Industrial Networks
versatile networking solutions

COOPER Crouse-Hinds
MTL Instruments is proud to present its range of Industrial Strength Networking products. Designed to meet the most demanding process applications worldwide, our complete portfolio of ruggedised Ethernet connectivity devices offer harsh and hazardous area classifications, combined with MTL’s 40 year pedigree of understanding process industry requirements.

The extensive range of switch and media converter products include multi-port Managed and Unmanaged Switches with Fibre, Gigabit, PoE (Power over Ethernet) and Redundant Ring functionality.

For applications requiring access into Division 1, Zone 1 and Zone 0 hazardous areas, including wireless access, then look no further than MTL’s range of Intrinsically Safe Ethernet units. The 9460-ET Series delivers Intrinsically Safe “Power over Ethernet” (PoEx) with a single Cat 5e or Cat 6 cable, allowing live connection and disconnection of the end device in Zone 0, Zone 1 or Division 1.

To safeguard your network’s critical devices, MTL can provide a unique solution to combat modern cyber-security threats - Tofino™. By deploying Tofino™ security appliances directly in front of each control device (or group of control devices), they provide SCADA and process control networks with a layered security solution.

MTL’s range of wireless products can be localized and customized for operation in both licensed and unlicensed RF bands in many countries. Products fall into two major classes: those designed for telemetry of analog and discrete I/O signals and those designed for RF connection of serial and ethernet communications, used by devices such as PLCs, RTUs, fieldbuses and SCADA components.

For further information about our “industrial strength” networking products contact -

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versatile networking solutions
Industrial Ethernet Switches

In today’s industrial process’s there are increasing demands for greater efficiency, higher reliability and lower cost of ownership of field equipment and supporting networks. MTL offers end to end or part solutions to meet the requirements of your project.

MTL’s industrial Ethernet switches combine enterprise-class performance with rugged reliability to provide a “best of both worlds” solution for many of today’s industrial applications. Our hardened switches are ideally suited for harsh and outdoor environments that include process plants, power substations, Smart Grid, utility, transportation and other industries where real-time performance under extreme operating conditions is required. Built-in redundancy coupled with advanced security and network management ensures the infrastructure stays up and running while providing tools for monitoring and tracking.

MTL can supply the full range of “industrial strength” Ethernet products to satisfy the most demanding process applications. Our Ruggedised Ethernet range is designed to operate in the harsh process control environment and features multi-port managed and unmanaged switches, copper to fibre media converters and Power over Ethernet (PoE) capabilities.

- Zone 2, Class 1 Div 2 approved
- Low power dissipation
- Flexible redundancy options
- Hardened environmental specification
- High MTBF
- Switch status via Modbus

Unmanaged Ethernet Switches

9200-ET SERIES

- Industrial edge devices and PoE
- Unmanaged copper, fibre and PoE switches

Flexible deployment options
- 5 to 16 port DIN rail or panel mount
- Plug and play functionality works out of box

Trouble-free operation
- Ultra-reliable 1,000,000+ hours MTBF
- Dual port rings with industrial spike protection

Industrial design
- Supports temperatures ranging from -40 to 75/85°C
- Class 1, Div 2 and Zone 2 hazardous locations

Managed Ethernet Switches

9200-ETM SERIES

- Versatile networking solutions
- Managed copper, fibre and Gigabit switches

Flexible deployment options
- 5 to 16 port DIN rail style
- Plug and play functionality works out of box
- Fast redundant ring and mesh network support

Advanced features and security
- Configurable network management options
- Real-time data access and prioritization

Hardened for the toughest applications
- Supports temperatures ranging from -40 to 75° C
- NEMA TS-2 for traffic control systems
- Div 2 and Zone 2 hazardous locations

Rackmount Ethernet Switches

9200-ETZ SERIES

- Designed for critical industrial applications
- Fast redundant ring and mesh network support for high availability
- Fast fibre message delivery prioritizes data to enhance network congestion
- Sophisticated multicast controls reduce traffic to achieve optimal performance
- Powerful network management and plug and play functionality ease configuration and speed troubleshooting

