

Inside Superior Essex  
How We Deliver  
Innovations

EVERYWHERE YOU LIVE AND WORK™



[SuperiorEssex.com](http://SuperiorEssex.com)



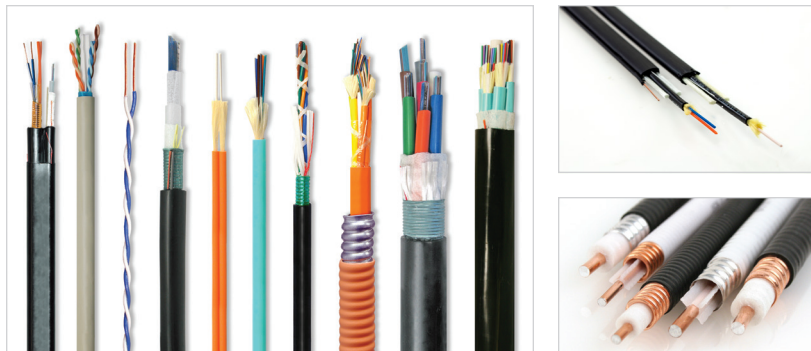
"The biggest challenge in our industry is pushing to develop new products that meet the needs of our community and customers. Our goal is to work together to **produce new and innovative results** based upon the collaboration between our engineers, line operators, and lab technicians. We want to ensure that the development of our products translates into a **solution for industry demands.**"

CHRISTIN FORD

Laboratory Manager, Product Development Center

# Providing Innovative Products To Meet Industry Demands

Superior Essex® provides the gateway for communication across multiple applications. Whether you're dialing a number on your cell phone, surfing the internet, streaming videos, or turning on a light switch, you are using Superior Essex products.



The growing demand for faster data and information and the requirement for networks to be flexible and last longer is a continuous challenge in the industry. Superior Essex is persistent in developing new products to ensure that you will meet the demands for better performance, reliability, and flexibility by giving you the next generation of products that are built upon years of expertise, knowledge, and technology.

Our broad offering includes premises optical fiber and copper cables, Outside Plant (OSP) cables, Fiber-to-the-Premises (FTTP) closures and enclosures, Fire Alarm and Security (FAS) cables and Wireless cables, connectors, and accessories.

Superior Essex is literally [Everywhere You Live and Work](#).

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# The Science of Cable Design

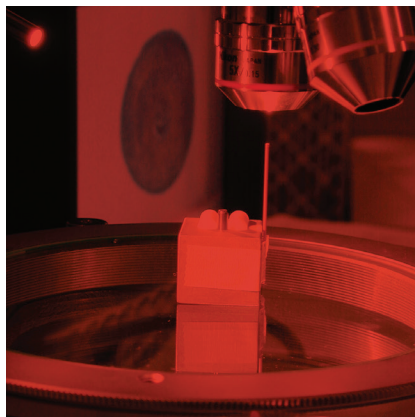


"We are a global team that includes the Product Development Center in Kennesaw, engineering at the plants, and LS Cable & System engineers and scientists. Our collective expertise is world-class for our industry."

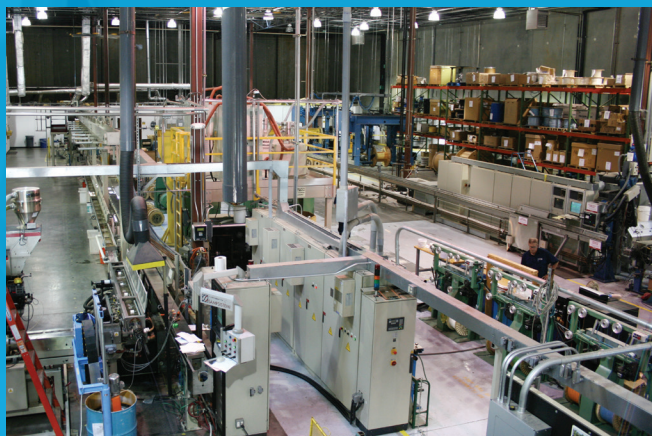
**CHRIS MCNUTT**  
Director, Product Development

High performance cable is more than an example of manufacturing precision; it is an outcome of intelligent design. Creating advanced cable designs requires an in-depth understanding of materials science, physics, and mechanical engineering. The development team is in constant pursuit of exceeding performance standards of existing cable designs as well as creating the new cable designs of tomorrow. Our engineering work has resulted in dozens of patent awards since 2009.

