BELDEN

SENDING ALL THE RIGHT SIGNALS

Connectivity

Security Software

Switches & Routers

Racks and Enclosures

Ethernet & Fiber Cables

Firewalls

Belden Supports IoT and IP Convergence

Capitalizing on the Internet: That's what the next wave of convergence – the Internet of Things (IoT) – is set to do. A common, highly reliable communications infrastructure is needed to manage the signal transmission from billions of previously unconnected devices, and support intelligent buildings, homes and industry.

How Belden Supports IoT and IP Convergence

Continued Innovation

IoT infrastructure solutions should be backed by a vendor with the financial strength, leadership and expertise to develop new and innovative solutions. Belden offers:

- Expertise in the industry with standards-setting performance
- Products for all levels of infrastructure convergence
- Value-added services for the life of communications infrastructures
- Several interoperable solutions for specific applications
- Easy upgrades without altering infrastructure or enduring downtime

Products that Work Together

Infrastructures comprised of products designed and manufactured to work together are key to ensuring maximum IoT performance and reliability. Belden systems provide:

- Components that seamlessly integrate into reliable, high-performance networks
- Ample bandwidth and reliability to avoid downtime and unexpected failure
- Support for hybrid systems during the move from legacy to IP-enabled systems, and from wired to wireless connections
- Unparalleled signal integrity across all building management systems

Strong Business Partners

Fully trained, professional Belden business partners optimize the design, installation, service and logistical supply of IoT systems. These partners provide:

- Superior guidance
- Flexibility and performance for converged networks
- Best-in-class warranties
- Advisory services, such as audits, design and project management

How Belden Products Support IoT and IP Convergence

When it's time to upgrade, deployment shouldn't slow you down.

Pre-Terminated Copper and Fiber Cabling

- Intuitive plug-and-play action with simple, reusable components
- Eliminate testing with built-in reliability
- Lower labor costs with faster moves, adds and changes (MACs)
- Significant time and cost savings with clear labeling for attachments

KeyConnect Series

- Suits any data, voice, video or multimedia application
- Quick, cost-effective work area outlet reconfiguration
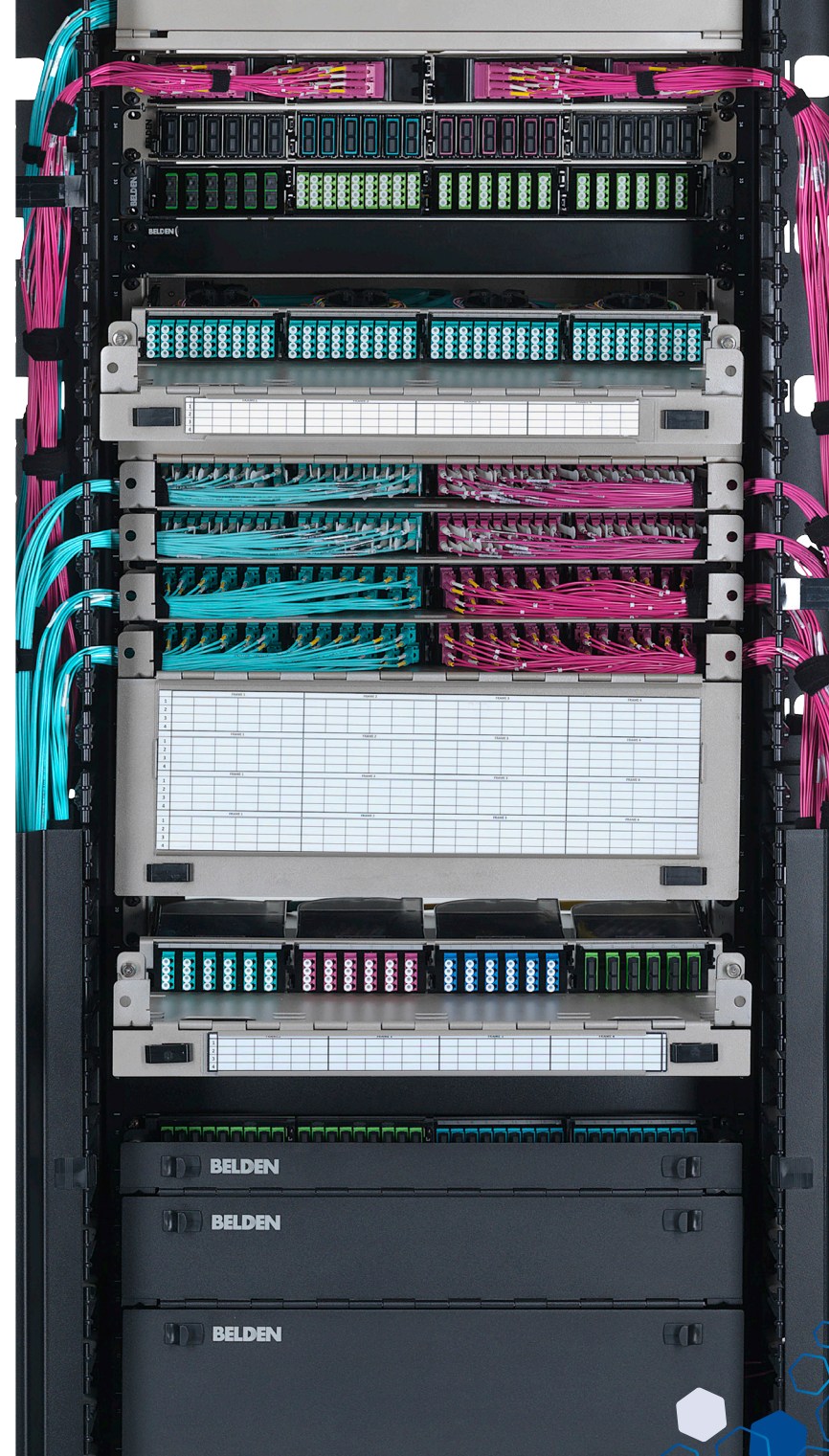- Reduce installation costs with easy insertion and removal from any keystone-style opening

