

A Belden smart building can improve and grow your business, enhance security, reduce operating costs, attract and retain employees, and adapt to changes with ease.

Belden offers a comprehensive portfolio for signal transmission, data communication networks and power supply of devices designed for a wide variety of applications.

## Why Choose a Belden Smart Building Solution?

A Belden smart building provides everything an enterprise needs to run smarter, automatically and efficiently. It also adapts to user preferences, creating a more productive work environment. It has technology and infrastructure to support:



### CONVERGENCE

Belden brings previously disparate, unconnected devices to your networks for direct communication and integration — without any human interaction or intervention — to share information, deliver high-quality AV, ensure life safety and improve building management.



### **RELIABILITY**

Get the reassurance of constant uptime, which allow business processes to continue, keeping revenue and productivity as high as possible. Belden's Smart Building Warranty covers several types of applications to make sure your systems work together for as long as possible.



### **EFFICIENT POWERING**

Belden brings you the ability to support local powering and Power over Ethernet (PoE), which delivers up to 100W through Ethernet cable to devices. Our systems support higher-power PoE, bringing power and data connections straight to monitors, cameras and other devices.



### **PRODUCTIVITY**

Belden systems and technology support many applications and technologies simultaneously, allowing people and devices on the network to complete jobs quickly and efficiently, without delays or bottlenecks.



### **ANALYTICS**

Belden systems support the sensor technology integrated into the many devices connected to your network. This allows you to quickly track and benchmark data - such as traffic patterns, occupancy rates and space utilization - in real time.



### **ENVIRONMENTAL SOLUTIONS**

Health and workplace well-being improve the environment and occupant satisfaction. Belden's green initiatives allow for buildings that are resource efficient, using less energy and water to reduce greenhouse gas emissions.

# **Global Footprint**

Belden has a global footprint with operations in North and South America, Europe, the Middle East and Asia Pacific to ensure that our in-house experts are available in an area near you.

Belden's global CICs (Customer Innovation Centers) are run by a multi-disciplinary team of engineers and consultants who combine technology and vertical market expertise to simplify network complexity and accelerate business impact. They work alongside your team to learn about your business and understand your processes to design and configure your Smart Building.



belden.com belden.com 3

# **Making Your Building Smart With Belden**

A smart building is seamless in operation, thanks to its connected infrastructure.

Building systems that have stood alone for years using a combination of twisted-pair cabling, AC power and video cable – voice, data, wireless, lighting, HVAC, security, AV, etc. – can now be networked together using one common infrastructure.

All these devices, which use Internet protocol (IP) to send and receive data via the network, converge under one umbrella for cost savings, easier maintenance and better building control.

Because smart buildings are so connected, devices and systems talk directly to each other and make necessary adjustments instead of requiring manual control and human intervention. The data gathered by these IP-enabled devices is sent back to the network – and to other devices – for evaluation.

Based on what these devices "see", and experience, adjustments and enhancements are made in real time throughout the day to keep expenses down, reduce energy use, maintain comfort and prevent performance problems.

Smart buildings will challenge enterprise networks, calling for more bandwidth, more flexibility, more speed, more connection points and more reliability. Networks will need to support legacy and new systems, a mix of passive and active equipment, a mix of copper and fiber cabling and ever-increasing numbers of wireless devices

### **Audio/Video Communication**



**Digital Signage** 



Cable Television System (CATV)



**Background Music System (BGM)** 

### **Energy Management**



Heating, Ventilation and Air Conditioning System (HVAC)



Power Management System (PMS)



**Intelligent Lighting Control** 



**Solar Energy System** 



### **Networking Infrastructure**



**IP Telephony & TV** 



Structured Cabling - Fixed & Wireless (LAN)



**Enterprise Data Center** 



**In-Building Wireless** 



Distributed Antenna System (DAS)

## **Operation Management**



**Building Management System (BMS)** 



Public Address and General Alarm (PAGA)