The Superior Essex Product Development Center (PDC) is dedicated to the design and testing of new products, making possible the introduction of hundreds of new cable designs and material innovations over the past 15 years. Our engineers and technicians use the latest materials performance measurement equipment to examine the physical properties of both raw materials and finished products. From electrical performance, to noise tolerance, to operation under environmental extremes, testing all products beyond specifications is what we do. We understand the limitations of materials, so we are able to design better products and raise the bar for performance standards.





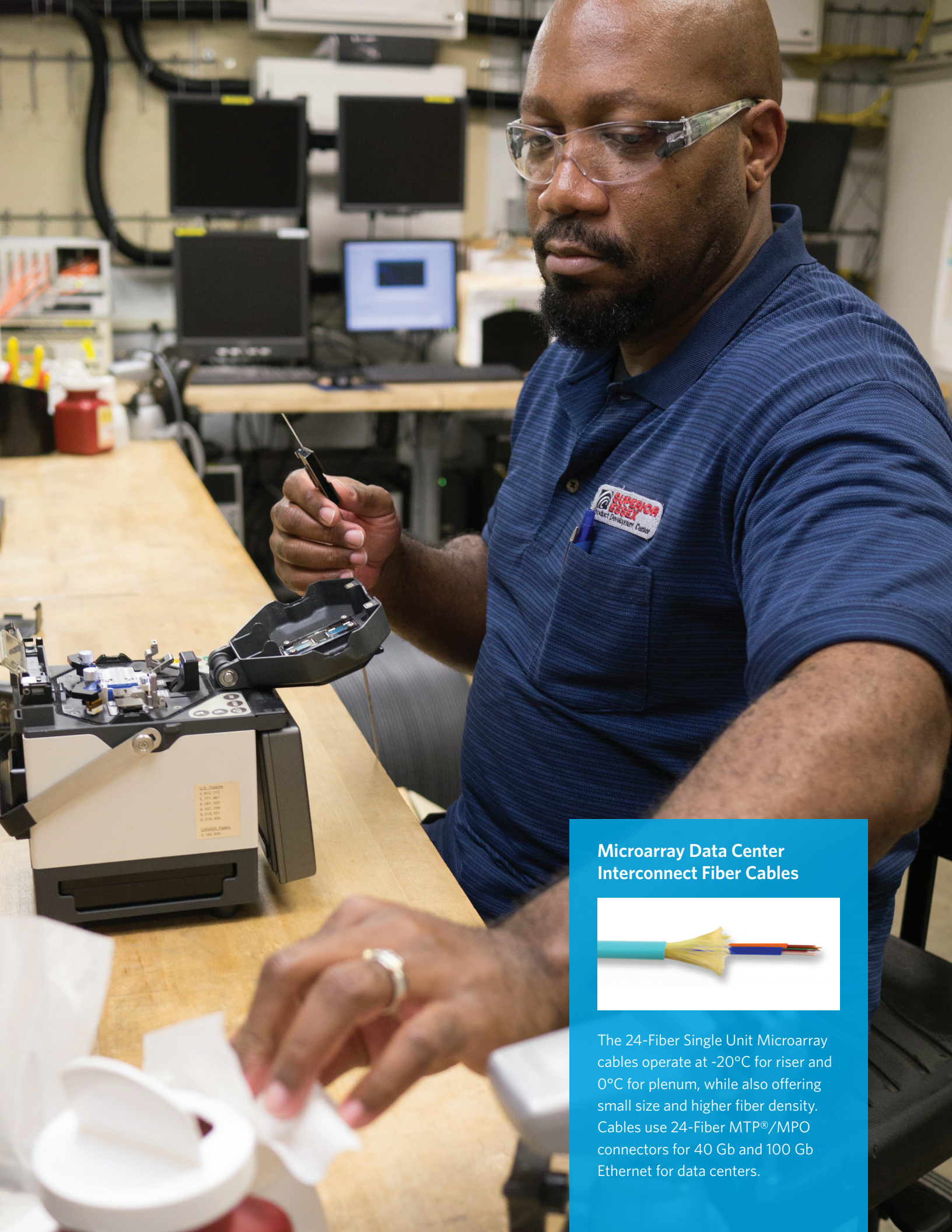


## Raising the Bar for Consistency, Quality, and Performance

The Product Development Center is a 38,000 square foot facility that includes design laboratories, fully-operational testing equipment, and **the people** that are behind our product designs. Our **team** of engineers, scientists and technicians has a combined **200+ years of experience, creativity, and knowledge** in developing new products and delivering innovations.







## Microarray Data Center Interconnect Fiber Cables



The 24-Fiber Single Unit Microarray cables operate at -20°C for riser and 0°C for plenum, while also offering small size and higher fiber density. Cables use 24-Fiber MTP®/MPO connectors for 40 Gb and 100 Gb Ethernet for data centers.



