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**Issue 6, January 2010**

## **Belden's new Adaptive Enclosure Heat Containment System**

Inefficient cooling within the Data Center has become an increasing issue for the Data Center manager, as it wastes increasing amounts of power and money. Now Belden has introduced a new Adaptive Enclosure Heat Containment (AEHC) System that removes the inefficiencies often seen today. By ensuring the entire room is normalized with just the right amount of cold air, a wasteful oversupply of cooling can be avoided.

In the new AEHC system, a pressure reading is made by a sensor inside the enclosure plenum. This modulates the rotational speed of the fans in the two cartridges mounted on top of the enclosure. The speed is varied so that they pull out exactly the correct amount of air from the enclosure and send it back to the air conditioner return via a ceiling plenum.

### **Avoiding the oversupply of cold air**

The process of cooling enclosures in a Data Center today wastes excessive amounts of energy. This is largely due to the oversupply of cold air by computer room air conditioner (CRAC) units attempting to compensate inefficiency in the enclosure cooling process. A recent study of 19 large computer rooms found that, on average, the amount of cold air supplied to a Data Center room is 2.6 times the amount of cold air that is actually consumed by the IT load. The CRAC is oversupplying the room with cold air to overcome both bypass leakage and the effects of hot/cold mixing. The result is a significant waste of energy and money.

Because of its innovative heat containment design, the new Belden AEHC system overcomes these problems. Since it completely separates the hot and cold sides of operations, the room will be normalized with cool air which is not mixed with exhaust heat from the enclosure. The bypass problem is eliminated, too. So there is no need to oversupply cold air to the room.

### **Enhanced design freedom**

The physical position of the CRAC unit and its proximity to the enclosures are no longer a concern. This simplifies the challenge of data room infrastructure design. Cool air can be fed to the computer room via a raised floor or an overhead duct which enhances your freedom of infrastructure design.

When designing a totally new Data Center with the AEHC system, it is now possible to install bigger and fewer CRAC units, instead of relying on many smaller units which are less efficient. And when retrofitting an existing room, the same quantity -- and type -- of cooling equipment can be used as currently installed. In either scenario, Belden's advanced management software will make a significant contribution by providing better control of the IT environment through real time assessment of enclosure cooling load or demand. It is also possible to raise the temperature of the cooling air supplied to enclosures to be closer to the ASHRAE recommended upper limit, saving on cooling costs.

For more information on how the AEHC system can save you both energy and money, download the product Bulletin below.

- [NP 300 The Belden® Adaptive Enclosure Heat Containment Cooling Distribution System \(AEHC\)](#)

## Belden High Density Patch Panel System



### Belden FiberExpress® Ultra - High Density Patch Panel System

There is an increased use of optical fiber to support large volumes of high-speed data transmission and data-intensive applications in Data Centers, corporate and campus network backbones, and other complex IT architectures. So CIOs and IT network administrators are looking for higher density, cost-effective solutions that are scalable, future-proofed, and easy to deploy and manage. Because of the sheer volume of data and the mission-critical applications supported by fiber, downtime is simply not an option, so utmost reliability is paramount.

Belden has developed its FiberExpress® Ultra Patch Panel System to respond to these urgent marketplace needs. FiberExpress Ultra has been built around three core concepts:

- Ultra high density
- Ultra easy installation and maintenance
- Ultra flexibility and manageability

The FiberExpress Ultra Patch Panel System offers a number of key benefits. These include ultra high connection density, while facilitating cable routing and patch cord management and seamless integration with all Belden FiberExpress cables, connectors and management components. This addresses the scalability issue in a variety of markets where future fiber build-outs are likely to occur.

- [NP284 Belden's Innovative Rack-mount and Wall-mount Patch Panel System Signals New Era of Optical Fiber Patching Reliability and Ease of Use](#)



### **FiberExpress® Ultra Cassettes**

Belden FiberExpress Ultra Cassettes are designed specifically for use with the Belden FiberExpress Ultra Patch Panel System – the highest density, easiest to install and manage fiber optic patching solution in the industry today.

- [NP285 FiberExpressUltra Cassettes](#)



### **FiberExpress® Ultra Bezels and Frames**

Belden's easy-to-use connector bezels and frames provide ultimate design flexibility in addition to easy installation and maintenance. As the basic building block of the FiberExpress Ultra System, the connector bezels provide the ultimate in design flexibility with availability in a wide variety of connector types, in both multimode and single-mode versions:

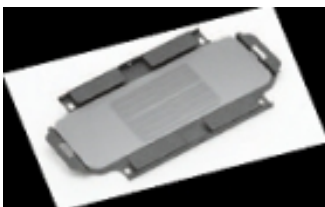
- Multimode versions include: ST, SC Simplex, SC Duplex, LC Duplex, MT-RJ and FC Simplex connector types
- Single-mode versions include: ST, SC Simplex, SC Duplex, SC APC Simplex, SC APC Duplex, LC Duplex, LC APC Duplex, MT-RJ and FC Simplex connector types

SC and LC adapters are available in Multimode TIA/EIA color code recommendations:

- OM1 (62.5 micron multimode) in Beige
- OM2 (50 micron multimode) in Black
- OM3 (50 micron Laser Optimized multimode) in Aqua

Belden also offers a full complement of FiberExpress Ultra accessories designed to help users successfully implement the Patch Panel System, as well as quickly and easily perform required maintenance, cable management, and moves, adds and changes.

- [NP287 FiberExpressUltra Patch Panel Frames & Bezels](#)



### **FiberExpress® Ultra Splice Tray Kits**

Splice Tray Kits provide the mechanical support and fiber protection needed to facilitate fiber splicing in FiberExpress Ultra Patch Panels and Splice Enclosures.

- [NP286 FiberExpressUltra Splice Trays](#)

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## Contact Details



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