
Panduit Professional Services

Partner with Panduit for strategic guidance and hands-on assistance assessing, designing, and deploying your industrial network infrastructure.



Maximize the Performance and Reliability of Your Industrial Network Infrastructure

Leading organizations around the world rely on Panduit Professional Services to assist with the operations, remediation, and building of best-in-class physical infrastructure for industrial networks.

Here are three reasons why:

1. We mitigate risk

Designing the physical infrastructure to support network communications in a manufacturing location requires a keen understanding of industry standards and best practices. Panduit Professional Services provides expertise and solutions required to meet applicable industry standards, global best practices and M.I.C.E. guidelines across all three areas within industrial spaces — factory floor, work area, and automation island.

2. We're part of an expansive partner ecosystem

Panduit partners with highly skilled installers, contractors, and system integrators across the globe who are trained and certified to assess, design, and deploy high-performing networks. This level of partner collaboration provides a true solution scope and leverages local resources more effectively. We also maintain long-term, strategic alliances with industry leaders including Cisco Systems, Rockwell Automation, and Pysmian Group that enable us to engineer interoperable solutions.

All Panduit physical designs are developed and validated to industry leading architectures using solutions that have been tested and verified for optimal performance. The designs are backed by a 25-year system performance warranty through the Panduit ONE partner program.

3. Our team is comprised of certified experts

All members of the Panduit Professional Services team are Building Industry Consulting Service International (BICSI) Registered Communications Distribution Designers®(RCDD®). On average, our staff members boast more than 20 years of experience assessing, designing, and deploying all aspects of a communications network physical infrastructure.



Panduit Professional Services provided a single source for our projects to reduce specification, evaluation, and procurement time. We have not had one service call since the installation.

Trevor Schuetz, Lead Network Administrator, noosa yoghurt

Our Holistic Professional Services Offering

Panduit Professional Services provides a holistic approach to help you assess, design, and deploy your network infrastructure.

Assessment Services *for Existing Industrial Networks*

A comprehensive assessment of the health of your physical infrastructure against applicable industry standards and best practices is the only way to know if your network is operating at its ideal state.

When to consider conducting an assessment:

- **You want to know if you are following best practices**
A detailed assessment performed by certified experts can identify if there are elements of your infrastructure that fall short of industry standards.
- **Problems exist that you need to find and fix**
If you are experiencing network performance issues but haven't been able to identify the cause of the issue, then an assessment is right for you.
- **You need to justify capital improvement expenditures**
Third-party validation that your legacy physical infrastructure doesn't meet industry standards can provide justification for obtaining budget.

Scope

This eight-point assessment evaluates the existing conditions of switch locations and endpoints for standards compliance, suitability, accessibility, physical protection, and adequacy relative to the existing environment and intended or desired use. Specifically, the assessment determines the health of the network across the following key functional areas:

1. General Space Conditions and Arrangement
2. Cooling
3. Power
4. Racks & Cabinets
5. Cabling
6. Pathways
7. Supplementary Bonding
8. Labeling & Identification

Deliverables

A comprehensive findings report detailing identified issues by functional area. The report also includes actionable remediation recommendations.

Our Physical Infrastructure Assessment is the most comprehensive available that measures compliance to all applicable industry standards.



