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Providing Innovation and Quality for 40 Years

Contemporary Controls has been designing and manufacturing network automation devices for 40 years. System Integrators have depended on us over the years to provide them with or durable and inexpensive BASautomation – Building on BACnet and CTRLink – Ethernet Built for Buildings products.

Today, Contemporary Controls continues to expand its product portfolio by introducing Wi-Fi and cellular connectivity to its IP routers using OpenVPN technology and a cloud-based service to assist system integrators.

The Automation Switch series is introduced with 24 and 16-port switches and support for Power over Ethernet (PoE). Support for existing ARCNET customers continues with the introduction of a PCI Express ARCNET adapter for use in modern high-speed PC motherboards. The BAScontrol20 is introduced as a truly open unitary controller supporting both BACnet/IP and Sedona Framework.

Recently in the year, Contemporary Controls was honored by receiving Control Trends (CTA) Peripheral Product of the Year award for the BASrouter while George Thomas was inducted to CTA's Hall of Fame.

Contemporary Controls, with sales and distribution offices in the United Kingdom and Germany and manufacturing locations in China and the United States, remains committed to serving its automation customers worldwide. Let us know how we can help you and we'll come up with an economical, long-lasting solution.

Contemporary Controls continues to grow from the result of treating people right —by providing quality, low-cost network devices that fulfill customer requirements —exactly what we set out to do 40 years ago. www.ccontrols.com



Product of the Year



BASrouters

Peripheral Category CTA Awards 2014

BASautomation®
Building on BACnet®

CTRLink®
Ethernet Built for Buildings

Welcome



Thank you for visiting Contemporary Controls during the recent Niagara Germany Forum 2015. In case we weren't able to answer all of your questions about our BASautomation and CTRLink products, we encourage you to visit our website at www.ccontrols.com to learn more about our proven solutions for the building automation industry.

Contemporary Controls serves the building automation industry with products based upon open standards such as BACnet, Modbus and Ethernet. Our customers are systems integrators, contractors and mechanical and controls OEMs seeking simple and reliable networking and control products from a dependable source. BASautomation®– Building on BACnet® provides routing, gateway and control solutions compatible with an internationally recognized building automation standard. CTRLink® – Ethernet Built for Buildings consists of unmanaged and managed switches, media converters, and wired and wireless IP routers. These products are designed for unattended operation in environments not conducive to office grade equipment. With headquarters based in the US, we have operations in the UK, Germany and China with self-manufacturing in the US and China.

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Offload Your JACE

The diagram illustrates a JACE system where MS/TP traffic is offloaded. A BASrouter (BACnet Router) and a BASrouterLX (High-performance BACnet Router) are connected to the JACE via BACnet/IP. An EISK Series Diagnostic Switch is also connected. A BASgatewayLX (Modbus to BACnet Gateway) is connected to the JACE via Modbus RTU. The BASgatewayLX is also connected to a Modbus I/O-Modul. The BASrouter is connected to an MS/TP I/O-Modul.

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Sedona Open Controllers

The diagram shows two Sedona Open Controllers, BAScontrol22 and BAScontrol20, connected to a BACnet/IP network. The BAScontrol22 is labeled as a Unitary Controller. The BAScontrol20 is labeled as a Unitary Controller and is shown with a demo board (optional). A list of features is provided:

- BACnet/IP Compliant
- B-ASC Device Profile
- Sedona Virtual Machine
- 22 Points of I/O + 24 Virtual Points
- Daisy-chain Ethernet Connection
- 200 Component Wire Sheet
- Workbench or Sedona Tool Programming
- Webpage Configuration

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Remote Your JACE

The diagram illustrates remote access to a JACE. A BAScloudVPN cloud service is connected to a FOX wireless router. The FOX router is connected to an EIPR-V wireless router. The EIPR-V router is connected to a BAScontrol22 Unitary Controller. A laptop is shown with a hand typing on the keyboard, representing remote access.

Remote Secure Access over the Internet

IP Routers
Wired and Wireless VPN

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Ethernet for Automation

The diagram shows various Ethernet switches and routers for automation. It includes Diagnostic Switches, Unmanaged Switches, IP Routers (Wired and Wireless), and Managed Switches (Skorpion Switch Series and Compact Switch Series). A BAScloudVPN cloud service is also shown.

Diagnostic Switches

- Ideal for network troubleshooting
- Network traffic can be observed from any port using sniffer tools such as Wireshark.

