Meeting your Business Objectives for a Robust, Flexible and Scalable Signal Transmission Infrastructure

Featured Brand

One Enterprise. One Infrastructure. One Partner.

BELDEN

Unlike any other infrastructure provider, Belden takes a universal approach to your enterprise – resolving your signal transmission needs with IP- and legacy-based solutions that enable a smooth migration to convergence. Outstanding global service and support capabilities and application-specific warranty programs complete Belden’s unique offering.
The Issues Created from Multiple Infrastructures and the Use of Multiple Vendors

It is widely known (and lamented) that the use of multiple infrastructures within the enterprise, comprised of components from any number of vendors and installers, adds undue complexity to the buying and specifying process, as well as to the updating and management of the infrastructure. Facility and IT management list the following problems when using multiple signal transmission infrastructures — and multiple vendors:

- Interoperability concerns resulting in minimally-compliant, underperforming systems
- Lack of fully-integrated solutions where all products work together for maximum performance and efficiency
- Space inefficiencies from varying degrees of form and fit
- Inconsistent aesthetics throughout facilities
- Lack of single point of accountability with vendors
- Keeping an overabundance of components and documentation on hand for maintenance
- Lack of solid customer service to address the needs of the entire infrastructure
- No true systems certification and warranty due to the mix of various vendors’ products
- Difficulty in scaling the infrastructure as requirements grow for deploying new systems and applications across facilities

Belden Responds with Enterprise-Wide Product and System Solutions

Belden can resolve the problems Facilities and IT Management face, when using multiple infrastructures and multiple vendors, by providing a broad range of high performance, field-proven signal transmission solutions that will meet their precise needs throughout the enterprise.

Belden offers:

- An extensive physical infrastructure portfolio (more than 250,000 line items)
- Solutions that include:
  - High-bandwidth, high-density copper and fiber network infrastructure systems
  - Professional and Commercial audio/visual entertainment cabling systems
  - Security, control and alarm solutions for building automation systems and physical security applications
  - Racks, enclosures and cable management systems
  - Experience across many diverse market segments.
  - Thousands of reliable, field-proven installations on a worldwide basis
  - Bundled pricing and single-source advantages

One Enterprise - The Value of a Broad Solutions Offering

To streamline the design, installation and maintenance process at a multi-purpose stadium, Belden signal transmission solutions were selected. Belden was chosen as the vendor since it offered solutions for the facility’s data center, as well as for its integrated LAN, data/voice, CATV, audio/visual, control, physical security and building management applications and systems.

The stadium’s networking and telecommunications backbone is comprised of Belden FiberExpress® single-mode fiber optic distribution cable and fiber connectivity components. Category 6 MediaTwist® copper cable traverses the telecom rooms to approximately 2,500 telecom outlets, utilizing Belden’s line of copper connectivity solutions. Belden racks and enclosures, and its versatile cable and infrastructure management solutions, were also installed.

The broadcast and audio/visual systems are comprised of FiberExpress single-mode cables and connectors and large quantities of Belden cable constructions.

One Enterprise. One Infrastructure. One Partner.
Is your infrastructure highly available, flexible, scalable and secure? Can you implement a smooth migration from disparate legacy analog systems to IP convergence?

**The Issues Involved with Vendor Technology and Convergence Deficits**

Most infrastructure vendors are unable to provide both high-performance IP-based solutions and high-value legacy cabling solutions for autonomous systems. This product and support inflexibility translates to the following key issues:

- Inability to adopt best-of-breed applications for systems currently running on legacy infrastructures
- Potentially high costs to tie multiple autonomous systems together
- Lack of experience with diverse applications that range from LAN, data center, audio/visual entertainment, physical security and building management and control
- Inability to accommodate a flow of information and integration between systems and applications
- Risk of being locked into proprietary and application-specific technology that hinders infrastructure scalability and management
- Inability to institute single-sourcing since many legacy infrastructure vendors don’t provide IP-based infrastructures
- Inability to implement a smooth migration from diverse legacy-based applications to IP-based converged infrastructures
- Inability to avoid duplication of work and associated costs when converging the infrastructure

**Belden Responds with Technology Solutions that Facilitate Convergence**

Belden’s technology range provides legacy and IP-based solutions that meet present-day needs, while providing a clear path to a fully converged IP-based infrastructure. Belden offers:

- Solutions that extend from the data center to the enterprise workspace - creating infrastructures that are highly available, flexible, scalable and secure
- Complete line of both IP- and legacy-based infrastructure solutions
- Single-source capability for product availability and service/support
- Better control and efficiency across all infrastructures
- High levels of physical life safety, network safety and security
- Lower total building infrastructure costs
- Ability to implement a smooth migration from diverse legacy-based infrastructures to IP-based infrastructures
- Long-term scalability – most infrastructure vendors do not offer scalable solutions for convergence
- Convergence benefits such as simplified management, control and tracking via non-proprietary protocols, and reduced installation costs
IT convergence is being adopted by organizations of all types because they know that a converged infrastructure built on an open architecture concept — along with the industry standards and best practices — can avoid the pitfalls of infrastructure obsolescence and the complexities inherent with multiple and proprietary protocols and systems. With convergence, simplicity and efficiency become the hallmarks of a new and more sustainable infrastructure. In fact, some healthcare facilities have realized up to a 20 percent savings in time and labor costs simply by implementing a converged network infrastructure.