Design Services for New or Existing Industrial Networks

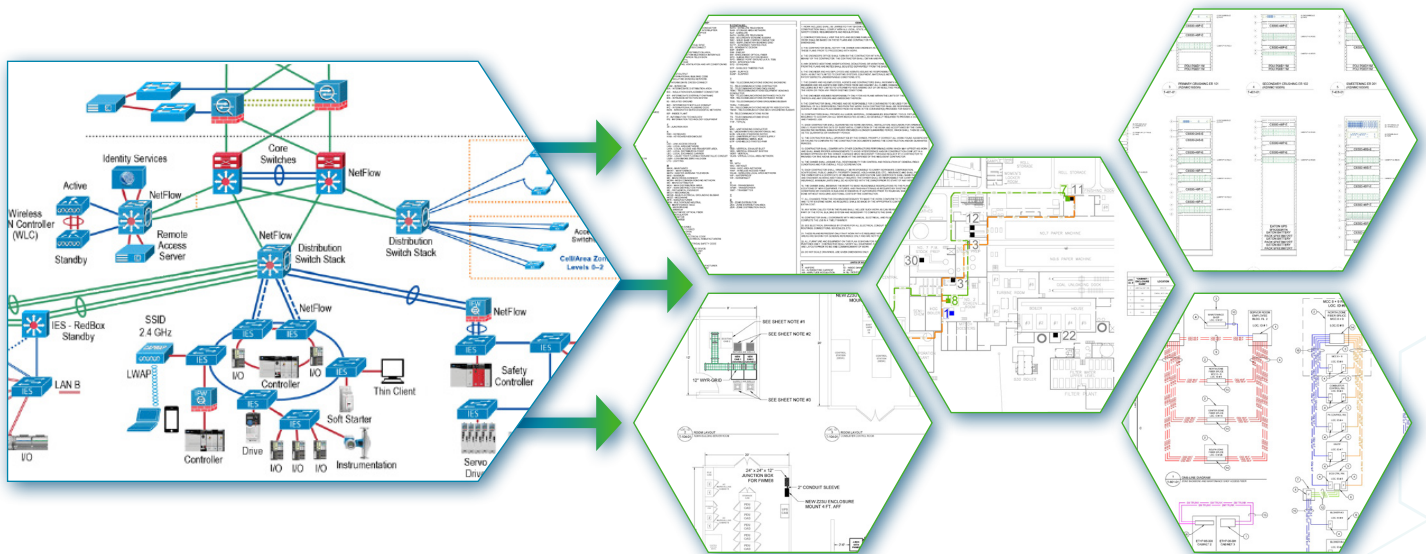
A best-in-class industrial network infrastructure is resilient, reliable, and fully compliant with applicable codes, industry standards, and best practices. It should be designed to meet immediate Day One needs and be flexible enough to accommodate future expansion. Panduit Professional Services has proven expertise developing the detailed designs that are required to deploy this type of network infrastructure.

Our Design Process

1. Translate logical designs into physical designs

Whereas a logical design depicts how information in the network flows, a physical design illustrates the network topology exactly as it is with all the devices and connections between them. It ensures the network is deployed as intended using a proven reference architecture approach.

The first step in the design process is for RCDD-certified solutions architects to review the logical architecture and translate it into a constructible, optimized, layer one design.



The comprehensive Panduit process includes translating the provided network logical design into a physical design, which includes a complete set of constructible drawings.

2. Develop purposeful, constructible design packages

Panduit Professional Services provides constructible physical design packages that both reflect the intent of the logical network design goals and provide a detailed cabling system layout that reflects our comprehensive due diligence process. They include relevant drawing plans, written specifications, and recommended materials.



The Panduit Professional Services Difference

- **Accurate and consistent bidding by potential contractors**

When firms bidding on system installation don't have all the information required to provide a detailed estimate, they are forced to make assumptions or add contingency dollars to their proposals – both of which can result in you paying far more for your system than you should.

Panduit Professional Services designs provide the detail that's necessary for you to receive accurate, consistent bids from all potential contractors.

- **Insights for contractors when they are on-site**

Our designers ensure that contractors have all the information they need to implement their infrastructure designs.

While diagrams are helpful, they can't account for on-site anomalies such as improperly routed cabling. We conduct a full site discovery prior to creating our design, and also include work-around solutions for contractors to streamline installation and avoid costly change orders.

- **An infrastructure that's designed with scalability in mind**

Ease of expansion is a key consideration for any organization operating an industrial network, and is another benefit of our constructible physical design packages. As opposed to ad hoc designs done in the field, they provide the comprehensive detail that is needed to deploy the infrastructure system that adhere to the same industry standards and best practices in any location.

