



Custom Zip-Mesh (AL) for Defense Contractor

PROBLEM:

A U.S. department of defense contractor needed to service and repair RF communication cables in a legacy system they produced. This contractor had won a contract to maintain and support the system past the original service lifetime, which included repairs and upgrades to the wiring & cables. In certain areas the original cable shielding was getting damaged and raising concerns over its longevity and performance.

REQUIREMENTS:

The cabling on this system needed to be repaired or fixed, but the original scope did not include a full replacement. Additionally, it did not include the time and effort required to remove and reinstall the cables and perform a full system re-verification. The ideal solution would be able to be applied to the cables in place without disconnecting the ends.

Additionally, this legacy system had strict rules and limits on what materials were acceptable to use. Any proposed shielding materials needed to be on the original bill of materials or be approved by the department of defense.



SOLUTION:

Custom Zip-Mesh (AL)

Zippertubing was able to modify their existing Zip-Mesh (AL) product to incorporate a single layer aluminum inner shield, instead of the PET backed standard shield. This aluminum alloy and the wire used to knit the mesh were already approved metals for the system and no waivers were needed. The combination of foil and mesh also provided a level of shielding attenuation equivalent to the original cable shielding that was used on the defense system.

CONCLUSION:

The custom Zip-Mesh (AL) product was thin enough and flexible enough to be installed onto the existing harness, in-place, without needing to de-mate the connectors. The customer was happy they would not need to request any material waivers or increase their scope for this portion of the contract. With the deteriorating shielding fully repaired, they could confidently report to their military customer that the cables would continue to perform well into the future of the program.