Fiber*Express*® Hydra Assemblies

- Upgrade from 10 Gbps to 40 Gbps or 100 Gbps while maintaining uptime
- Eliminate downtime and replacement costs when replacing MPO-to-LC cassettes with MPO frames

REVConnect

- Any connectorization requires only one process, one tool and a set of core components
- One core termination compatible with eight different connectors

Valuable Space Savings

Just because more devices are connecting to your network doesn't mean you have infinite space to accommodate the additional infrastructure that supports IoT.

Rack-Mount Products

- Gain vertical rack space
- Increase available space without increasing footprints or operating costs with 48U, 50U or 52U cabinets

Ultra-High-Density Copper Patch Panels

- Achieve double the port density with unique connector technology
- 48 ports in a 1U space

AngleFlex™ Patch Panels

- Eliminate horizontal cable management purchases
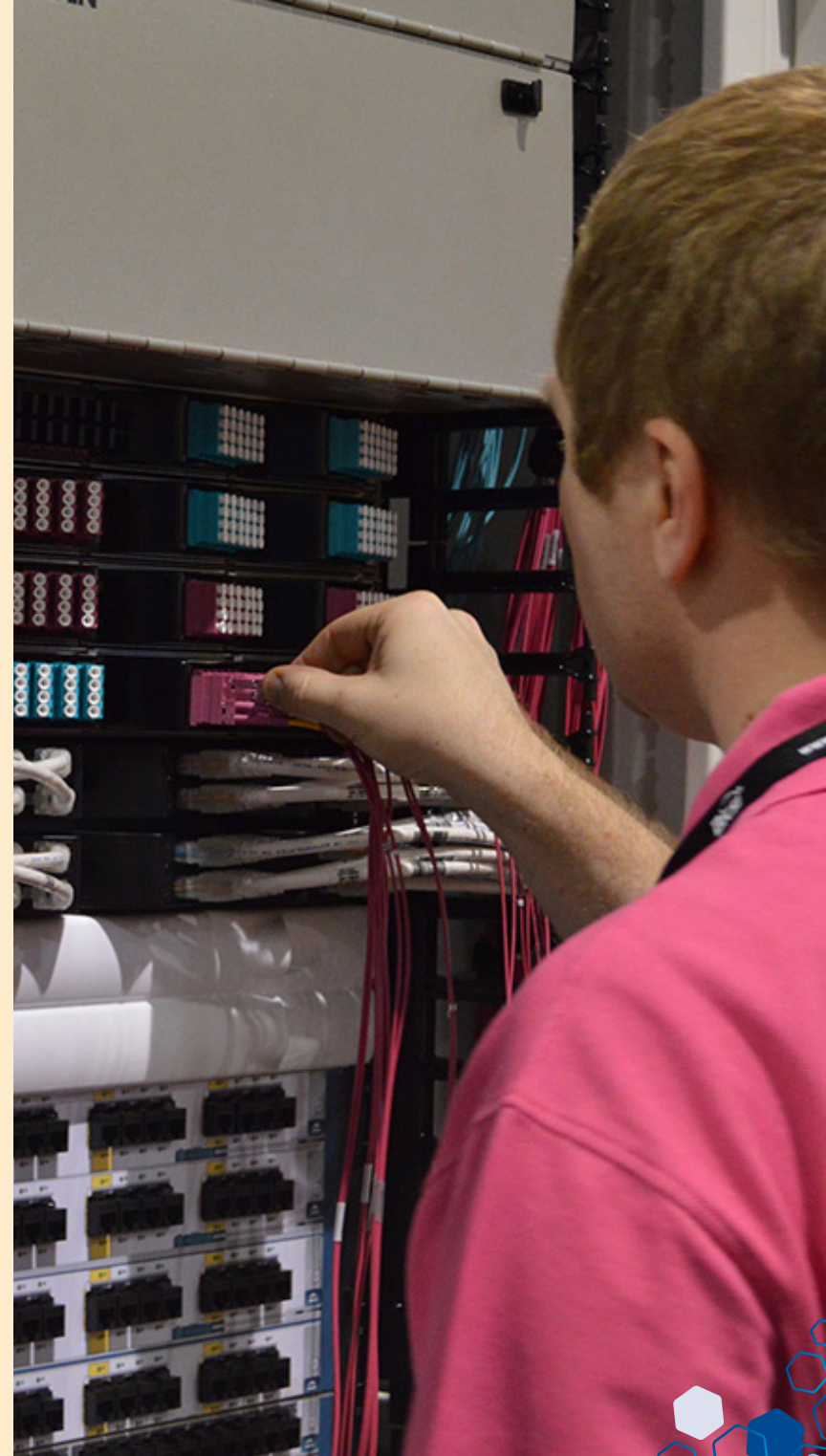- Achieve 27% space savings per rack

FiberExpress® UHD Patch Panels

- Accommodate 144 LC ports or 72 MPO ports for over 860 fiber potential in 1U of space

Small Diameter 10GX and 10GXS Cabling

- Tight bend radius allows small, light cable trays and reduces installation and routing costs
- Reduce cooling loads by improving airflow
- Use 25% less space in cable pathways without compromising performance

Our End-to-End Expertise   Your End-to-End Solution

Streamlined Migration Paths

Your data center needs to be equipped to handle current needs while offering a clear path for future IoT requirements – all while staying within tight budgets.

Base-8 Cassettes

- Optimize costs and achieve smooth migration