**Car Park Management** 

## Security/Safety/Surveillance



Fire Alarm



**Access Control** 



CCTV - Indoor & Outdoor

belden.com

## Belden Has the End-to-End Solution

### **Audio/Video Communication**



**Digital Signage** 

- Digital Signage is usually in the form of small to large billboards com - posed of LCDs, LEDs or similar display systems. It is generally connected by a content management system or software that sends the display system the data.
- Belden systems support 100W higher-power PoE devices like digital signage and video walls
- Belden systems support signal extension across large distances for 4K and UHD content



**Cable Television System (CATV)** 

CATV refers to the system that distributes television signals by means of coaxial and fiber cables. In remote and hilly areas, community antennas are constructed to receive broadcast signals and coaxial cables are used to carry cable television to subscribers.



**Background Music System (BGM)** 

- Background Music System refers to a music playback system that plays continuous background music, normally via a distributed public address audio system in a building.
- Belden offers connectivity support for zoned and buildingwide BGM systems
- Belden offers convergence solutions to allow systems to integrate with other devices for communications purposes

belden.com

## **Energy Management**



Heating, Ventilation and Air Conditioning System (HVAC)

- HVAC System controls the ambient environment including temperature, humidity, air flow, and air filtering in a building.
- Belden offers cabling infrastructure to connect devices HVAC controls in plenum spaces or raised floors
- Belden can seamlessly integrate sensors, automation and monitoring for total thermal control



Power Management System (PMS)

- Power Management System refers to the building air conditioning and mechanical ventilation, energy and climate management system to monitor and manage energy demand and climate condition in a building.
- Belden offers cabling infrastructure to connect devices PMS
- Belden can seamlessly integrate sensors, automation and monitoring for energy management



**Intelligent Lighting Control** 

- building.

**Solar Energy System** 

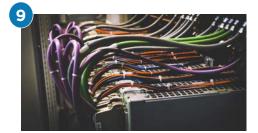
- Intelligent Lighting Control System ensures visibility for building occupants, life safety and overall atmosphere in a
- Belden offers cabling infrastructure to provide individual fixture management and control in any type of space
- Belden systems support Power over Ethernet to take DC power straight to LEDs anywhere
- Solar Energy System is one of the most promising renewable clean energy source, absorb and convert sunlight into electricity. Usually, some other monitoring and tracking systems will be integrated with Solar System to improve the overall efficiency.
- Belden's Type H1Z2Z2-K Solar Cables can be used as the interconnection cable between solar panels and PV inverters.
- For long distance communication, Belden offers fiber optic cables that suitable for outdoor environment and UV resistant.

## **Networking Infrastructure**



 IP Telephony & TV System refers to the system through which TV services are delivered using the Internet Protocol suite over a packet-switched network such as a LAN or the Internet, instead of being delivered through traditional terrestrial, satellite signal, and cable television formats

IP Telephony & TV



Structured Cabling - Fixed & Wireless (LAN)

- Local Area Network is the backbone communication infrastructure for information transmission in a building.
- Belden offers infrastructure to support wired and wireless devices, as well as carry high-speed communication and remote power
- Belden systems support high bandwidth and higher power throughput requirements brought forth by BYOD and IoT



**Enterprise Data Center** 

- Local Area Network is the backbone communication infrastructure for information transmission in a building.
- Belden offers infrastructure to support wired and wireless devices, as well as carry high-speed communication and remote power
- Belden systems support high bandwidth and higher power throughput requirements brought forth by BYOD and IoT



**In-Building Wireless** 

- A data center is a facility that centralizes an organization's shared IT operations and equipment for the purposes of storing, processing, and disseminating data and applications.
- Belden manufactures the widest breadth of copper/fiber 400G/100G/40G products, BAV/control cable and switches for data center, giving you unique end-to-end expertise.
- Belden offer full range of DAC, AOC and Transceivers meets the requirement of data center today and tomorrow.

