

SPE: The Future of Industrial Ethernet



Ethernet is serving many modern industrial and commercial applications like smart lighting, intelligent building, IP based security systems, and factory automation with flawless data transfer capacity and current handling capabilities. Digital connectivity and modularity in industries are enabling flexible production.

What is SPE?

Single Pair Ethernet or SPE is an advanced and much simpler form of Ethernet connectivity. It replaces the traditional co-axial twisted cable lines. SPE narrows down the earlier two or four pairs of cables to just a single pair, saving space and enabling a comprehensive array of standardized communication protocols. SPE can rely on the existing architectures and extend connection up to 1000 meters with PoDL (Power over Data Link) capability guaranteeing maximum flexibility. The key support for next generation of automation technologies like IIoT and [Industry 4.0](#) is simplified with SPE.

Amphenol has industry-leading technical expertise in manufacturing ruggedized & sealed high speed data interconnect products in Industrial markets. We are a key supplier of Single Pair Ethernet solutions used in both industrial and automotive markets.

Benefits of SPE Connectors

Amphenol's [Single Pair Ethernet](#) (SPE) connectors bring direct Ethernet connectivity to peripheral devices like sensors, actuators, and vision system cameras that operate at speeds up to 1Gb/s and delivers PoDL (Power over Data Link) up to 50W. SPE eliminates the need for costly and complex Fieldbus protocols and conversion gateways by simplifying and standardizing existing and new industrial network systems.

These IEC63171-6 compliant [industrial Ethernet connectors](#) are mechanically robust and feature secure latching with 360° shielding for excellent performance in harsh environments. These are more economical when compared to 2 and 4 pair cabling. These connectors come with current handling up to 4A in right angle and vertical PCB mount versions. The SPE jacks mate to field terminable plugs, providing a complete shielded interface with metal latching features and easy installation.

Amphenol's SPE connectors are compatible with other SPE Industrial partner network products and can provide innovative flexible solutions for unique applications.

Check out for more [Industrial Ethernet](#) solutions from Amphenol for [next-generation applications](#)