- Eliminate dark fiber associated with SR4 and PSM4 architectures
- Save 5% to 8% in SR4-based architectures
- Save 4% to 5% when deploying Base-8 in duplex architectures for 10GBASE-SR and 25GBASE-SR

FiberExpress® Hydra Assemblies

- Eliminate replacement costs for switching out MPO-to-LC cassettes with MPO frames
- Easily upgrade from 10 Gbps to 40 Gbps or 100 Gbps

Open Bridge Racks

- Flexible, cost-effective migration to an Open Compute environment
- Used in three configurations: networking, server and Open Compute
- Convert quickly from TIA/EIA to Open Compute rails in the field to minimize business interruption

Confirmed Uptime

Preventing downtime is vital to keep buildings, their systems and their occupants fully functional in IoT environments.

Hot- or Cold-Aisle Containment

- Keep hot and cold air in place with sliding doors that connect magnetically
- Transition easily between flat roof and vertical containment without costly upgrades

- Prevent waste heat and cool air from mixing, providing lower IT inlet air temperature to reduce failure-causing hotspots

Passive and Active Rack Containment

- Prevent hot and cold air mixing to reduce hotspots leading to downtime
- Optimize airflow to deploy more equipment in the same footprint

- Remove high heat loads to save up to 50% on cooling and prevent overheating with intelligent controllers

Cable Management Solutions

- Properly manage cabling to prevent trips and accidental disconnections

- Protect servers and equipment from failure-causing dust, debris and damage

Ladder Rack Runways

- Fast deployment with minimal business interruption
- Easy to route around plumbing and electrical systems with flexible swivel design