8 belden.com



**Distributed Antenna System (DAS)** 

- A Distributed Antenna System (DAS) can be designed for use indoors or outdoors and can be used to provide wireless coverage in hotels, subways, airports, hospitals, businesses. (DAS) is a network of antennas, connected to a common source via Coaxial cable. DAS are distributed throughout a building or an area to improve network performance.
- Belden has whole range of cables available for the DAS solution.

### **Operation Management**



Building Management System (BMS)

- BMS is the computerized measurement, control and management of building services in a facility.
- Belden supports accommodation for devices/sensors/ systems that rely on both legacy protocols and newer IP based communications, e.g. IoT.
- PoE-enabling cable & connectivity solutions supporting devices with up to 100W of power for devices.
- REVConnect® for BMS direct field termination which supports up to CAT6A connectivity and 100W PoE



Public Address and General Alarm (PAGA)

- PAGA System refers to an electronic sound amplification and distribution system with a microphone, amplifier and loudspeakers, used to allow a person to address to general public in a building for announcement and safety/emergency purposes.
  Belden offers cabling for proper zoning and integration of
  - Belden offers cabling for proper zoning and integration of PA systems with fire and security systems for automated and manual messaging
- Belden offers cabling infrastructure to support centralized system control and management



**Car Park Management** 

- Car Parking Management System offers real-time indication of available parking lots in various zones of the car park through signage display. Individual lot sensors with LED lamp indicators further enhance the lot counting and directional guiding services.
- Belden offers cabling infrastructure to support centralized system control and management
- Belden offers cabling for proper zoning and management of parking lots

### Security/Safety/Surveillance



Fire Alarm

- Designed to detect unwanted presence of fire by monitoring environmental changes. In the event of an emergency, the system provides a visual alert for the occupants to escape safely.
- Belden offers connectivity that allows fire alarms and mass notification systems to display safety alerts and updates.
- Belden solutions meet different local and international alarm standards for different regions.



**Access Control** 

- Selective restriction of access for certain doors and facilities based on system parameters.
- Belden offers reliable and easy-to-install cabling to support bandwidth and power requirements of access control systems for data transfer and management



**CCTV - Indoor & Outdoor** 

- Belden offers integration support for CCTV systems to converge with other facility devices in order to automatically identify threats and send alerts.
- PoE solutions that enable cable and connectivity to support devices with up to 100W of power for indoor and outdoor surveillance.
- REVConnect® supports signaling and power solutions for CCTV systems in white, gray and outside spaces

10 ) belden.com

# **Planning For Your Smart Building**

**AV-over-IP** (Internet Protocol) describes the distribution of audio, video and control signals over the LAN using IP switching and configuration protocols.

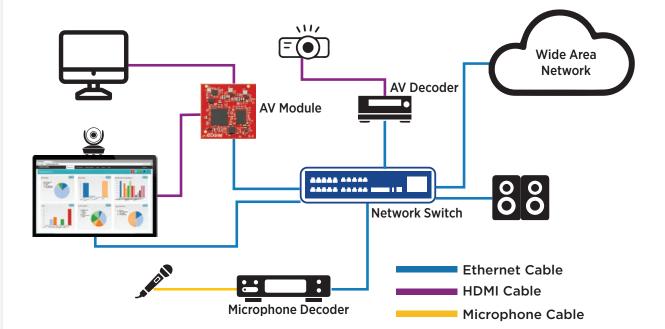
There are two types of networking methods: circuit switching and packet switching.

AV has primarily used circuit switching for AV switching networks – this is how HDBaseT systems work. On the other hand, IT has traditionally used packet switching for data networks.

In a circuit switched network, dedicated point-to-point connections are made to distribute streams of data.

In a packet switched network, data is sliced into small packets and delivered to various destinations that request the data.

The key advantage of Ethernet-based packet switched networks is that they allow many services and users to share the same network infrastructure.



