



Industrial Automation Solutions

PANDUIT[®]

building a smarter,
unified business foundation
Connect. Manage. Automate.



Do You Have....

Shorter Production Runs?

Meeting fluctuating customer demand by operating short-run, high-mix environments is a test to operational agility. Reduced staff levels have left fewer personnel for preventative maintenance, which increases the risk of more unplanned downtime. Spending time/resources for machine repair or losing work-in-progress is a destructive force to the bottom line.

To Run 24-7-365 in Any Environment?

If your process equipment faces the worst of what Mother Nature can dish out or simply it comes with the nature of your business, then maximizing availability demands peak performance from each and every module. As with most applications that require no single point of failure, uptime becomes an all or nothing game. Ultimately, it comes down to the individual component selection and the proper design to orchestrate a dependable process.

A Supply Chain that Can't React?

Your own inventories have been reduced to free up capital. Distributor inventories are also running leaner. What effect does this have on the responsiveness of your supply chain? The worst time to discover this is when a customer's HOT order finally arrives.

A New Machine or Process Being Installed?

If you are installing a new, or overhauling an existing distributed automation system, chances are the controls are now being connected via IP based networks. According to a recent ARC study, over 85% of new factory networks are using Ethernet for machine control. Integration of new technology places significant demands on the physical infrastructure. New design strategies become essential to ensure the agility, reliability and security of your operations, as well as to optimize return on investment.



Did You Know....

Panduit Offers Training and Certification Programs

One of the most common sources of failure in an industrial automation system is improper terminations. Exposure of these failures often occur during a critical production run, when problem identification and resolution is most costly. Panduit is committed to reducing this risk by helping to ensure connections are made right the first time. Panduit has a network of industrial automation contractors, trained to properly crimp and verify power and communications cabling terminations, and products that are designed to help ensure the installation is right the first time, bringing peace of mind to your industrial automation infrastructure.

American Bureau of Shipping (ABS) has Tougher Standards than the Military or Nuclear Certification

UL/CSA/Restriction of Hazardous Substances (RoHS) are just the ante to the game. Did you also know that only two companies have connectors that meet ABS standards. Panduit has over 3,200 parts that carry the ABS Certification. The next closest provider has less than 20 parts. Chances are we have what you need to optimize performance in the harshest industrial environments.

Pan-Pro Reduces Back Orders by 28% and Emergency Orders by 53%

Panduit's eBusiness Pan-Pro Tools help our channel achieve world-class service levels and the lowest total operating costs. Our innovative product research, order, stocking, tracking, and automation capabilities help you maximize productivity through the entire order management and supply chain process.

Up to 90% of Network Failures Occur in the Physical Infrastructure

Industry experts estimate that up to 90% of all industrial networking problems can be traced back to the physical infrastructure. **Panduit has released an Industrial Ethernet Physical Infrastructure Reference Architecture Design Guide** to ensure that our customers adopt a holistic approach using proven practices in physical infrastructure design, installation and operation:

- Mapping of the logical design to physical implementation
- Innovations to secure and monitor the physical network infrastructure
- Solutions that reduce required control panel space and improve reliability
- Total plant schema that addresses your entire bonding and grounding needs

EM Noise Mitigation

Electromagnetic Noise (EM) is one of the leading causes of unplanned downtime in manufacturing. It can disrupt network communications, lead to improper field measurement or cause unpredictable faults with automation equipment. All of this cripples production, leaving a negative impact on profitability.

Panduit's Industrial Automation Solutions, including grounding systems, wiring ducts, and high-grade connectors, help reduce noise in factory environments. This minimizes related malfunctions and failures, optimizes network performance, and assures the protection/longevity of factory infrastructures and assets.

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Key Benefits

Panduit draws from proven methodologies and global best practices to allow organizations to leverage existing assets and investments and overcome operational challenges to achieve lowest cost of ownership.

Mitigate Risk – Efficient physical infrastructure management enables seamless integration to reduce risks which can occur throughout core systems.

Lower Cost – Panduit physical infrastructure solutions drive financial advantages to reduce energy and occupancy costs, and help secure competitive advantage.

Increase Agility – A high level of integration within the physical infrastructure enables flexibility and improved business agility.

Enhance Sustainability – UPI-based solution offerings enable organizations to meet sustainability goals by driving resource and energy efficiencies across the physical infrastructure.