Recently, an 80-bed acute care hospital in the Southwest U.S. upgraded its infrastructure to accommodate an increased volume of data generated by the hospital’s advanced Clinical Information Systems (CIS), a shift to Electronic Health Records (EHR) and patient monitoring, building automation and security systems, as well as a multi-channel cable TV system for patient entertainment.

For the infrastructure’s fiber backbone, the hospital’s IT staff chose to implement Belden’s FiberExpress System of cabling and connectivity, while using Belden’s IBDN 4800 Category 6 structured cabling system for the copper horizontal infrastructure. Belden racks and cable management solutions were used in the hospital’s data center and telecom closets.

The illustrations at right depict both the initial, non-converged infrastructure and the newly-converged infrastructure. The non-converged diagram shows seven dedicated infrastructures, supporting the hospital’s seven systems. The converged diagram shows how five of the seven systems were converged to form a singular, IP-based Ethernet infrastructure. To comply with regulations, however, the Nurse Call and Fire systems remain on dedicated infrastructures which are comprised of Belden cables.

The converged IP-based infrastructure allows for:

- Optimal flow of information between the facility’s equipment and systems
- Easier deployment of new clinical and non-clinical systems and applications across facilities
- Remote monitoring of systems, equipment and patients
- Elimination of vendor duplication
- Simplified command and control via an open network, non-proprietary and secure protocol
- Physician, staff and patient mobility
- Lower total cost of operation (TCO)

The non-converged layout (top) depicts seven dedicated infrastructures supporting seven systems. The converged diagram (bottom) shows five of the systems on an IP-based Ethernet infrastructure, while the Nurse Call and Fire systems remain on dedicated infrastructures to comply with regulations.
The Issues Related to Insufficient or Problematic Service and Support

Some infrastructure vendors are unable to provide a comprehensive, fully trained, proficient partner network to support the LAN, audio/visual entertainment, building management and physical security infrastructure systems on both a local and worldwide basis. This scenario presents Facility and IT Management with the following issues:

- Multiple system designers, distributors, installers and support personnel could be involved, adding undesirable complexities to the servicing of the infrastructure
- Some product manufacturers do not provide design support
- Inability to obtain solutions that require performance beyond prescribed standards
- Some product manufacturers do not have worldwide partner networks to assure local support
- Long-term performance of the infrastructure could be compromised by the installers' inconsistent systems knowledge and workmanship
- Space inefficiencies could occur through use of multiple contractors/installers
- Increased installation and maintenance costs due to the number of contractors/installers needed to service various applications and systems

Belden Responds with Expert Local/Global Business Partners

Belden's business partners provide local service and support for the design and deployment of the infrastructure, including skilled installation, product distribution, and technical support. This is accomplished through Belden’s global partner programs. Best-in-class, application-specific warranty programs round out Belden’s comprehensive support program. Belden offers Facility and IT management:

- True global availability – service and support operations throughout the Americas, Europe, Africa and Asia
- Design, delivery, installation and post-installation support
- Service and support simplicity from one vendor
- Full compliance with applicable standards, codes and safety regulations
- Reduced risk and ensured long-term performance
- One of the industry's best product and system warranty programs – with each program designed to match the needs of the specific LAN, audio/visual entertainment, building automation and physical security installation

Is your infrastructure sustained by knowledgeable service and support professionals that are able to accommodate your local/global needs?
**One Enterprise, One Infrastructure, One Partner –**

The Value of a Universal Approach

**Belden’s Universal Approach Enables a Smooth Migration to Convergence**

- **One Enterprise** means that Belden can take a universal, single-source approach to your enterprise since Belden provides a broad range of high quality, field-proven solutions to meet your precise needs throughout the enterprise.

- **One Infrastructure** relates to Belden’s ability to provide legacy and Ethernet IP solutions that meet your present-day needs, while providing a clear path to a fully converged IP-based infrastructure.

- **One Partner** refers to Belden’s unique ability to provide local and global service and support with best-in-class, application-specific warranty programs.

**Belden solutions:**

- Are engineered and manufactured for highest performance with the highest quality.
- Provide unparalleled signal integrity and systems reliability.
- Exceed all applicable industry standards.
- Are verified through comprehensive, independent third-party testing.
- Are designed to support today’s most demanding applications and tomorrow’s emerging technologies.

**Belden’s technical experience:**

- Is unmatched in the industry.
- Extends to the entire enterprise – meeting the signal transmission needs for a facility’s data center, LAN, audio/visual entertainment, building automation and physical security applications and systems.
- Includes both IP- and legacy-based solutions that allow for a flexible and sound migration to a fully converged IP-based infrastructure.

**Belden’s comprehensive network of business partners:**

- Excels in global/local resource availability.
- Provides design services, as well as product delivery, expert installation and technical support.
- Offers application-specific warranty programs that are considered best-in-class.

For more information call 1.800.BELDEN.1 (1.800.235.3361) or visit our web site at [www.belden.com](http://www.belden.com) for more information on Belden Enterprise Solutions.

No other company provides such a profound commitment to excellence in product development, systems expertise and service.