The Single Pair Ethernet (SPE) standard can help introduce significant cost savings and easier installation in building automation and management. Everything from access management, fire safety and lighting to HVAC, communications and security rely on some kind of Ethernet-based connectivity, and the related devices need to be powered. SPE allows power and data to be presented together on one single twisted wire pair (Power Over Data Line or PODL). SPE, based on xBASE-T1 protocols, will become a key technology in smart buildings. Thin cables with miniaturized connectors make it possible to significantly increase terminal equipment connection density.



Compared to traditional Ethernet cabling, this approach offers a significantly higher number of connection points. SPE works with 10BASE-T1 to 1000BASE-T1, offers 15-1,000-meter link ranges at Gbit/s transmission rates, and can supply terminal equipment with up to 50 watts.

- Cost savings and easier installation
- Allows power and data to be presented together on one single twisted wire pair
- Significantly increase terminal equipment connection density

Through **IP Convergence**, signals like voice and video can be easily converted into digital data, compressed into IP packets and transported over a single, packet-switched IP network.

More and more applications moving toward IP Convergence direction such as CCTV, AV, Access Control, LED Lighting, so on and so forth. With these next-generation applications, businesses can become even more connected to their stakeholders and drive efficiencies.

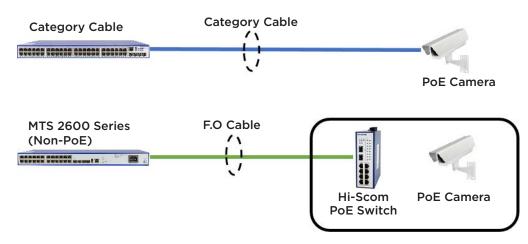
IP Convergence leads to easy configuration of single infrastructure, and suit to all application in smart building market.

- Cost Reduction: single IP infrastructure reduce complexity.
- Ease of Use: plug and play terminology, easy configurable.
- System Uptime: reliable product to maintain system uptime.
- Highly Scalable: network base accommodate larger devices.

**PoE** plays a key role in delivering both data and power to thousands of smart devices behind smart building implementations. In modern IoT deployment, PoE provides an alternative method of powering devices in those locations may not have power sources available.

The benefits of PoE Technology:

- Power and data can be delivered through one cable
- Quick deployment (without needs of additional power sources)
- Cost saving



Ease

of Use

12 ) belden.com

# Your Single-Source, End-to-End Infrastructure Solution Provider

### **10GXS Category 6A Cable**

#### **Key Technology**

- Innovative Cable design
- EquiSpline<sup>™</sup> ensures structural integrity and maintains distance between pairs
- EquiBlock™ Barrier Technology achieves uniform heat flow dissipation while maintaining insertion loss performance

#### **Benefits**

Cost Reduction

**|||** 

Highly

Scalable

System

- Guaranteed 625 MHz Bandwidth (all benefits of 10GX cable) plus
- Smaller Diameter, Smaller Bend Radius and save space of conduit and tray
- Fewer Twists for easy termination
- Highest Power Rating up to 100W of 4pPoE no length de-rating (100-meter channel)

### FiberExpress Optic Cable

Belden offers indoor and outdoor fiber cable in tight buffer and loose tube designs. Armored, burial, and ruggedized designs are suited to a host of enterprise environments. For each product design, items for OM1, OM2, OM3, OM4, and OS2 (Single mode) items have been developed. Belden offers preterminated MPO trunk cables for data center applications and flexible ribbon fiber cables for the Hyperscale data center applications. Most of the Belden fiber products are third-party tested by either ETL or UL and approved for commercial building codes.











### **DCX System Optical Distribution Frame**

Handle high amounts of fibers cable and add density to fiber frames without compromising on ease-of-use, with the new DCX Optical Distribution Frame, which features innovations like slide-out cassette trays, complete bend radius protection and multiple frame and cabinet configuration options. This solution optimizes and futureproofs the ROI of fiber infrastructure, ensuring the ability to support ever-increasing data center bandwidths, IP migration and new types of technology requiring more fiber connection.