Panduit's Unified Physical Infrastructure: A Guiding Vision

For a Smarter, Unified Business Foundation

The growing interdependence of systems and applications, and the increased demands that they place on physical infrastructures, requires the integration of traditionally disparate and proprietary systems. This trend is dramatically changing infrastructure design, management strategies, and effective synchronization of critical systems. It is opening the door for seamless convergence and interoperability of all core business systems.

Panduit provides flexible end-to-end solutions for the physical infrastructure that drive operational and financial advantages, allowing businesses to minimize risk and heighten agility. Tailored by industry and customized by application, Panduit solutions span the core systems necessary to transform a business, from data center and facility operations to next-generation intelligent buildings and industrial networks.

Panduit has developed the industry's most comprehensive and holistic approach for a network infrastructure that can help enterprises align, converge, and optimize critical systems – communication, computing, control, power, and security – to build a smarter, unified business foundation.

Unified Physical Infrastructure



communication computing control power security

Unify Your Network Infrastructure: From Panel to Plant

Industrial automation systems on the factory floor are the nerve center of successful manufacturing. Panduit is uniquely qualified to understand the complexities of plant-level networks, from monitoring production processes to optimizing pathway design.

Panduit began working with manufacturers over fifty years ago to protect and manage field wiring for factory machines. Since that time, Panduit has become a known and trusted global supplier of high-quality industrial systems components, which are easy to install and offer maximum durability, even in the most hazardous conditions. Panduit's solutions help manufacturing by:

Reducing Risk

- Meeting/Exceeding regulations for compliance with the most recent industry standards through rigorous component and systems performance testing (e.g., all Panduit manufacturing facilities maintain ISO 9001 certificates, as well as appropriate certifications of conformity to other industry/international standards)
- Defense in Depth (DiD) Strategies that utilize a multi-layered approach to more effective physical network security (e.g., keyed solutions, color-coded connectivity, and blockout and lock-in solutions)
- Enhancing workplace and worker safety (e.g., a complete line of lockout/tagout systems)

Maximizing Performance

- A comprehensive portfolio of innovative products engineered to meet greater performance requirements, quick and dependable installations, and fast, easy maintenance and repair (e.g., Panduit's cable managers designed with bend radius control that contributes to more effective network performance)
- Leveraging existing network assets/investments to reduce project/installation costs, and maximize ROI (e.g., reusing compatible panels and switches with newly installed equipment, when appropriate)

Unified Physical Infrastructure



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Unified Physical Infrastructure



Panduit's Comprehensive Industrial Automation Solutions

Based on the principles of a Unified Physical InfrastructureSM approach, Panduit is the industry's only single-source supplier of complete physical layer solutions for Ethernet-based Industrial Automation networks. Our control panel solutions offer an extensive system that bundles, routes, protects, terminates, and identifies wire and cabling in control panels, plus copper and fiber connectivity for these industrial Ethernet networks:

Connectivity and Cabling – End-to-end copper and fiber cabling systems that offer ease of deployment and proven performance to satisfy the majority of applications. The IndustrialNet™ System provides connectors, patch cords, and Ethernet enclosures for the most stringent requirements or severe conditions, delivering protection for switches and cabling while allowing for a flexible, lower cost-topology.

Cable Ties and Accessories – Comprehensive selection of regular and stainless steel cable ties for a broad range of applications and environments, including demanding harsh industrial applications. Large selection of mounts, clips, and clamps to help speed installation and lower installed costs, while increasing overall reliability.

Wiring Duct – Panduct® Wiring Duct is the industry's leading wire management solution for routing, protecting, and concealing wiring in electrical control panels.

Labeling and Identification – Panduit's full line of engraved plates, signs, labels, software, and printers assists with meeting control panel requirements and industry standards.

Terminals – Termination and tooling products that ensure the highest industry performance. Pan-Term® Terminals are available in a wide array of disconnects, splices, ferrules, rings, forks, flanged forks, locking forks, and short locking forks in sizes ranging from #26 – 2 AWG. Non-insulated terminals range from #24 – 250 kcmil. Ergonomic crimping tools provide consistent, reliable installations.