Deliverables

Customers receive a comprehensive Construction Document Package consisting of the following:

- **Program Report**

The Program Report details the technical performance expectations and functional requirements of the physical infrastructure system design and identifies the cabling requirements for the new infrastructure including cable media selection, topology, redundancy requirements, pathways, and locations of infrastructure components.

- **Drawings**

- General Arrangement/Horizontal Space Plan
- Proposed Pathway Plan
- Single-Line Diagram(s)
- Identification Sequence and Details
- Typical Details (i.e., installation methods)
- Enclosure Elevations and Enlargements
- Cable Schedule

- **Specifications**

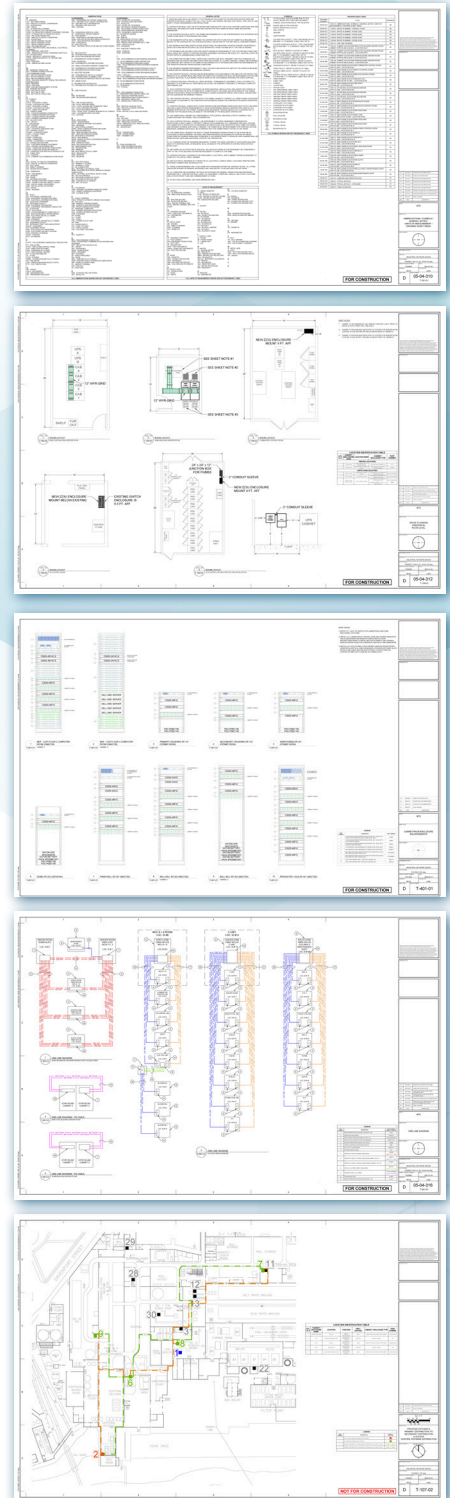
Industry Standard, Division 27 Construction Specification Sections:

- Section 27 05 26 Bonding and Grounding of Telecommunications System
- Section 27 05 28 Telecommunications Pathways
- Section 27 10 00 Structured Cabling System
- Section 27 17 00 Testing Identification Administration of Structured Cabling System

- **Recommended Parts List for all designs for all Panduit products**

Outcomes

- Ensures the network is deployed as intended.
- Closes persistent gaps in scope between the logical design and installation.
- Reduces infrastructure start-up risks.
- Enables long-term, robust network performance.



Deployment for Construction Administration for Industrial Networks

By partnering with Panduit Professional Services, organizations can be confident that their new physical infrastructure design will be installed in accordance with the constructible design package (if developed), and in strict compliance with all applicable codes, industry standards, and best practices.

How We Help

Panduit Professional Services conducts on-site support and inspections at key milestones during the installation phase of the project, as follows:

- **Pre-bid meeting and walkthrough**

We help facilitate this meeting during which contractors bidding on the project ask technical questions about the physical infrastructure design.

