General Motors

General Motors Breeds Smart Crash Test Dummies

Key Benefits

- Enables new data sensors to send real time down a flexible tether line
- Solid state, low power to meet repeated extreme crash shock challenges
- Solves issues for researches requiring more precise data result

Meeting Evolving Industry Safety Needs

In today's science-assisted world, we take a lot of things for granted. Our food is instant, our music is digital, our mail is electronic and our phones are wireless. Much of the technology we have become accustomed to was little more than science fiction only a few decades ago. And amid all the advanced gadgetry we use day-in and day-out are another kind of technology most of us never see or touch or experience in any tangible way. Technology that is so advanced it's virtually transparent. These devices help ensure all of the products we interact with are safe. GM has leveraged the technology of Enable-IT Ethernet Extenders to exceed the challenges of harnessing vital data provided in the live sensors to design superior products to protect us; products that we take for granted and rely on to keep us as safe as possible. The Motor Vehicle fatality rate has dropped about 90 percent since 1922, even with millions more vehicles on the road today. That's largely due to the ongoing pursuit of higher levels of safety through engineering. Any of us who have ever had the harrowing experience of walking away from an automobile accident likely have a GM engineered dummy and the Enable-IT Ethernet Extenders to thank.

Improving Performance and Quality of Data

Before using the Enable-IT Ethernet Extension solutions, GM's design and safety engineers had to rely on mechanical sensors for capturing crash test results, however these results were static and not acquired as crashes occurred. The Enable-IT Ethernet Extension kits revolutionized the dynamic crash results to record them in real-time as they happened. By adding thousands of feet of standard CAT5e cabling to the existing car tethers and installing an Enable-IT 860 LRE kit on each end, the engineers were able to use network smart sensors and more sophisticated equipment inside the test crash cars to capture precise data. They were also able to place smaller sensors in locations previously unattainable with older mechanical sensors. The type and amount of new data has dramatically helped designers and engineers to make critical adjustments to car designs for better crash performance and our safety.

General Motors (Continued)

Reducing costs for expendable equipment

A key benefit of using the Enable-IT Ethernet Extension technology for high speed, real-time data capture is the replacement of bulky expendable mechanical sensors that are expensive to replace with that of miniature network smart micro digital sensors that are far superior to crash survivability, cheaper to replace, and more numerous for data capture. The weight savings of being able to remove the old equipment and more accurately placing real-world loads into crash test vehicles has increased the quality of data captured and lowered the green footprint of the recyclable waste - post crash test.

Creating New Value with a High-Performance Extended LAN Solution

Someday, on-screen computer "dummies" may be replaced by virtual humans, with hearts, lungs and all the other vital organs. But it's not likely that those electronic scenarios will replace the real thing in the near future. Crash dummies will continue to provide GM researchers and others with remarkable insight and intelligence about occupant crash protection for many years to come. Enable-IT Ethernet Extenders will be there to provide the real-time data to the designers and engineers who can then design cars which we rely on to ultimately keep us safe.

Solutions Used

- Enable-IT 860 LRE Kit - 100Mbps Full Duplex Ethernet Extender Kit up to 6,000 feet