

Powered Fiber Cable System

Customer

Jade Communications Inc

Executive summary

Jade Communications Inc, a southeastern USA leader in cabling communications systems engineering, worked with CommScope's Powered Fiber Cable System for a golf course camera project. 36 high definition security cameras were to be installed on the golf course at distances up to 10,700 feet from the power source. Utilizing the Powered Fiber Cable System saved \$142k USD on the overall bid, versus traditional means of powering/communicating with the cameras.

Project scope

Jade had initially designed a system using traditional means of running long distance AC power and separate fiber optic cables to each of the 18 poles where cameras were desired to be installed. Two cameras would be installed on each pole.

The cameras were powered via Power-Over-Ethernet (IEEE 802.af) standard. A rough sketch of the layout is shown below.

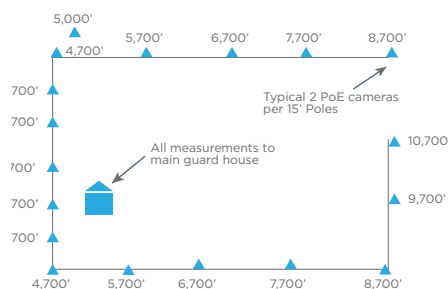
Materials including conduit, transformers and rectifiers at each pole, electrical protection, media conversion, etc. to connect the cameras came to a total cost of \$616k USD. Adding in labor, including electrical contracting and trenching came to a total system cost of \$981k USD.

(Note: The costs of cameras and camera equipment are not included in the cost estimates).

Working with CommScope, Jade was able to redesign the proposed system by utilizing CommScope's Powered Fiber Cable System.



Total system including NEC Class II compliant power supply, Powered Fiber Cables, 36 PoE Extenders, labor and other materials including trenching, conduit, handholds, etc. came to a total system cost of \$839k USD. Using this design Jade was able to save \$142k USD, a 14.5% savings over the traditional method of powering and communicating with the cameras.



Powered Fiber Cable System

The Powered Fiber Cable System combines hybrid optical fiber and copper cabling plus electronics to provide a complete indoor/outdoor solution for both powering and communicating with HD Cameras, Wi-Fi AP's, small cells, and other PoE devices. It allows extending PoE from the standard 100 meters up to distances of 3000 meters or more.

The system provides both remote electrical power and gigabit communications via hybrid optical fiber cabling, incorporates three levels of electrical protection, media conversion for converting from optical fiber to CAT cabling, and DC/DC electrical conversion to automatically correct for voltage drop over long distances.

The system is comprised of a central 48V DC, NEC Class II and SELV compliant power supply, Powered Fiber Cable, and PoE Extender.



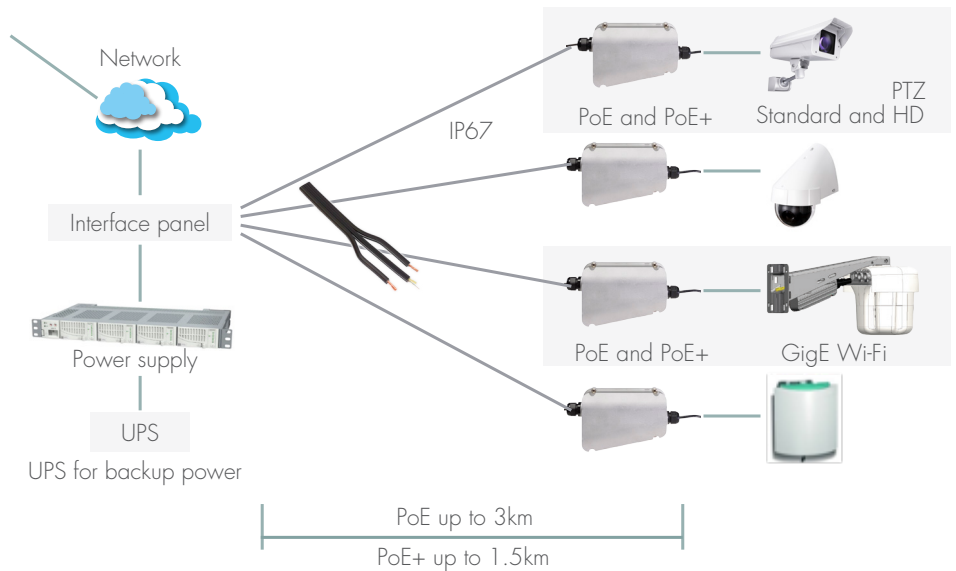
The Powered Fiber Cable contains optical fiber and copper conductors to deliver gigabit communications and electrical power under one sheath in a rapid access cable format.



The PoE Extender device terminates the Powered Fiber Cable in a weather proof housing, and provides a single RJ45 jack output for PoE/PoE+ output.



A combiner panel is available for proper hybrid cable management at the head end.



Everyone communicates. It's the essence of the human experience. *How* we communicate is evolving. Technology is reshaping the way we live, learn and thrive. The epicenter of this transformation is the network—our passion. Our experts are rethinking the purpose, role and usage of networks to help our customers increase bandwidth, expand capacity, enhance efficiency, speed deployment and simplify migration. From remote cell sites to massive sports arenas, from busy airports to state-of-the-art data centers—we provide the essential expertise and vital infrastructure your business needs to succeed. The world's most advanced networks rely on CommScope connectivity.



commscope.com

Visit our website or contact your local CommScope representative for more information.

© 2017 CommScope, Inc. All rights reserved.

All trademarks identified by ® or ™ are registered trademarks or trademarks, respectively, of CommScope, Inc. This document is for planning purposes only and is not intended to modify or supplement any specifications or warranties relating to CommScope products or services. CommScope is committed to the highest standards of business integrity and environmental sustainability, with a number of CommScope's facilities across the globe certified in accordance with international standards, including ISO 9001, TL 9000, and ISO 14001. Further information regarding CommScope's commitment can be found at www.commscope.com/About-Us/Corporate-Responsibility-and-Sustainability.

CU-111185-EN (03/17)