- Scalable Cable Management to support a potentially unlimited number of fiber connection
- Customizable Side-by-side, back-to-back and left or right configurations
- High Density 4608 fibers per frame; up to 55% higher density without compromising ease-of-use
- Modular Migrate from Base-12 to Base-8/16/24 without changing housings

#### **Belden REVConnect® Solution**

REVConnect® Systems combine high-performance cable with REVConnect® Connectivity components that feature Belden's innovative, game-changing REVConnect® Connectivity. This reduces rework and retesting, is simple for entry-level technicians to learn quickly and makes it simple to adapt to emerging applications and IoT devices.

#### Reliable

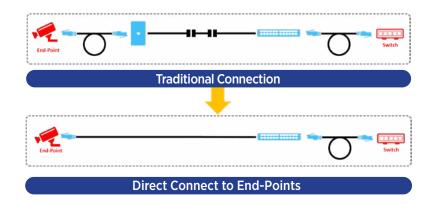
- Connectivity that you can count on to work well the first time
- Compare against other brands which require lengthy rework

#### Easy

- As you'll see, an easy, fast termination that is universal for all connectivity styles **Versatile**
- Featuring the 'core' termination, REVConnect® allows for any 1 of 8 modules to be terminated using the same core termination process and tools
- Switching among these 8 modules occurs in a matter of seconds







14 ) belden.com

#### **Hirschmann IT MTS Switch**

The Hirschmann IT High Performance and Multi-purpose Switches Portfolio Set the Standard for Quality, Reliability and Service.

- Support PoE/PoE+ function (persistent PoE)
- Various interfaces (GE TX, SFP, SFP+ and QSFP)
- Rich L3 feature (RIP, OSPF, ISIS, BGP, as well as IPv6)
- Support up to 8 devices in one stacking
- \* Persistent PoE Supply power supplying will not be interrupted during device rebooting.

















### **Hirschmann IT Dragonfly**

Hirschmann IT Dragonfly is next gen indoor and outdoor Wi-Fi 6 access point.

- Support a maximum concurrent data rate of 2.975Gbps
- Support OFDMA, MU-MIMO, BSS Coloring, TWT, WPA3 and all other Wi-Fi 6 features
- RF management ensures the access point stay clear of all radio frequency interference sources
- Support Fine tuned QoS parameters to differentiate and provide appropriate QoS for every application





#### **Hirschmann IT Raven Next-Generation Firewall**

Raven NGFW includes modern functions to complete Hirschmann IT total solution.

- Applications, users and protocols are assessed in forwarding and security policies (typical NGFW features).
- Provides up to 40G QSFP interface to co-work with MTS2948 and MTS8K switch.
- RAVEN NGFW can get latest cyber security events from over 70 traffic flow sampling centers around the world with RAVEN EYE database.
- AV/IPS/APP-ID are available and optional features to make it suffice various application needs.









### **Cyber Security Solution**

Tripwire Enterprise is an industry leading security configuration management (SCM) suite that provides a full integrated solution for configuration policy, file integrity and remediation management. With compliance polices that support the framework of more than 42 entities, the suite lets IT and OT cybersecurity, compliance and IT/OT operations teams rapidly achieve a foundational level of security throughout their IT and OT infrastructures by reducing the attack surface, increasing system integrity and delivering continuous compliance.



Tripwire Log Center™ collects, analyzes and correlates log data from devices, servers and applications. Why does this matter in an ICS context? ICS create a staggering amount of data, and Tripwire Log Center helps you cut through the noise and focus only on what matters by pre-processing data before filtering it into your security information and event management system (SIEM). This data can be extremely helpful when creating a proactive maintenance strategy—for example it can send an alert if a patch cord is about to fail.