Rugged rackmount switch for the harshest environments
- Wide operating temperatures from -40 to 85°C

rugged reliable switches
Additionally, in Process Automation it is preferred to use a single cable providing power and communications to the end device. The 9400-ET Series delivers Intrinsically Safe “Power over Ethernet” (PoEx™). This ground breaking technology brings the concept of a single cable connection for Industrial Ethernet enabled devices suitable for mounting in any hazardous area environment. The range, consisting of an Ethernet Switch, Serial Gateway, Wireless access point, and Media Converter - all suitable for Zone 1 and Division 1 mounting - combine with a Zone 2 mounted Power Supply and Isolator unit to provide a complete “Ethernet anywhere” solution.

The deployment of Ethernet into Process Automation has long been hindered by the hazardous area classification in which the end device is installed. Now the 9400-ET Series provides cost-effective, Intrinsically Safe (IS) Ethernet equipment that can be installed and maintained in Zone 1, Zone 0 and Division 1 hazardous areas in Surface Industry Group II and Mining Group I applications.

Intrinsically Safe Ethernet

MTL, known for its leadership in Intrinsic Safety, is proud of another world first, Intrinsically Safe “Power over Ethernet” (PoEx™). This ground breaking technology brings the concept of a single cable connection for Industrial Ethernet enabled devices suitable for mounting in any hazardous area environment. The range, consisting of an Ethernet Switch, Serial Gateway, Wireless access point, and Media Converter - all suitable for Zone 1 and Division 1 mounting - combine with a Zone 2 mounted Power Supply and Isolator unit to provide a complete “Ethernet anywhere” solution.

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Industrial Networks range
Network Security

Supervisory Control and Data Acquisition (SCADA) and Industrial Control Systems have long been considered immune to the cyber attacks suffered by corporate information systems. The move to open standards such as Ethernet, TCP/IP, and web technologies has allowed hackers and virus writers to take advantage of the control industry’s ignorance. The result is a growing number of cyber-based security events that are affecting critical infrastructure and manufacturing industries.

The Tofino™ Industrial Security System from MTL Instruments addresses the important issue of protecting Industrial Networks from both malicious and accidental network security incidents.

The MTL Tofino™ Industrial Security Solution is designed specifically to provide industrial companies with a defence-in-depth solution for both new and legacy control systems. Think of it as a tailored security suite offering features such as Firewall, Secure Asset Management, Deep Packet Inspection and OPC protection for operator stations, PLC’s, RTU’s and DCS, giving your control system multiple layers of “defence-in-depth”.

The Tofino™ Industrial Security System from MTL addresses the important issue of protecting Industrial Networks from malicious or accidental disruptions.

Instead of the standard, highly complex, “IT-style” firewall that requires highly-trained staff to install it, the Tofino™ appliance only requires a field technician to attach power and two network cables to it and then walk away. Configuration is handled via a Central Management Platform (CMP) allowing the user to monitor deployments and configure multiple Tofino’s from a single location.

The system has the flexibility to protect a small plant with a single PLC, or a multi-national organisation with thousands of critical devices scattered around the globe. By deploying Tofino™ appliances in front of each control device (or group of devices), they provide SCADA and process control companies with a layered security solution for their systems.

The Tofino™ uses Loadable Security Modules (LSM’s) which are tailored software modules. The Appliance and LSM’s provide highly customizable protection directly in front of critical devices, in a similar fashion to the way personal firewalls provide local protection for desktop computers.

Configuration is simple. Drag and drop the icon of a device you want to communicate with onto a second device and the rules are automatically created. Or put the Tofino into TEST mode and then use the Assisted Rule Generation feature to suggest firewall rules based on existing traffic patterns. Even highly complex industrial protocols can be carefully managed with the “Special Rule” feature.

The Tofino™ appliance logs “events of interest”. Chosen events, such as power anomalies, abnormal or unsolicited traffic and intrusions can be recorded and downloaded for later examination. Redundant power supply inputs enable the user to reduce the risk of power failures to the module and power-fail inputs are provided to enable any supply failures to be signalled directly to the appliance for data logging.

