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Remee
WIRE & CABLE

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INTELLIGENT TRANSPORTATION SYSTEMS

Case Study

Activate™ by Remee Enables the Industry's First Fiber Solution for Intersection Detection and Actuation for GRIDSMART®

The GRIDSMART SOLUTION, part of Cubic Transportation Systems, adopted the *Activate™ by Remee* Copper/Fiber Composite Cable for use in its highly advanced SMARTMOUNT2025 traffic inter-section control system. The GRIDSMART SOLUTION provides state-of-the-art traffic management, allowing municipalities and other users to upgrade their systems from existing buried inductive loops or use of PoE cables to the camera.



THE PROBLEM:

Distance & Interference

The GRIDSMART SOLUTION used a Cat 5e PoE cable between their bell camera and the processor in the traffic control cabinet. While this PoE cable provided a means to deliver data and power the camera, a Category cable can only run 328 feet before a repeater is required. The repeaters were typically located below ground, making them susceptible to water penetration issues, and these were points of vulnerability for signal performance. The Category cable was also susceptible to EMI with power lines that were often positioned near traffic intersections, radio signals and lightning.



THE SOLUTION:

Activate™ by Remee PFCS

Cubic Transportation Systems looked at several options for the GRIDSMART Solution and chose *Activate™ by Remee* with its Powered Fiber Copper Solution (PFCS) to cable their best-in-class system. This composite cable allowed The GRIDSMART System to run data at longer lengths and eliminate the use of repeaters. Similar to the Cat 5e, the *Activate™ by Remee* cable required only one cable pull, saving installation time.



The cable solution for SMARTMOUNT2025 included four 3.0mm aramid reinforced tubes of OM3 multimode fiber - two fibers carrying the signals and two for redundancy. In addition, two 16 AWG copper conductors were used to power the camera and were cabled, along with the fibers, in an overall composite construction. This rugged cable was designed to withstand the rigors of outdoor use.



“Activate™ by Remee Provided a Solution for Installations with Distance, Interference and Performance Issues.”

- Tracy Nelson, Hardware
Engineering Director,
CUBIC | GRIDSMART

Continued

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Activate™ by Remeefiber optic cable interconnected the processor with the bell camera.



Activate™ by Remeefiber optic cable enabled The GRIDSMT SOLUTION to offer the industry's first fiber solution for intersection detection and actuation.

The Benefits of Activate™ by Remeefiber optic cable

The benefits that the GRIDSMT SOLUTION achieved by using *Activate™ by Remeefiber optic cable* composite cable for SMARTMOUNT2025 included:

- More reliable communication
- Elimination of noise interference and EMI from nearby power lines, radio signals, lightning, and even cosmic noise
- Fewer points of failure than the traditional Ethernet system
- Runs up to 2,000 feet without repeaters, requiring less space

Why Remeefiber optic cable?

Remeefiber optic cable was chosen to supply SmartMount 2025 systems because:

- The GRIDSMT SOLUTION management team was comfortable with Remeefiber optic cable's experience and expertise in pairing copper and fiber
- Remeefiber optic cable's response time and feedback was very quick
- Lead time was very good and deliveries have been on time
- The GRIDSMT SOLUTION management team felt that Remeefiber optic cable's philosophies and culture were in sync with theirs
- The GRIDSMT SOLUTION management team also had positive experience working with Remeefiber optic cable's distributor
- Remeefiber optic cable could design and manufacture a custom cable to meet the specific application criteria

About GRIDSMT SOLUTION

Cubic Transportation Systems prides itself on using state-of-the-art equipment and components for its SMARTMOUNT2025 system. This best-in-class solution features advanced image processing, computer vision modeling and machine learning, all with a single camera solution.

One of the visions behind the GRIDSMT SOLUTION is to improve one billion lives. The company is well on its way to achieving this goal with over 300 billion vehicles monitored in 29 countries and 1300 communities, including 49 states in the U.S.

The GRIDSMT SOLUTION can easily claim that it...

- Delivers real-time data to traffic professionals
- Makes traffic safer and more efficient
- Improves situational awareness and reduces urban traffic congestion
- Optimizes the flow of traffic and people through intersections

For more information about the GRIDSMT SOLUTION, go to www.gridsmart.com

“ We were very comfortable with Remeefiber optic cable's experience in pairing copper and fiber under one jacket.”

- Matt King, Senior Product Operations Manager, CUBIC | GRIDSMT SOLUTION

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