

Introducing CTRLink® Ethernet for Automation



About CTRLink

CTRLink's connectivity products facilitate the use of Ethernet in your automation project. Designed for unattended operation in environments not conducive to office grade equipment, CTRLink overcomes the challenges that Ethernet presents to the automation professional by providing convenient mounting in control panels, low-voltage power wiring, improved EMC compliance, and reliability. The CTRLink Ethernet family includes simple plug-and-play unmanaged switches, media converters, fully-managed switches, IP routers, cellular routers and products that support Power-over-Ethernet (PoE). CTRLink products have been successfully used in diverse industries including —

- Industrial Automation
- Building Automation
- Commercial Automation
- Communications and Networking
- Energy, Utilities and Transportation
- Embedded Networking

When standard products do not suffice, Contemporary Controls has the expertise to provide the perfect solution for its customers.

Media Converters, IP and Cellular Routers, PoE Injector and Splitter

Skorpion Media Converters — making the copper to fibre conversion simple

0 to 60°C

- Plug-and-Play operation
- 100BASE-TX/100BASE-FX conversion
- Shielded RJ-45 and SC/ST-style fibre optic connectors
- Full-duplex operation
- MDI and MDIX ports
- Auto-negotiation
- DIN-rail mounting
- Rugged metal enclosure
- Diagnostic LEDs
- Enhanced EMC compliance
- UL 508 listed, c-UL listed, CE mark
- 24 VAC/VDC powered

EIMK



Model	Description
EIMK-100T/FT	100BASE-TX/100BASE-FX (1300 nm) media converter w/ ST connectors (multimode)
EIMK-100T/FC	100BASE-TX/100BASE-FX (1300 nm) media converter w/ SC connectors (multimode)
EIMK-100T/FCS	100BASE-TX/100BASE-FX (1300 nm) media converter w/ SC connectors (single-mode)

Skorpion IP Router — LAN-to-LAN or LAN-to-WAN routing

0 to 60°C

- Configurable by web browser
- 10/100 Mbps Ethernet WAN port
- 4-port 10/100 Mbps Ethernet LAN switch
- PAT, NAT and port forwarding
- Stateful firewall
- DHCP client (WAN) and server (LAN)
- Supports external DSL or cable modem
- DIN-rail mounting
- Rugged metal enclosure
- Diagnostic LEDs
- Enhanced EMC compliance
- UL 508 listed, c-UL, CE mark
- 24 VAC/VDC powered

EIPR



Model	Description
EIPR-E	Ethernet-to-Ethernet router w/ 4-port switch

Skorpion Cellular Router — LAN-to-WAN wireless routing

0 to 60°C

- Configurable by web browser
- GSM/GPRS/EDGE WAN port
- 10/100 Mbps Ethernet LAN port
- IPsec, OpenVPN tunnelling
- PAT, NAT and port forwarding
- Stateful firewall
- DHCP client (WAN) and server (LAN)
- Expansion port
- DIN-rail mounting
- Rugged metal enclosure
- Diagnostic LEDs
- Enhanced EMC compliance
- UL 508 listed, c-UL, CE mark
- 24 VAC/VDC powered

EICR



Model	Description
EICR-2	Cellular to Ethernet router for GSM/GPRS/EDGE networks

Skorpion PoE Injector or Splitter — for powering a single PoE end device or for deriving power from PoE

0 to 60°C

- IEEE802.3af compliant
- Mid-span power injector
 - 24 VAC/VDC power input
 - Isolated 15.4 W power output
- Power splitter
 - Isolated 24 VDC 10 W (min) power output
- 10BASE-T/100BASE-TX
- DIN-rail mounting
- Rugged metal enclosure
- Diagnostic LEDs
- Enhanced EMC compliance
- UL 508 listed, c-UL, CE mark

EIPE



Model	Description
EIPE-1	PoE mid-span power injector
EIPE-2	PoE power splitter



Unmanaged Switches for Simple Systems

- 10BASE-T/100BASE-TX/1000BASE-T/100BASE-FX
- Auto-negotiation
- Auto-MDIX
- Rugged metal enclosure
- Diagnostic LEDs
- Enhanced EMC compliance
- UL 508 listed, c-UL listed, CE mark
- 24 VAC/VDC powered