Unparalleled security . . .

Industrial network protection with 24/7 support

To find out more about the Tofino™ Industrial Security Solution or our range of support services...

visit our website at: www.mtl-inst.com
or email: tofino@mtl-inst.com
Wireless Connectivity

MTL offers end-to-end or part solutions to meet the requirements of your project. From plant-wide 802.11 network infrastructure to simple transducer cable replacement, MTL brings the experience and the products to offer robust and secure wireless systems. MTL wireless technology supports industry standard connections and protocols, maximizing flexibility and reducing inventory costs.

Wireless technology can be used to solve physical problems such as:

- Cabling repeatedly damaged or EMC issues on site
- Mobile data access (personnel, rotating machines, vehicles)
- Large communication distances
- Harsh or protected environments

In addition to the above solutions, wireless technology can bring benefits and flexibility to a new or completed project beyond that of a purely cabled solution. Benefits of wireless systems include:

- Simpler installation options; pulling cable through walls and ceiling can increase complexity.
- Improved commissioning options; some wireless systems can be tested before installation.
- Improved scalability; wireless networks are simpler to scale than wired equivalents.
- Increased mobility; wireless networks enable personnel to perform diagnostics remotely.
Our 10 year ‘no fuss’ product warranty, is further evidence of our confidence in our products and their application capabilities.

At MTL we understand that your business relies on our products so we aim to design and manufacture the very best devices available. We know that when you install an MTL solution you want to know that it will give years of reliable maintenance free protection, protection you can depend on, and we’re confident that it will.

MTL has a close association with the Process Industry and a presence in the Networks and Wireless Infrastructure markets which means that we are well placed to support a wide range of industries around the world. We supply a comprehensive range of surge protection devices offering solutions for all mains power, process control, network and communications, telecom, wireless and RF systems.

Our commitment to not only meet, but surpass our customers’ high expectations can only be achieved by maintaining very high standards in all aspects of our business. Independent verification of our quality and safety procedures is of paramount importance and our accreditation to internationally recognised standards such as ISO 9001 is proof of this commitment.

MTL has a wealth of experience in the design and manufacture of surge protection solutions for very specialised areas of application. Whether protection is required for wireless telecommunications, utilities, CCTV or general airborne protection, MTL can supply a superior protection device to meet your requirements. It is not just the obvious areas, such as mains power, robotics and telecom systems that require protection - these specialist applications should not be overlooked.

Networks and communications protection

Network technologies from the Internet to WiMAX have revolutionised the way businesses operate. Few last month’s sales figures to the real-time status of a remote pumping station. Industry relies on computer networks more now than ever. Network surge protection is essential if your business relies on IT services for its remote to mobile operations. MTL provides an extensive range of protection devices serving a wide range of network and server applications. Make sure you’re protected.

AC protection

Surges and spikes from nearby lightning strikes, arc-welders and high-voltage cables can destroy or even disrupt electronic equipment. These destructive forces enter mains power circuits within buildings by a variety of methods. A full range of AC surge protectors are available for local equipment protection and also complete facilities protection. Surge handling capabilities up to 40kA ensure that the maximum protection is guaranteed for your facility. Power Protection is fundamental - MTL supplies that protection.

Data and signal protection

Induced surges and transient impulses can disable or perhaps more worryingly, render inaccurate sensitive control and measurement instruments. Control systems, sensors and telecommunications equipment can be subjected to a barrage of interferences and bursts of energy, therefore to disregard the need for simple, effective and reliable surge protection is to compromise the safety of your plant. MTL surge protection devices provide protection both at the controller and at the field-mounted instrument, with specifically designed devices suitable for all data & signal requirements.

RF and coaxial protection

MTL has a wealth of experience in the design and manufacture of surge protection solutions for very specialised areas of application. Whether protection is required for wireless telecommunications, utilities, CCTV or general airborne protection, MTL can supply a superior protection device to meet your requirements. It is not just the obvious areas, such as mains power, robotics and telecom systems that require protection - these specialist applications should not be overlooked.

Surge protection

Protecting your assets
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