16 ) belden.com

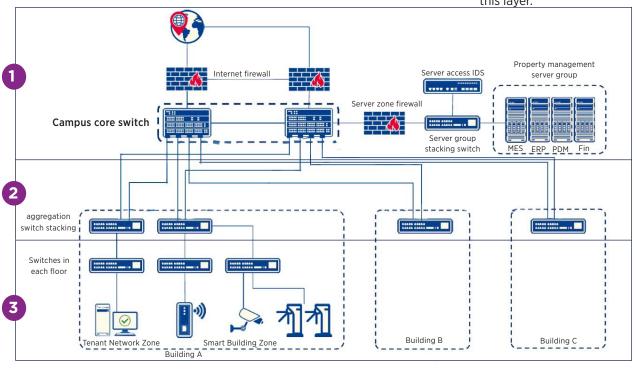


### **Typical 3-layer Enterprise Network Reference Architecture**

1 Access Layer provide the user access and support PoE/PoE+ application to end devices.

2 Distribution/Aggregation Layer typically segregated by floor/block basis, serve as the bridge between access layer and core layer for network redundancy purpose.

Tore Layer provide network routing and redundancy, required high bandwidth and high performance L3 switches at this layer.



Understanding Belden's Smart Building Portfolio			Audio/Vide	eo Communication		Energy Management				Networking Infrastructure					Operation Management			Security/Safety/Surveillance		
			Cable Television	Background Music	Heating, Ventilation	Power Management	Intelligent Lighting		IP Television System	Structured Cabling	Enterprise Data		Distributed Antenna	Building	Public Address	Car Park			CCTV - Indoor &	
# Solution	Product Group	Product Family	Digital Signage	System (CATV)	System (BGM)	and Air Conditioning System (HVAC)	System (PMS)	Control	Solar Energy System	(IPTV)	- Fixed & Wireless (LAN)	Center	In-Building Wireless	System (DAS)	Management System (BMS)	and General Alarm (PAGA)	Management	Fire Alarm	Access Control	Outdoor
1		Belden Cat6A Cable - 10GX Series, 10GA Series, Cat6 Cable - 78xx Series	•		•		•	•			•	•			•	•	•		•	•
2		Belden KeyConnect Modular Jacks - UTP & STP	•		•		•	•		•	•	•	•		•	•	•		•	•
3	Copper System (Cat6 and Cat6A)	Belden Modular Patch Cord - UTP & STP	•		•		•	•		•	•	•	•		•	•	•		•	•
5		Belden Faceplate & Workstations Media	•		•		•	•		•	•	•	•		•	•	•		•	•
4		Belden KeyConnect Patch Panel	•		•		•	•		•	•	•	•		•	•	•		•	•
6		Belden REVConnect Solution	•		•		•	•		•	•	•	•		•	•	•		•	•
7	Fiber System (MMF and SMF)	Belden Optical Fiber - Tight Buffer, Loose Tube, (Indoor / Outdoor)									•	•		•						
8		Belden FiberExpress Fiber Patch Cord & Pigtails									•	•		•						
9		Belden FiberExpress Rack Mount Patch Panel, Wall Mount Patch Panel									•	•		•						
10		Belden FiberExpress Adapter Strips & KeyConnect Modules									•	•		•						
11 Enterprise Connectivity Solutions		Belden FiberExpress UHD High Density Patch Panel System									•	•		•						
12 13 14 15 16		Belden FiberExpress UHD Frame, Splice Cassette, Pre-terminated Cassette									•	•		•						
	Belden Rack & Cabinet System	Belden ADN & ASN Series Enclosure, AWD & AWR Series Wall Mount Cabinet									•	•		•						
	Cabinet Accessories & Power Distribution	Belden Fan Unit, Shelf, and Basic Power Distribution Unit									•	•		•						
	Intelligent Patching System	Belden PatchPro® Intelligent Patching									•	•		•						
