

SINGLE PAIR ETHERNET

SPE is here and this is what you need to know

Turn Your Production Line into a Smart Factory With Single Pair Ethernet

In the not-so-distant past, manufacturers needed four wires to have 100 Mbit/s Ethernet and up to eight wires for 1 Gbit/s Ethernet. Now, with Single Pair Ethernet (SPE), **only two wires are needed for both data and power transmission**. SPE provides a single open, scalable Ethernet-based network within an automation system, **improving efficiency and reducing complexity**. It is what the industry calls a game-changer.

WHAT DOES SPE MEAN FOR YOU?



Infrastructure for Your Smart Factory



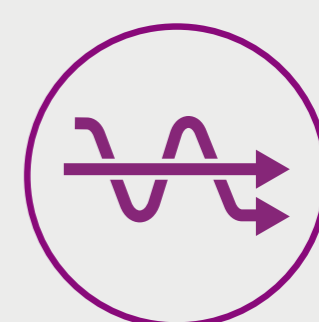
New Communication Standard



Vastly Improved Efficiencies



One Language for Your Entire Infrastructure



Reduced Complexity

SPE PROVIDES 4 MAJOR BENEFITS

1 INCREASED SPEED AND BANDWIDTH WITH FEWER WIRES

SPE means using half the wiring of your current infrastructure, transmitting Ethernet via two wires rather than four or eight. Fewer wires mean less space is used — meeting today's miniaturization trends.

Fast Ethernet
10/100 Mbit/s over two twisted pairs



Gbit Ethernet
1/10 Gbit/s over four twisted pair

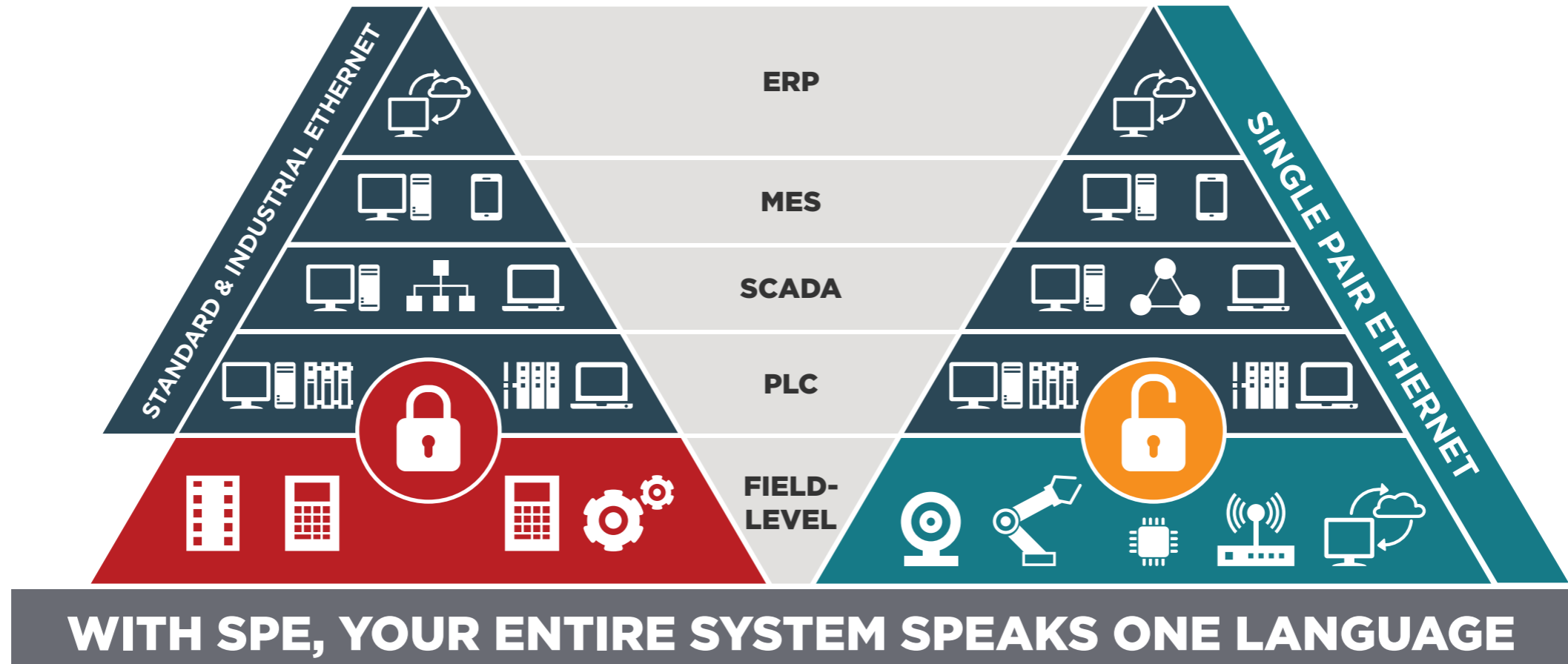


Single Pair Ethernet
1 Gbit/s per twisted pair



2 LESS COMPLEXITY

When SPE in the network edge is paired with existing Ethernet and industrial Ethernet solutions it provides a fully transparent IP-based industrial network infrastructure, essentially eliminating the need for expensive gateways that add delay to and reduce full transparency in communication.



3 SUSTAINABILITY

By reducing the number of wires used in your infrastructure, SPE uses less copper and plastic. Adopting SPE enables more sustainable sourcing and contributes to a greener operation overall.



LESS WEIGHT ON THE WIRE LEADS TO
LESS COPPER

4 DECREASED DOWNTIME

SPE transfers Ethernet data in real time which makes your system more efficient. It helps prevent the loss of your data, and decreases downtime.



TOGETHER WE CAN MOVE SMART MANUFACTURING FORWARD



TE Connectivity (TE) is committed to helping manufacturers adopt SPE technology and experience the benefits of real-time communication.



As a founding partner of the SPE Industrial Partner Network — a network of global organizations working together to standardize SPE technology — TE is collaborating with other industry leaders to foster an ecosystem that enables interoperability.



One key step forward is the recent adoption of the IEC 63171-7 standard. The development of this standard was led by TE and adopted by different partner networks to drive greater acceptance across the industrial market.

Read more [here](#).

Connect with Us

TE Connectivity is a world leader in connectivity and is now bringing SPE's powerful advantages to the infrastructure for the Industrial Internet of Things.

Visit te.com/usa-en/campaigns/industrial-solutions/spe-connect-with-us.html to chat with a product information specialist and find the expert support you need.