# Meeting and Exceeding Industry Requirements

Not only are our products designed to meet the requirements of today's standards, they will also exceed those expectations. We test our products well beyond industry requirements, providing you with products that perform above the standards. Tests include:

- Heat and humidity exposure and performance beyond normal requirements
- Extended sunlight exposure testing of jacket materials
- High frequency Balun-less testing of category cables above standard frequency ranges

## The PDC also offers:

- A fiber optic cable testing network with more than 1,000 fiber optic channels for measuring product parameters in simulated environments
- A full fabrication lab with capabilities ranging from advanced Computer Numerical Control (CNC) cutting technologies to 3D printing
- Cable tensile test equipment can test to greater than 200% of product specification
- Full materials analysis suite that is utilized to fingerprint and catalog materials

## A History of Innovations and Industry Firsts

First all-plastic drop wire	1963
First gel-filled OSP cable	1968
First cellular insulated OSP cable	1973
First dry buried drop wire	2000
First CAT 6+ cable without a cross-web filler	2002
First to offer ColorTip® technology	2003
First PFM™ gel in loose tube cables	2003
First Reel-in-a-Box with QuickCount® marking system	2005
First indoor/outdoor tight buffer water-blocked cable with UL sunlight resistance	2006
First CAT 6A UTP cable with 3 dB alien crosstalk margin	2009
First to offer CableID® alpha numeric coding	2010
Introduction of DAS cables product line	2012
Grand opening of the energy manufacturing facility	2012
Introduction of nCompass structured cabling systems	2013

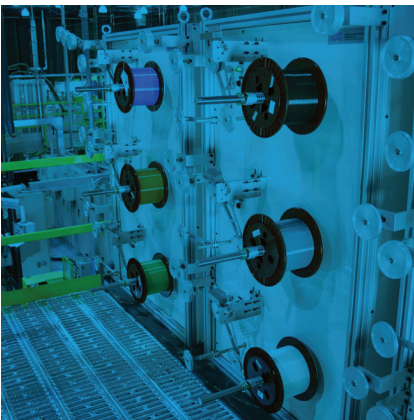
# Consistency and Performance Through Leading-Edge Technology



Through each step of the manufacturing process, Superior Essex products are monitored and tested to ensure that the finished product meets or exceeds industry standards.

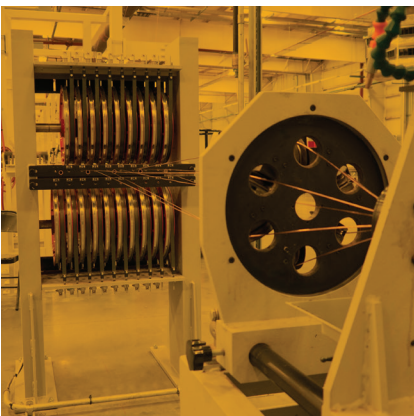
## Communications Copper Cable Manufacturing

Through the use of advanced quality control processes and modern technology, our copper cable products are manufactured with precision. From the first step of insulating the conductor, to twinning and jacketing, and to the final testing, all of our products undergo continuous scrutiny to make sure that products bear consistency and meet all testing requirements.



## Fiber Cable Manufacturing

The fiber cable manufacturing facility contains the latest and most efficient machinery, control processes and testing equipment. Every fiber optic strand at all steps of the manufacturing process maintains 100% traceability. The traceability process allows us to monitor the performance characteristics of the fiber before, during and after production. At final testing, every optical fiber is verified against strict attenuation limits. It is an approach that assures customers that every cable is thoroughly tested and verified for quality.







"The biggest kick I get out of the end of the day is to be able to go up to these engineers and say, 'You know that cable you made? It's perfect.' I think it is a good representation of the efforts that everyone has put into making this a world-class facility."

LEVON SHADE  
Quality Assurance Manager





No matter what requirements you have,  
Superior Essex has the **solution** for your  
network infrastructure needs.





# The Choice of Leading Enterprises

Data Centers

Education

Enterprise

Government

Healthcare

Utilities

Industrial &  
Manufacturing

What if you had one cable supplier that could provide a comprehensive solution for your unique network requirements?

Evolving technology and increasing demands for better data transmission has put pressure on the industry to provide you with everything you need when you need it. When it comes to data centers, the highest level of performance and reliability is crucial, along with high-density solutions that can support ever-changing technology. For medical, financial services, gaming and government facilities it is the demand for better security. Academic and other multi-building campuses need the flexibility that high-bandwidth, multimedia technologies offer.

No matter what requirements you have, Superior Essex has the solution for your network infrastructure needs.