Power and Grounding Connectors – Pan-Lug™ Power and Grounding Connectors are designed for use with many different code and flex conductor types from #14 AWG – 1000 kcmil. A variety of crimping tools provide consistent, reliable terminations. Panduit training and certification programs ensure the integrity of the installation.

Abrasion Protection – Panduit abrasion protection products provide an economical and easy way to insulate, protect, bundle, and color-code components and cable. The full offering includes split harness wrap, braided expandable sleeving, corrugated loom tubing, spiral wrap, grommet edging, and heat shrink.

Lockout/Tagout – Panduit offers a complete line of lockout/tagout products to aid in compliance with OSHA 1910.147.

A Commitment to Green

As a global manufacturer, Panduit has embraced lean and sustainable thinking as a core value by designing solutions and facilities that are good for the environment and for business. These values guide and influence the development of resource-efficient, reliable UPI-based Industrial Automation offerings that enable customers to support their own sustainability and business goals.

Enhance Sustainability and Reduce Carbon Footprint

- Panduit's energy usage audits and programs reduce pollution, support zero-waste initiatives, and generate significant savings across manufacturing processes and office facilities
- Panduit's global manufacturing facilities are strategically located to reduce the cost and environmental impact of worldwide shipping along the entire supply chain
- Panduit provides thought leadership as a member of the National Electrical Manufacturers Association (NEMA), the U.S. Green Building Council (USGBC), and The Green Grid
- Panduit is compliant with all applicable environmental manufacturing and facilities regulations, including RoHS, ISO 14001, ISO 9001, WEEE, and other international standards

Drive Consolidation and Operational Efficiencies

- Panduit's UPI-based solutions facilitate reductions in space and power consumption across critical systems
- Reference architectures for UPI-based solutions enable consistent and optimized deployment of enterprise-wide infrastructure for measurable efficiency gains
- Panduit works with its extensive Partner Ecosystem to drive sustainability principles across the entire business lifecycle value chain
- Design for Environment (DfE) strategies include operational energy efficiency, end-of-life, and disposal considerations for all product designs



PANDUIT®

Real-World Solutions to Ensure the Success of Our Customers

With a proven reputation for excellence and technology innovation, a robust ecosystem of global partners, and long-term alliances with top industry leaders, Panduit is a valuable, trusted partner offering strategic vision and real-world solutions to ensure the success of our customers.



Innovative Technology Leadership

Panduit is an industry leader in developing innovative technology solutions that meet the rapidly evolving needs of our customers around the world. Our commitment to continued leadership is supported by significant ongoing investment, dedicated manufacturing facilities, strategic technology alliances, and collaborative R&D with other industry leaders.



Global Business & Commitment

Panduit's ongoing commitment to excellence and our technology alliances with key industry leaders such as Cisco Systems, EMC, Emerson, IBM, etc., enables our highly skilled and knowledgeable global sales, systems engineering, and technical support teams to engage with critical customer challenges that range from initial problem determination all the way to resolution. Local specialists, trained to global standards and competencies, provide consistent regional support that brings value to local business. Our global value chain, which combines manufacturing, distribution, and service, provides prompt responses to customer-related issues, and streamlines procurement and delivery to any global destination.



Best-in-Class Partner Ecosystem

Panduit employs a consultative approach to identify customer needs and engage appropriate partners in a collaborative fashion to serve our customers. Panduit's robust ecosystem of architects, consultants, engineers, designers, systems integrators, contractors, and distributors offers a full portfolio of lifecycle services. Our partners are trained on relevant services to Plan & Design, Build & Deploy, and Maintain & Operate to deliver predictable and measurable results.



Worldwide Alliances

Panduit has established long-term strategic alliances with top global industry leaders such as Cisco Systems, EMC, HP, IBM, Liebert, and Rockwell Automation to develop and integrate innovative, holistic solutions for our customers. We continually invest in relationships and resources for solving our customers' greatest business challenges.



Eco-Sustainability & Global Citizenship

With a long-standing commitment to environmental excellence, Panduit continually develops and implements solutions designed to protect, replenish, and restore the world in which we live and operate. This commitment is demonstrated by Panduit's LEED-certified new world headquarters and future green building plans using its own revolutionary Unified Physical InfrastructureSM vision to enable convergence of critical systems for driving sustainability.



*Optimize Your
Plant's Investment.
Call or visit us online,
we can show you how.*

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