	L3 Rack Mount Switch (Access/Workgroup) No PoE	Hirschmann IT MTS 2600 Series			•	•	•			•	•	•			•	•	•			
17	L3 Rack Mount Switch (Access/Distribution) with PoE/PoE+	Hirschmann IT MTS 2700 Series	•		•					•	•	•			•		•		•	•
18	L3 Rack Mount Switch (Access/Distribution) No PoE	Hirschmann IT MTS 2800 Series				•	•			•	•	•			•					
19	L3 Rack Mount Switch (Tiny Core)	Hirschmann IT MTS 2900 Series										•								
20	L3 Rack Mount Switch (Core)	Hirschmann IT MTS 8000 Series										•								
21	Enterprise Firewall	Hirschmann IT Raven Next-Gen Firewall										•								
22 Enterprise Networking Solutions	Enterprise 802.11ax Wifi6 wireless product	Hirschmann IT Dragonfly Access point & controller	•		•						•	•	•		•	•	•		•	•
23 Industrial Cyber Security Solution	Industrial Security & Firewall	Tripwire Enterprise (with Tripwire Data Collector)								•		•								
24		Tripwire Log Center										•								
25	Rack Mount Managed Full Gigabit POE/POE+ Switch	Hi-Scom BN3049 Series				•	•	•	•						•		•			•
26 Industrial Networking Solutions	DIN-Rail Managed Full Gigabit POE/POE+ Switch	Hi-Scom BN44/48 Series				•	•	•	•						•		•			•
27	System Accessories	Hirschmann Modular Industrial Patch Panel (MIPP)	-			•	•								•		•			
	Electronic Wire and Cable	Belden Classic 8461 & 8471 & 8777 & 8773 & 8460	•					•							•	•	•	•	•	
29	Control & Instrumentation Cable	Belden Control Cable - EN 50288-7 & IEC 60502-1 & IEC 60332	•													•	•			
30	Fire Resistant Cable	Belden FR Cable - EN 50288-7 & IEC 60502-1 & BS 6387 & IEC 60331														•		•		
Industrial Cable Solutions	Data & Protocol Cable (RS485, Modbus, etc.)	Belden Protocol Cable - 3079A,3076F,9841,9842,7960A,79 61A,7962A,3082A	•			•	•		•						•		•			
32	MachFlex Cable	Belden Machflex 350,375; Machflex One (High Flex)				•	•								•		•			
33 34	Industrial Ethernet / IP Cable	Belden Industrial Ethernet (CATSe, CAT6, CAT6a, CAT7)				•	•		•						•		•			
	PV Solar Cable	Belden Solar Cable - EN 50618 H1ZZZZ-K Type							•											
35	Video Coax Cable	Belden Precision Video Cables (RG-6, RG-11, RG59)	1	•																•
36	Audio Cable	Belden Speaker, Audio, Microphone Cable			•															
37 Broadcast Connectivity Solutions	Safety & Security Cable	Belden New Gen Cables, Banana Peel Cable	1		1			•								•			•	
38	Control Systems and Lighting Cable	Belden New Gen Cables and Lighting Control Cables	•					•											•	
39	Audio & Video Connectivity	Belden Broadcast & Coaxial Connectivity		•																•
40	DAS Coax Cable	Belden DAS Coax Cable		•										•						•