Skorpion Switch Series — for cost-effective general-purpose applications

0 to 60°C

- DIN-rail mounting



EISK

Model	Description
EISK5-100T	5 ports 10/100 Mbps
EISK5-100T/H	5 ports 10/100 Mbps diagnostic switch
EISK5-GT	5 ports 10/100/1000 Mbps
EISK8-100T	8 ports 10/100 Mbps
EISK16-100T	16 ports 10/100 Mbps
EISK5-100T/FT	4 ports 10/100 Mbps, 1 port 100 Mbps MM fibre ST connector
EISK5-100T/FC	4 ports 10/100 Mbps, 1 port 100 Mbps MM fibre SC connector
EISK5-100T/FCS	4 ports 10/100 Mbps, 1 port 100 Mbps SM fibre SC connector
EISK8-100T/FT	6 ports 10/100 Mbps, 2 ports 100 Mbps MM fibre ST connector
EISK8-100T/FC	6 ports 10/100 Mbps, 2 ports 100 Mbps MM fibre SC connector
EISK8-100T/FCS	6 ports 10/100 Mbps, 2 ports 100 Mbps SM fibre SC connector

BAS Switch Series — for shallow-depth cabinets and wiring closets

0 to 60°C

- Panel or DIN-rail mounting



EIBA

Model	Description
EIBA5-100T	5 ports 10/100 Mbps low-profile panel mount
EIBA5-100T/R	5 ports 10/100 Mbps low-profile DIN-rail mount

Ethernet Interconnect Switch Series — for UL 864 fire-protective signaling systems

0 to 60°C

- Panel or DIN-rail mounting



EIS

Model	Description
EIS8-100T	8 ports 10/100 Mbps
EIS6-100T/FT	4 ports 10/100 Mbps, 2 ports 100 Mbps MM fibre ST connector
EIS6-100T/FC	4 ports 10/100 Mbps, 2 ports 100 Mbps MM fibre SC connector
EIS6-100T/FCS	4 ports 10/100 Mbps, 2 ports 100 Mbps SM fibre SC connector

Compact Switch Series — for harsh environments

-40 to 75°C

- Panel or DIN-rail mounting



EISX

Model	Description
EISX9-100T	9 ports 10/100 Mbps
EISX9-100T/FT	8 ports 10/100 Mbps, 1 port 100 Mbps MM fibre ST connector
EISX9-100T/FC	8 ports 10/100 Mbps, 1 port 100 Mbps MM fibre SC connector
EISX9-100T/FCS	8 ports 10/100 Mbps, 1 port 100 Mbps SM fibre SC connector
EISX8-100T/FT	6 ports 10/100 Mbps, 2 ports 100 Mbps MM fibre ST connector
EISX8-100T/FC	6 ports 10/100 Mbps, 2 ports 100 Mbps MM fibre SC connector
EISX8-100T/FCS	6 ports 10/100 Mbps, 2 ports 100 Mbps SM fibre SC connector

MM = multimode fiber **SM** = single-mode fiber

Managed Switches for Taking Control of Your Network

- 10BASE-T/100BASE-TX/100BASE-FX
- SNMP protocol
- Configurable by web browser
- IGMP snooping with query
- Virtual LAN (VLAN)
- Quality of Service (QoS)
- RSTP or RapidRing® cable redundancy
- Port mirroring, port security and rate limiting
- Trunking
- Auto-MDIX
- Auto-negotiation or static port settings
- Optional Power-over-Ethernet (PoE)
- Programmable fault relay
- Rugged metal enclosure
- Diagnostic LEDs
- Enhanced EMC compliance
- UL 508 listed, c-UL listed, CE mark
- 24 VAC/VDC powered

Skorpion Managed Switch Series — providing cost-effective management

0 to 60°C

- DIN-rail mounting



EISK8M

Model	Description
EISK8M-100T	8 ports 10/100 Mbps
EISK8M-100T/FT	6 ports 10/100 Mbps, 2 ports 100 Mbps MM fibre ST connector
EISK8M-100T/FC	6 ports 10/100 Mbps, 2 ports 100 Mbps MM fibre SC connector
EISK8M-100T/FCS	6 ports 10/100 Mbps, 2 ports 100 Mbps SM fibre SC connector

Compact Managed Switch Series — cost-effective management for harsh environments

-40 to 75°C

- Panel or DIN-rail mounting



EISX8M

Model	Description
EISX8M-100T	8 ports 10/100 Mbps
EISX8M-100T/FT	6 ports 10/100 Mbps, 2 ports 100 Mbps MM fibre ST connector
EISX8M-100T/FC	6 ports 10/100 Mbps, 2 ports 100 Mbps MM fibre SC connector
EISX8M-100T/FCS	6 ports 10/100 Mbps, 2 ports 100 Mbps SM fibre SC connector