- **Initial project kick-off**

We visit the installation site to provide any needed guidance to the selected telecommunications contractor.

- **In-progress project inspection**

We return to the site at the 50% complete stage to inspect the work that has been done for any deviations to the plans and specifications. Detailed notes and photographs are taken to be used in the report deliverable.

- **Pre-owner acceptance visit**

We visit the site on the final week of the installation to review the progress and ensure that any deviations found during the 50% visit have been corrected. Any deviations from work performed since that milestone are documented and photographed for the report.

Deliverables

- A report is issued after each trip. Relevant information such as questions asked during the pre-bid visit and the kick-off visit are featured in the reports for those milestones.
- Reports from the 50% and 100% visits include a complete "Punch List" of deviations to the plans and specifications that were found. Detailed descriptions of any deviations and required action to remediate issues are included in the reports.





Customer

A major utility provider known for offering reliable services at the best value to its customers while ensuring protection for the area's precious natural resources.

Situation

- Integrating new automation equipment was difficult due to the legacy control network and outdated coaxial cabling.
- Limitations of existing conventional copper networks forced engineers to continuously add network segments and network equipment in order to provide connectivity across the site.
- The company's Industrial Automation team was short staffed and did not have the bandwidth, expertise, or time to manage the project.

Goal

- Achieve better network visibility and security throughout the material handling buildings.

Approach

Grantek reached out to Panduit, EESCO, and Oreair Electric to work together to review and resolve gaps in the project scope, help guide the PLC migration team, and provide training services to the company's preferred integrators for controller migration.

Panduit Professional Services at Work

Panduit's ecosystem helped a utility company achieve better network visibility and security for its material handling buildings.

Solution

Assess

Panduit Professional Services assessed the customer's physical network and engaged Grantek Systems Integration to partner on the opportunity. Grantek, a Panduit ONE Gold Partner, performed a logical assessment and provided logical network design, access layer mapping, and project management services.

Design

Panduit Professional Services provided the customer with a constructible physical design package that included design plans, a set of written installation specifications for all cabling, connectivity, and cabinets/enclosures, and AutoCAD drawings to ensure proper installation. Panduit Professional Services completed this service under contract to its distribution partner, Englewood Electric Supply Company, (EESCO) Distribution, Inc.

Deploy

The complete solution, which upgraded the physical network from Layer 1 to Layer 3, comprised the Industrial Distribution Frame (IDF), Integrated Network Zone System, fiber and copper connectivity, and fiber distribution enclosures.

Outcomes

- Enhanced monitoring and access, along with improved historical data collection and device management.
- A modernized control network and an Ethernet-based infrastructure with copper and fiber optic connectivity.
- Connectivity between operation systems and enterprise systems in accordance with the CPwE model for industrial networking.
- Access to all material handling controls devices on a single, secure Ethernet network.



With the physical vastness of its property and the harsh working conditions, the customer needed a much more scalable solution that allowed for a manageable network to provide better monitoring and security.

Jacob Chapman, Client Solutions Manager, Grantek



Optimize Your Physical Infrastructure with Panduit Professional Services

To learn more about engaging the Panduit Professional Services ecosystem for strategic guidance and hands-on assistance assessing, designing, and deploying your industrial network infrastructure, **contact your Panduit sales representative.**



Panduit Difference

Panduit is committed to delivering a consistently high level of quality and service the world over. With a presence in more than 100 countries, local Panduit sales representatives and technical specialists offer guidance and support that bring value to your business. Our global supply chain, which includes manufacturing, customer service, logistics, and distribution partners, provides prompt response to your inquiries and streamlines delivery to any worldwide destination.

Our most important connection is with you.

We have the knowledge and experience to help you make the most of your infrastructure investment.

www.panduit.com

Let's Connect

www.panduit.com/en/support/contact-us.html