"The biggest change in the Communications industry is the evolution of the telecommunications rooms to large computer rooms, and finally to data centers. The majority of that change is the mix of products installed. We have also moved from a heavy copper base to a mix of copper and fiber in a commercial space to a 90% mix of fiber in the data center. In my 20 years in the industry, we have moved from CAT 5 to CAT 6A, and now CAT 8 is just around the corner."

BRIAN ENSIGN, RCDD, NTS, OSP, RTPM, CSI  
Director of Strategic Accounts

Arena at Gwinnett Center  
Atlantic City Convention Center  
Daytona International Speedway  
Fidelity  
JetBlue  
Lockheed Martin  
NBC  
Stanford University  
University of Washington  
USAA

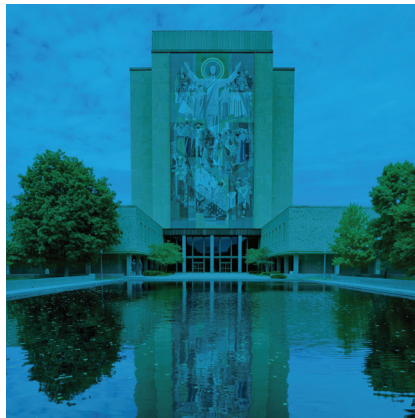
# Meeting **Your** Specialized Needs

To keep pace with the demands of evolving technology, Superior Essex provides the broadest portfolio of communications products that exceed typical performance standards. You can rely on our innovative solutions to keep pace with industry demands and your specialized needs, whether you are a service provider, leading enterprise, university, hospital, military facility, or other business.



## Rockefeller Center

Superior Essex supplied DAS cables and connectors for several phases of this multi-building project. DAS LHF-12DP plenum cables, and N Type and DIN Connectors were installed to provide the wireless network with RF, attenuation, and PIM performance.



## University of Notre Dame

The main cross-connect, located in the basement of Hesburgh Library, utilizes high-performance fiber optic cables that connect seven intermediate cross-connects strategically located in outlying buildings. The selection of Superior Essex indoor/outdoor fiber cable will support both current needs and future growth of the campus.



## John. F. Kennedy Space Center

To ensure proper and direct communication from the launch pads to the Operation Support Building (OSB), Superior Essex Cobra CAT 5e+ and TeraGain® 50 micron fiber cables were installed for the Local Area Network, along with outside plant loose tube fiber and copper cables for the exterior portion of the network.





## **Distributed Antenna System (DAS) Cables**

We specialize in state-of-the-art cable solutions for the entire wireless HetNet—from traditional coaxial cables to hybrid fiber optic and power cables, we have a cable solution for every technology, frequency, cell size, and network architecture. As the world migrates to wireless solutions, we provide the wire that makes it possible.





## nCompass CAT 6A+ U/UTP Copper Solution

The CAT 6A+ U/UTP copper solution combines the industry-leading, small diameter Superior Essex **10Gain® XP** UTP cabling and Ortronics® Clarity® 6A connectivity, offering excellent channel performance that exceeds industry standards.



# nCompass Structured Cabling Systems

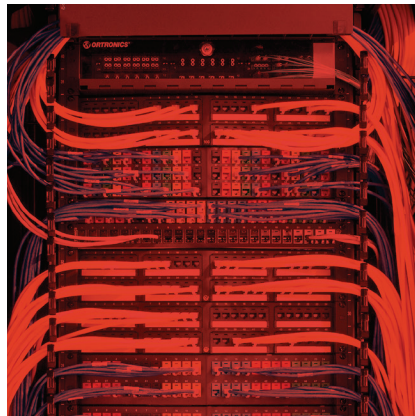
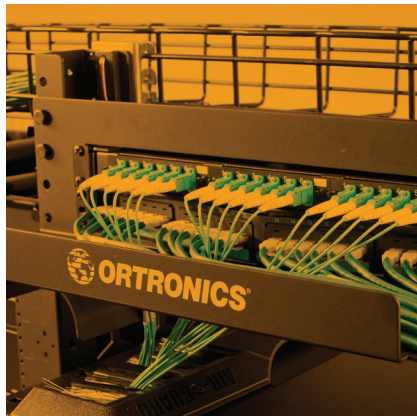
Fairbanks Memorial Hospital

Orlando VA Medical Center

University of New Mexico

Washington Metropolitan  
Area Transit Authority

Overcome your challenges of the ever-changing technology landscape with a full suite of high-performing optical fiber and copper cabling systems that are built upon innovation and expertise. With any nCompass system you receive extensive professional support for the life of your network, energy efficiency that provides lower operating costs and optimal design and functionality, reliable products that keep performance high and downtime low, and flexibility in your network for future growth.