Automation Switch Series — comprehensive set of features plus high port density

-40 to 75°C

- Panel or DIN-rail mounting



EIDX16M

EIDX24M

Model	Description
EIDX16M-100T	16 ports 10/100 Mbps
EIDX24M-100T	24 ports 10/100 Mbps
EIDX16M-100T/FT	14 ports 10/100 Mbps, 2 ports 100 Mbps MM fibre ST connector
EIDX16M-100T/FC	14 ports 10/100 Mbps, 2 ports 100 Mbps MM fibre SC connector
EIDX16M-100T/FCS	14 ports 10/100 Mbps, 2 ports 100 Mbps SM fibre SC connector
EIDX24M-100T/FT	22 ports 10/100 Mbps, 2 ports 100 Mbps MM fibre ST connector
EIDX24M-100T/FC	22 ports 10/100 Mbps, 2 ports 100 Mbps MM fibre SC connector
EIDX24M-100T/FCS	22 ports 10/100 Mbps, 2 ports 100 Mbps SM fibre SC connector

Automation Switch Series — comprehensive set of features plus high port density and PoE

-40 to 75°C

- Panel or DIN-rail mounting
- 8 PoE ports
- 48 VDC powered



EIDX16MP

EIDX24MP

Model	Description
EIDX16MP-100T	16 ports 10/100 Mbps
EIDX24MP-100T	24 ports 10/100 Mbps
EIDX16MP-100T/FT	14 ports 10/100 Mbps, 2 ports 100 Mbps MM fibre ST connector
EIDX16MP-100T/FC	14 ports 10/100 Mbps, 2 ports 100 Mbps MM fibre SC connector
EIDX16MP-100T/FCS	14 ports 10/100 Mbps, 2 ports 100 Mbps SM fibre SC connector
EIDX24MP-100T/FT	22 ports 10/100 Mbps, 2 ports 100 Mbps MM fibre ST connector
EIDX24MP-100T/FC	22 ports 10/100 Mbps, 2 ports 100 Mbps MM fibre SC connector
EIDX24MP-100T/FCS	22 ports 10/100 Mbps, 2 ports 100 Mbps SM fibre SC connector

CTRLink® — Ethernet for Automation

Ethernet has rapidly become the network of choice for automation systems due to its high speed, familiarity among users, and ability to easily connect to the Internet. But the environment can be demanding. The equipment must be robust, reliable, and easy to install, maintain and use. It must carry proper regulatory approvals and, in some instances, withstand outdoor temperatures. Office-grade equipment, with its frequent model changes and inconvenient mounting, will not do.

The CTRLink family of Ethernet infrastructure products addresses the needs of the automation professional. Unlike office-grade products, all CTRLink product enclosures are metal and intended for direct panel or DIN-rail mounting. Metal DIN-rail clips prevent damage during installation. All products can share with other automation equipment a common 24 VAC/VDC power source, eliminating the need for a dedicated mains-powered transformer. Most models have provisions for redundant power sources to accommodate back-up strategies in critical applications.

Depending on the application, Ethernet performance needs can vary greatly. For simple systems, CTRLink 5- to 16-port **plug-and-play** (unmanaged) Ethernet switches will suffice. These products will operate “right out of the box” and can be put into service without adjustments. Auto-negotiation — in which data rate (10/100/1000 Mbps) and duplex (half or full) are set between link partners without user intervention — is standard on copper ports. Auto-MDIX eliminates the need for a crossover cable when cascading switches. Models are available with either multimode (MM) or single-mode (SM) fibre optic ports to accommodate long distances through hostile environments. If no fibre optic ports are available on equipment to be connected, a CTRLink **media converter** will do the trick. Plug-and-play switches provide a simple, cost-effective method of expanding Ethernet networks.

A unique 5-port unmanaged switch is the **diagnostic switch** which never learns MAC addresses and therefore floods traffic to all ports. This feature is ideal for network troubleshooting because all network traffic can be observed from any port.