### Headquarters

#### Global

Belden St. Louis 1 N. Brentwood Blvd. 15th Floor St. Louis MO 63105 US Fax:+314-854.8001 info@belden.com

#### Division Headquarters - Americas Belden - Richmond

2200 U.S. Highway 27 South Richmond, IN47374 US Phone: 765.983.5200 Toll Free: 1-800-BELDEN1 Fax: +765-983-5294

#### info@belden.com

Belden - EMEA Edisonstraat 9, Postbus 9 5928 PGVenlo, 5900 AA The Netherlands Phone:+31-773-878-555

Division Headquarters - Europe

Fax: +31-773-878-448 venlo.salesinfo@belden.com

### Division Headquarters - Asia Pacific

Belden - Hong Kong 7/F Harbour View 2 16 Science Park East Avenue Hong Kong Science Park, Shatin Hong Kong Phone: +852-2955-0128

Fax: +852-2907-6933 hongkong.sales@belden.com

### Asia Pacific

#### Australia

140 William Street, Melbourne, Victoria 3000, Phone: 1800-500-775

australia.sales@belden.com

Beijing Room 2507,25/F Jintai Building No.1 Xi Bahe Southern Road Chaoyang District Beijing People's Republic of China Phone: +86-10-6591-8801 Fax: +86-10-6591-8933 china.marketing@belden.com

#### Bengaluru

Vaswani Presidio, 6th Floor 56 Panathur Rd, New Kaverappa Layout, Kadubeesanahalli, Panathur Bengaluru, Karnataka, India 560103 Phone: +91-80-6703-7800 india.sales@belden.com

#### Gurugram

Unit No: 233-236, 2nd Floor, Spazedge, Tower B, Sohna Road, Sector 47, Gurugram Haryana 122002 Phone: +91-124-450-9999 Fax: +91-124-450-9900 india.sales@belden.com

#### Indonesia

Puri Indah Financial Tower, Sue 805 Jl. Puri Indah Raya Blok T No.8, RT.1/RW.2, Kec. Kembangan, Jakarta Barat, JAKARTA 11610 - Indonesia Phone: +62-21-5799-3466 Fax: +62-21-5748-8888 indonesia.sales@belden.com

#### Japan

Level 3, Marunouchi Nijubashi Building, 3-2-2 Marunouchi Chiyoda-ku Tokyo 100-0005 Japan Phóne: +03-6837-9613 japan.sales@belden.com

#### Malaysia

Suite 1-2, Lower Level 1 The Horizon Annexe, Avenue 7 Bangsar South, No. 8, Jalan Kerinchi 59200 Kuala Lumpur Malaysia Phone: +603-2247-1898 Fax: +603-2247-1878 malaysia.sales@belden.com

Unit 2001 to 2003, 20th Floor, Kailas Business Park, A Wing, Veersawarkar Road, Vikhroli (W) Mumbai 400079 Phone: +91-022-400-98200

india.sales@belden.com

#### Philippines

One Global Place Level 10-1 25th Street & 5th Street Bonifacio Global City, Taguig Philippines Phone: +632-3224-2029 philippines.sales@belden.com

Plot No D-228/1 Chakan MIDC Phase II Village Bhamboli, TalKhed District-Pune, Maharashtra India 410507 Phone: +91-21-3563-8791 Fax: +91-21-3563-8790 india.sales@belden.com

Shanghai Unit 301, No. 19 Building 1515 Gu Mei Road Caohejing High-Tech Park Shanghai 200233 People's Republic of China Phone: +86-21-3418-2688 Fax: +86-21-5445-2366/77 china.marketing@belden.com

#### Shenzhen

Rm 809, 8/F, New World Center No.6009 Yitian Road Fu Tian District Shenzhen 518035 People's Republic of China Phone: +86-755-2398-0778 Fax: +86-755-2398 0578

#### Singapore

83 Clemenceau Avenue #07-01/04 UE Square Singapore 239920 Phone: +65-6879-9800 Fax: +65-6567-9656 singapore.sales@belden.com

#### South Korea

505 KD Tower, Wangsimni-ro 125, Seongdong-gu, Seoul, Republic of Korea Fax: +02-6964-7192 korea.sales@belden.com

#### Suzhou

333 Yanhu Road, Huaqiao Town Kunshan City, Jiangsu Province Suzhou 215332 Jiangsu Province People's Republic of China Phone: +86-512-5796-1688 Fax: +86-512-5796-1222 china.marketing@belden.com

#### Thailand

No. 3 Promphan 3 Building UNIT 1725,17th Floor, Soi Lad Phrao 3 Chomphon Sub-District, Chatuchak District Bangkok 10900 Thailand Phone: +66-2026-0525 Fax: +66-2024-6767 thailand.sales@belend.com

#### Vietnam

S007, Floor 5, CJ Building, 2bis-4-6 Le Thanh Ton street, Ben Nghe ward, District 1, Ho Chi Minh City, Vietnam Phone: +84 28 6255 6800 Fax: +84 28 6255 6802 vietnam.sales@belden.com