## CitiMortgage

CitiMortgage is one of the mortgage divisions of Citigroup with a data center inside the Progress Point Industrial Park campus. Continual nCompass add-ons to the existing data center have been implemented, ensuring continued network performance in the ever-changing technology landscape.

## Visa

Visa renovated their east coast data center facility. The additional space called for add-ons which included the nCompass structured cabling system and components. These new add-ons have enabled Visa to continue connecting consumers, businesses, banks, and governments in more than 200 countries and territories.

## Creighton University

The newly constructed Creighton University Championship Center, a 43,000 square foot building, was designed to support the growing athletic department. The project included a comprehensive nCompass structured cabling solution that provides support, efficiency, reliability, and flexibility for the network.

# Looking for Resources and Customer Service Support?



"It seems all of our customers are feeling the pressure to do more, quicker, and at a lower cost. Deadlines are tight and unforgiving. When they need answers or assistance, sometimes delay of even a few hours can jeopardize a project.

The Superior Essex technical support team strives to provide customers with excellence and responsiveness, and I'm pleased to say that the company is very supportive of our efforts. I've never seen Superior Essex be unwilling to provide the resources my team needs to support a customer. A common highlight of my day is hearing a customer say 'Wow, thanks for the quick response!'"

TIM WEST, RCDD  
Director of Engineering Services

When the clock is ticking and you need information or assistance with your current project, we have several options to ensure that you get what you need when you need it.

## Technical and Sales Resources

In response to the growing complexity of specifying proper infrastructure for new data applications, we know that you need expertise, advice, and consultation on cable product types. We staff telecommunications specialists, such as certified engineers and sales support, that provide you with comprehensive technical assistance.

## Social Media



Join our LinkedIn Group to connect with the experts, follow us on Twitter for news and updates, watch us on YouTube to see new products and technical guidelines, or sign up for our newsletter to receive information automatically. Either way, you will have up-to-date information at your fingertips, as well as a way to get in touch with us.





"Our customers expect us to be subject matter experts on our products and evolving technologies. Superior Essex provides in-depth and hands-on product training to leverage our knowledge and provide solutions that meet and exceed customer expectations. We also use social media channels to expand our customer or potential customer reach, while also providing a great space for one-on-one interaction. Today, anyone that is part of our LinkedIn Group is invited to participate in lively discussions on product-related topics such as designs, applications, installation issues, and tech support."

**TERRI BROWN**  
Product Training and Social Media

# Product Breadth

Superior Essex maintains its leadership position through continual enhancement and expansion of its communications product portfolio. From high-performance copper cables to innovative fiber optic cables in thousands of variations, the Superior Essex product line covers the broadest spectrum of communications cable applications available. A portion of our offering is shown here:

## Communications

- Premises Cable

## Premises Fiber

*Tight Buffer, Ribbon, Loose Tube*

## Composites

Premises Copper

CAT 6A through CAT 3, Coaxial,  
Fire Alarm and Security

## Central Office Copper

- Outside Plant Cable

## OSP Fiber

## Composites

RDUP/RUS OSP Copper

Bell OSP Copper

Canadian OSP Copper

## OSP Copper Wire

- Fiber-to-the-Premises (FTTP)

## Closures and Accessories

- Wireless

## RF Feeder Cables and Jumpers

## RF Feeder Connectors

## DAS Cables and Jumpers

## DAS Connectors

## Wireless Accessories



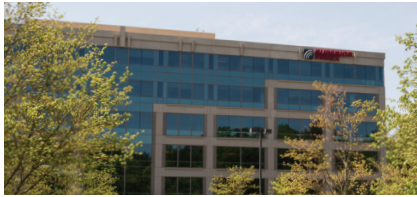
“With the proliferation of mobile devices, cabling system architectures have had to **grow, adjust** and **accommodate** these devices. Data center, servers, Ethernet switches and network attached storage devices have had to increase speed, through-put, and storage capacity to meet the demand. Optical fiber cables play a preeminent role in this growth, not only in their capacity to carry incredible amounts of information, but in their small, unobtrusive size, allowing for very dense cabling infrastructures.

So, while we might be in a ‘wireless world,’ optical fiber cables provide the infrastructure to make mobile devices **feasible, economical** and **responsive.**”



DR. PAUL E. NEVEUX, JR.  
Director of Global Product Management, Premises Fiber





Corporate Headquarters | Atlanta, GA



Product Development Center | Kennesaw, GA



Brownwood Communications Plant | Brownwood, TX



Hoisington Communications Plant | Hoisington, KS



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