Unmanaged Switches

- Plug & Play
- 10/100/1000 Mbps
- Auto-negotiation
- Auto-MDIX
- 24 VAC powered

IP Routers
Wired and Wireless

- Stateful firewall
- PAT, NAT and port forwarding
- WiFi (802.11b/g/n)
- DHCP client and cellular network support
- VPN tunnel support

Managed Switches

Skorpion Switch Series

Numerous Management Features Including:

- Quality of Service (QoS)
- Virtual LAN (VLAN)
- Cable redundancy
- SNMP Protocol
- Configurable by web browser
- IGMP snooping with query

Automation Switch Series

Compact Switch Series

BAScloudVPN

Secure remote access over the Internet

The EIPR-V Skorpion VPN Router provides secure remote Virtual Private Network (VPN) access to the Internet via a cellular or Ethernet connection.

While the JACE has the ability to route MS/TP traffic over one of its serial ports, handling the overhead of the BACnet MS/TP token passing protocol burdens the JACE's CPU. This results in increased CPU usage that could be used for other functions or calls for a potential need to change to a higher-powered JACE.

The JACE CPU usage can be decreased by offloading the MS/TP token passing to external BACnet MS/TP to BACnet/IP routers, such as the BASrouter and BASrouterLX. This is especially important if you require the JACE to be connected to multiple MS/TP networks.

Although the JACE has the ability to communicate Modbus RTU over one of its serial ports, Modbus points cannot be discovered like BACnet points requiring manual configuration of each Modbus register. By using the BASgatewayLX, with pre-defined Modbus device profiles, configuration of Modbus registers is just as quick as configuring BACnet points allowing to greatly reduce the time to configure Modbus devices in the field.

The virtual routing feature in the BASgatewayLX allows each connected Modbus device to appear as an individual BACnet compliant device which can save configuration time if using multiple identical Modbus devices.

The BAScontrol22 Unitary Controller is a good example of an open controller in that it embodies the attributes of an open controller as defined by Contemporary Controls. It is BACnet/IP compliant and incorporates a Sedona Virtual Machine. It can be programmed using Niagara Workbench or with a Sedona Tool. It is available to any systems integrator without restriction.

By having an Ethernet connection, the BAS22 can easily connect to Niagara Workbench or a Sedona Tool for programming or to a web browser for configuration. A built-in 10/100 Mbps Ethernet switch allows for a daisy-chain connection to the next-in-line controller or to a building supervisor. Besides having 66 Sedona components from Tridium, it has 100 custom components from Contemporary Controls. These include 48 web components that can be viewed and manipulated by a web browser, and 24 virtual points that can be read or written by a BACnet client.

The BAScontrol20 Demo Board is ideal for training and simulation by having inputs and outputs pre-wired to physical points. Applications can be tested before being deployed in the field.

Our EIPR-V wireless router provides a secure VPN connection to the JACE in conjunction with our BAScloudVPN cloud service.

Traveling to a job site to conduct a service call can be expensive and unproductive especially when the problem can be resolved remotely. Having remote access to the JACE is extremely important with saving time and improved troubleshooting responsiveness. There are several ways this can be accomplished with either a wired or a wireless solution that does not compromise network security.

With the JACE's two Ethernet ports, one port can be utilized for the building control network and the second port for remote communications. Connecting the second port to our EIPR-V router, when connected to our BAScloudVPN cloud service, provides access to the JACE from an office or other remote locations.

When using more than one JACE, all of the second JACE ports can be networked together to create a remote access network that can be accessed through the EIPR-V. The EIPR-V can communicate via cellular networks, through the addition of a USB cellular modem, or via its Ethernet port - if Internet access is available.

Contemporary Controls manufactures a line of Ethernet switches that fit nicely in the panel with other automation equipment. Our diagnostic switch easily allows tools such as Wireshark® to capture the communications between Ethernet connected automation devices. Standard switches will not allow protocol analyzers such as Wireshark® to capture most of the communications between Ethernet devices. The diagnostic switch will allow a PC running Wireshark® to capture all communications between connected devices. Our compact 5 port switch, can expand the controller's number of connections – allowing for the configuration and /or programming of controllers without needing to remove cables.

Some building automation supervisors can be used to monitor Ethernet networks using Simple Network Management Protocol (SNMP). All Contemporary Controls' managed Ethernet switches support SNMP. The managed switches incorporate an SNMP agent that provides a wealth of information on the health of the network. With a SNMP client or Network Management Station, you can query the SNMP agents in managed switches — turning the building automation supervisor into a manager.

For wireless network communications, our EIPR-E router can be used to create a WiFi access point for building automation controllers allowing WiFi devices to communicate with it. The EIPR-E IP router is perfect for automation systems and for job sites that require IP router wireless access. Wireless connectivity is accomplished through the USB port. For more information visit:

www.ctrlink.com