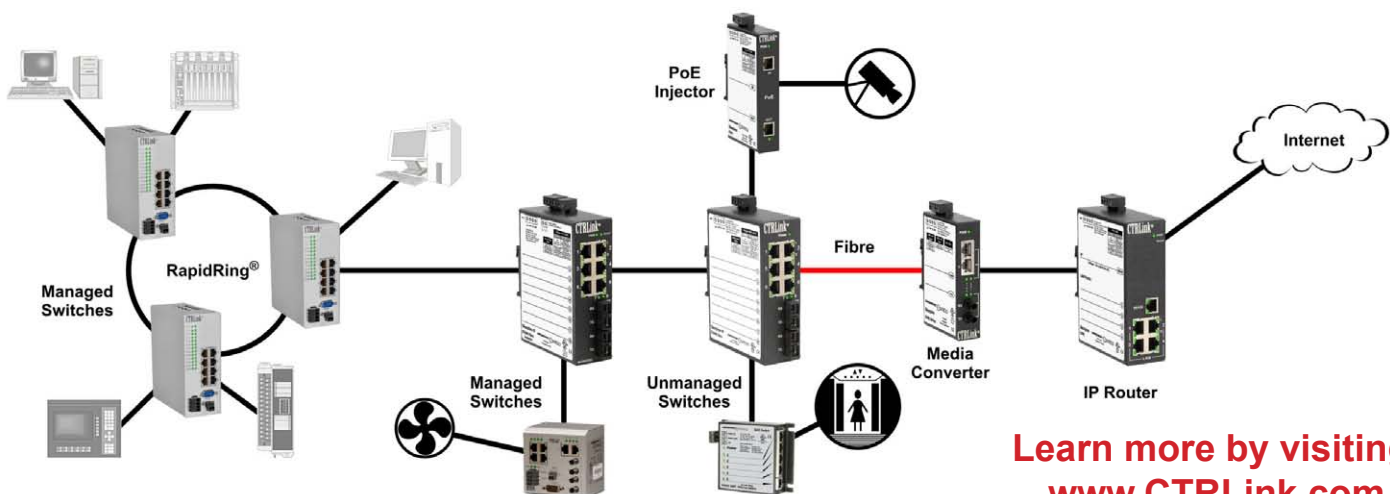
More demanding applications require 8- to 24-port **managed switches** that support the SNMP protocol — providing data on network health and the ability to report abnormal operation. CTRLink managed switches provide advanced features such as VLANs to segment traffic within a single physical network, several Quality of Service (QoS) methods (including 802.1p) to prioritise traffic, port security to guard against intrusions, port mirroring for troubleshooting, and a programmable fault-relay that can be tied to a host controller for alarming. Trunking allows for parallel paths for increased throughput. For cable redundancy there is RSTP or Contemporary Controls’ proprietary RapidRing®. Configuration can be accomplished using a simple web browser. Managed Ethernet switches provide the ultimate in network performance.

While Ethernet switches can expand a single Ethernet network, **IP routers** connect two Internet Protocol (IP) networks together — passing appropriate traffic while blocking all other traffic. Either Ethernet-to-Ethernet (LAN-LAN) or Ethernet-to-modem (LAN-WAN) routing is possible with external DSL or cable modems. The **cellular router** makes the WAN connection using the GPRS/EDGE network. CTRLink’s routers provide either NAT or PAT and a host of features, including a stateful firewall that can make a WAN connection as secure as possible.

IEEE 802.3af Power-over-Ethernet (PoE) is supported on some switch models (requiring a 48 VDC power source). For simple applications, a single-point **mid-span power injector** is available that only requires a 24 VAC/VDC power source. The **power splitter** does the opposite — it delivers 24 VDC from a PoE source.

With automation systems, applications vary — possibly requiring a special product or need. Contemporary Controls has worked with OEMs in obtaining UL 864 compliance with some CTRLink switches, and can help in other areas such as private-labelling, unique packaging or extreme environmental design.

Whatever the Ethernet infrastructure need, a solution is available with CTRLink.



Learn more by visiting
www.CTRLink.com

Our Social Responsibility

Within today's innovative global community, our most significant priority is to meet the needs of the manufacturing sector without forfeiting our commitment to the betterment of society. We approach our business with a strong focus on growth while providing a responsible, environmentally-conscious workplace with sound business procedures.

We hold every aspect of our business to the highest ethical standards, from our research and development to our sales and customer service. Our customers depend upon us to understand their unique needs and deliver the products and services that allow them to attain their goals. Because we treat our suppliers like partners, we maintain a strong supply chain to reliably meet our customers' schedules.

Contemporary Controls is committed to making our manufacturing process as environmentally sustainable as possible. We have converted all of our manufacturing facilities to lead-free operation. We provide in-depth personnel training and practice "lean" manufacturing initiatives. Our efforts ensure that our products, processes and services contribute to the renewal of the earth's ecology for the next generation. Because of our progressive manufacturing processes, all our products are RoHS compliant.

Our pursuit of sustainable manufacturing means we fully support environmental legislation. We adhere to the goals of reducing energy consumption, reducing the amount of hazardous materials in our environment, greater recycling, reducing the waste in landfills and the use of fewer natural resources. Our company follows the Waste Electrical and Electronic Equipment (WEEE) directive.

We realize the significance of our actions, and we are a responsible partner in facing the challenges of today and tomorrow.

Our Quality Policy

Our **CORE VALUES** and **BELIEFS** are the foundation on how we conduct business.

- Our customers depend upon us to deliver products and services that meet their needs. Their success provides us the means to exist.
- Our suppliers are important to our success and, therefore, we treat them as partners.
- Each employee is considered a professional, independent of position, and contributor to the success of the organization.
- We are all members of a working team, striving to develop innovative products, technologies, and processes.
- We stress quality in everything we do and know we can do better through continuous improvement efforts.
- The ethical way of doing business is the only way.

Our **PURPOSE** is to develop, manufacture, and market networking technology to the benefit of our automation customers worldwide.

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