								
RSLogix5000 Level 3: Project Development	CCP143	4	\$1,875	11/29	1/31	---	---	---
RSLogix5000 Level 1: ControlLogix System Fundamentals	CCP146	2	\$1,125	10/11,1/10	11/8,1/17	10/11,1/10,2/28	---	12/6
RSLogix5000 Level 2: Basic Ladder Logic Programming	CCP151	2	\$1,125	10/13	1/19	---	---	12/8
RSLogix5000 Level 4: Function Block Programming	CCP152	2	\$1,125	---	---	---	---	---
RSLogix5000 Level 3: ControlLogix Maint. & Troubleshooting	CCP153	4	\$1,875	---	12/13	10/18,1/17	---	12/13
RSLogix5000 Level 4: Structured Text/Seq. Function Chart Progr.	CCP154	2	\$1,125	---	---	---	---	---
RSLogix5000 Level 1: CompactLogix Fundamentals & Troubleshoot.	CCP298	4.5	\$2,250	---	---	---	---	---
RSLogix5000 Level 1: ControlLogix Fundamentals & Troubleshooting	CCP299	4.5	\$2,250	---	10/3	---	---	11/7
RSLogix5000 Level 2: Basic Ladder Logic Interpretation	CCCL21	2	\$1,125	1/12	10/11	10/13,1/12	---	---
Introduction to Automation & Integrated Architecture	CIA101	2	\$1,125	---	---	---	---	---
PROGRAMMABLE CONTROLLERS								
PLC-5 / SLC500 & RSLogix Fundamentals	CCP122	2	\$1,125	11/15	10/11,1/24	12/13	---	10/11
PLC-5 Advanced Maintenance & Troubleshooting	CCP409	4	\$1,875	---	---	---	---	---
PLC-5 & RSLogix 5 Programming	CCP410	4	\$1,875	---	---	---	---	---
PLC-5 & RSLogix 5 Maintenance & Troubleshooting	CCP412	4	\$1,875	---	---	2/21	---	---
PLC-5 to ControlLogix Transition	CCP710	2	\$1,125	---	---	---	---	---
SLC 500 & RSLogix 500 Programming	CCPS41	4	\$1,875	---	---	---	---	11/1
SLC 500 & RSLogix 500 Advanced Programming	CCPS42	4	\$1,875	---	---	---	---	---
SLC 500 & RSLogix 500 Maintenance & Troubleshooting	CCPS43	4	\$1,875	12/6	---	2/14	---	10/4,10/18
MOTION CONTROL								
PLC-5/SLC 500 & RSLogix Fundamentals	CCN122	2	\$1,125	---	---	---	---	---
RSLogix5000 Level 4: Motion Programming Using Ladder Logic	CCN142	3	\$1,500	---	---	---	---	1/31
Kinetix 6000 Maintenance & Troubleshooting	CCN200	2	\$1,125	---	---	---	---	---
SAFETY								
GuardLogix Application Development	SAF-LOG101	2	\$1,125	---	---	---	---	---
Lock-out/Tag-out Implementation	SAF-SFT100	1	\$750	---	---	---	---	---
NFPA 70E - ARC Flash Awareness	SAF-SFT106	1	\$750	---	---	---	---	---
NFPA 70E - Electrical Safety & ARC Flash Compliance	SAF-SFT112	2	\$1,125	---	---	---	---	10/11,10/13,11/15
2011 National Electric Code (NEC) Change Awareness	SAF-SFT12011	3	\$1,500	---	---	---	---	---
Safety Seminar - Machine Safety	SAF-SEM	1	\$375	---	---	---	---	---
AC & DC DRIVES								
AC/DC Motors & Drives Fundamentals	CCA101	2	\$1,125	10/4	---	---	---	---
PowerFlex 700 Vector Control Configuration & Startup	CCA161	1	\$750	1/24	---	---	---	---
PowerFlex 700 Vector Control Communications on a DeviceNet	CCA162	1	\$750	---	---	---	---	---
PowerFlex 700 Maintenance & Troubleshooting	CCA163	1	\$750	1/25	---	---	---	11/16,11/18,11/19
PowerFlex 755 AC Drives Maintenance & Troubleshooting	CCA180	2	\$1,125	---	---	---	---	---
COMMUNICATIONS								
DeviceNet & RSNetwork Configuration & Troubleshooting	CCP164	3	\$1,500	11/8	---	11/8	---	2/28
ControlNet Design & RSNetWorx Design & Configuration	CCP170	2	\$1,125	---	---	---	---	---
ControlNet & RSNetWorx Maintenance & Troubleshooting	CCP172	2	\$1,500	---	---	---	---	---
RSVIEW								
RSView32 Project Development	CCV201	4.5	\$2,250	---	---	---	---	---
FactoryTalk View ME & PanelView Plus Programming	CCV204	4	\$1,875	10/25	---	1/24	---	---
FactoryTalk View SE Maintenance & Troubleshooting	CCV206-LD	2	\$1,125	---	---	---	---	---
FactoryTalk View Site Edition Programming	CCV207	4.5	\$2,250	1/16	---	10/31	10/3	---
FactoryTalk View ME & PanelView Plus Maint. & Troubleshooting	CCV209	2	\$1,125	---	---	11/29	---	---
PANELVIEW								
PanelView 300/550/600/900/1000/1400 & PanelBuilder 32 App. Develop.	CCP196	2	\$1,125	---	---	---	---	11/8
SOFTWARE								
RSTestStand Enterprise Project Development	RS-RSTS101-LD	2	\$1,125	---	---	---	---	---
QUALITY MANAGEMENT								
Industrial Air Controls (Pneumatic) Fundamentals	MFG202	3	\$1,500	---	---	---	---	10/25
Industrial Electrical Controls Fundamentals	MFG213	4	\$1,875	---	---	11/15	---	---
Lean Fundamentals	LEAN501	2	\$1,125	---	---	---	---	---
VIBRATION TRAINING CLASSES								
Vibration Analysis Fundamentals	EK-ICM101	3	\$1,460	---	---	---	---	---
Vibration Analysis: Level I	EK-ICM201	3.5	\$1,460	---	---	---	---	---

To enroll in any of these classes, contact your local Kendall Electric, or register online at www.kendallelectric.com.

All classes are held at Allen-Bradley facilities.

Ask your Account Manager about the advantages of purchasing vouchers for training classes.

Kendall Electric Inc.
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Portage, MI 49002

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1-800-525-2842

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1200 S. Grandstaff Ave.
260-927-1530
1-800-368-1017

Battle Creek, MI 49037

131 Grand Trunk Ave
269-965-6897
Fax : 269-965-6899

Benton Harbor, MI 49022

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1-800-255-5214

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3317 5th Ave. S.
205-254-3192
1-800-605-3192

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231-775-9734
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1-888-263-6673

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1-800-695-5464

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1-800-552-0999

Grand Haven, MI 49417

1436 Fulton Ave.
616-844-7017

Grand Rapids, MI 49504

832 Scribner Ave., N.W.
616-459-8327
1-800-442-2523

Grand Rapids-S. MI 49512

4525 44th St. SE
616-459-8327
1-800-968-9880

Holland, MI 49424

11560 E. Lakewood Blvd.
616-396-4625
1-800-968-4625

Jackson, TN 37801

25 American Dr.
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1-800-467-1155

Jenison, MI 49428

6726 Roger Dr.
616-662-0185
1-800-968-9880

Kalamazoo, MI 49001

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1100 58th St. SW
616-406-1555

Call the Kendall Electric location nearest you for all of your electrical needs.