- Prevent downtime by managing cable bend radius, number of cables in a tray and weight placed on cables

Real-Time Monitoring and Management

Remote Climate Monitoring

- Detect environmental hazards before they cause damage
- Receive notifications via cell phone or email

Power Distribution Units (PDUs)

- View real-time power load assessments
- Receive alarms when conditions exceed thresholds

Visual Cues and Traceability

- Patch cords with blinking LEDs provide identification of both ends, making troubleshooting easy and preventing incorrect disconnects
- Bar-coded labels for tracking with data center software – no other equipment needed for connectivity management

Virtual Facility Software

- Visually assess cooling airflow and equipment temperature
- Pre-test scenarios and configurations to ensure resilience of IT assets
- Run failure scenarios to confirm availability after a potential change
- Compare impacts of different vendor equipment on data center space
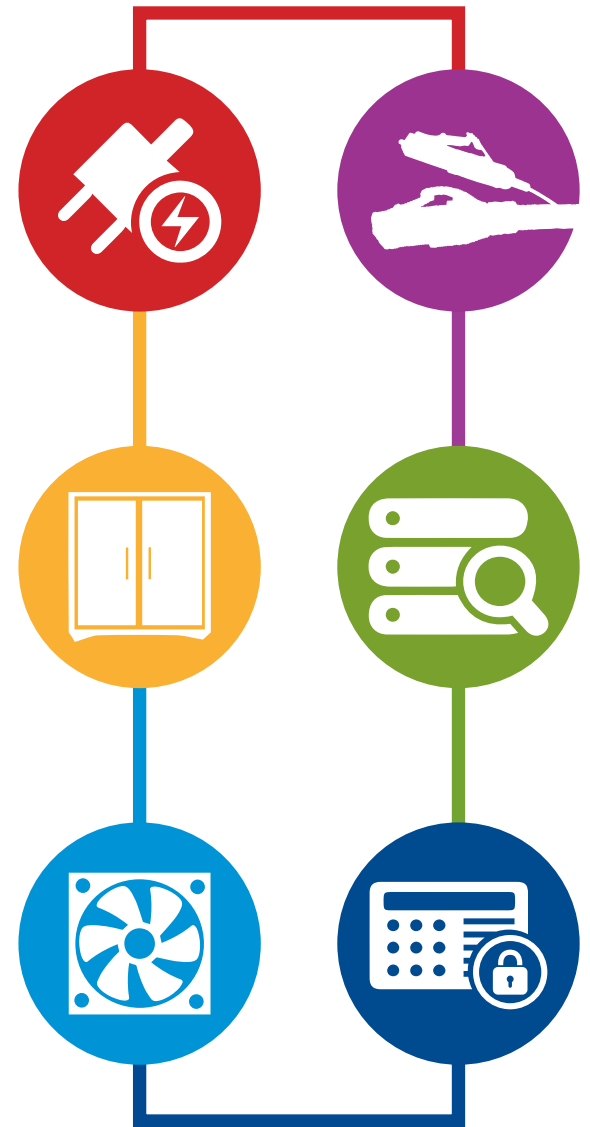
What Makes Belden Stand Out

Belden owns the manufacturing process, which means we can customize IoT solutions beyond the capabilities of many of our competitors.

Our expertise allows us to provide unique value-added services that set us apart. We can conduct cost analyses to compare IoT solutions and help you make the best choice based on needs and budgets.

Our data center and LAN knowledge allows us to work closely with every data center team member: low-voltage contractors, electrical contractors, IT staff, infrastructure specialists and facilities managers.

Assessment Services

- Uncover costly performance concerns
- Identify data center pain points that impact availability and capacity
- Resolve issues that waste time, money, energy and floor space

Consignment Services

- Store Belden products onsite without paying for them until they're needed
- Decrease freight costs through large orders that are packaged and bundled together

Data Center Ready Solution Sets

- Customized enclosures designed for optimal performance, with a single part number for ease of ordering
- Reduce labor costs and improve deployment time with copper, fiber and accessories that ship pre-installed

Virtual Inventory Services

- Keep necessary products in stock at a Belden warehouse, ready to ship within 24 hours
- Eliminate space dedicated to storing extra equipment

Visit info.belden.com/LAN to learn more.

BELDEN

Belden Technical Support **1.800.BELDEN.1**   **www.belden.com**