

A+ Core 1 and Core 2 CertMaster Perform 15.0

5.3.2 Shielded Twisted Pair

Shielded Twisted Pair (STP) provides extra protection against interference. STP cables are typically a requirement in environments with high levels of external interference, such as cable that must be run in proximity to fluorescent lighting, power lines, motors, and generators.

Shielded cable can be referred to generically as "STP," but several types of shielding and screening exist:

- Foiled Unshielded Twisted Pair (F/UTP) cable has a single foil shield that surrounds all wires in the cable. This type of cable may also be called screened twisted pair (ScTP) or sometimes just foiled twisted pair (FTP). This type of cable provides decent protection against electromagnetic interference (EMI) and crosstalk at a reasonable cost.
- Shielded Foiled Twisted Pair (S/FTP) cabling has a braided outer screen and foil-shielded pairs. This type of cable provides the best protection against EMI and crosstalk but is expensive and less flexible. There are also variants with a foil outer shield (F/FTP).
- Unshielded with Foiled Twisted Pair (U/FTP) cable has no outer shield, but each pair of wires has a foil shield around them. This provides good protection against EMI and crosstalk.

F/UTP cable with a foil screen surrounding unshielded pairs

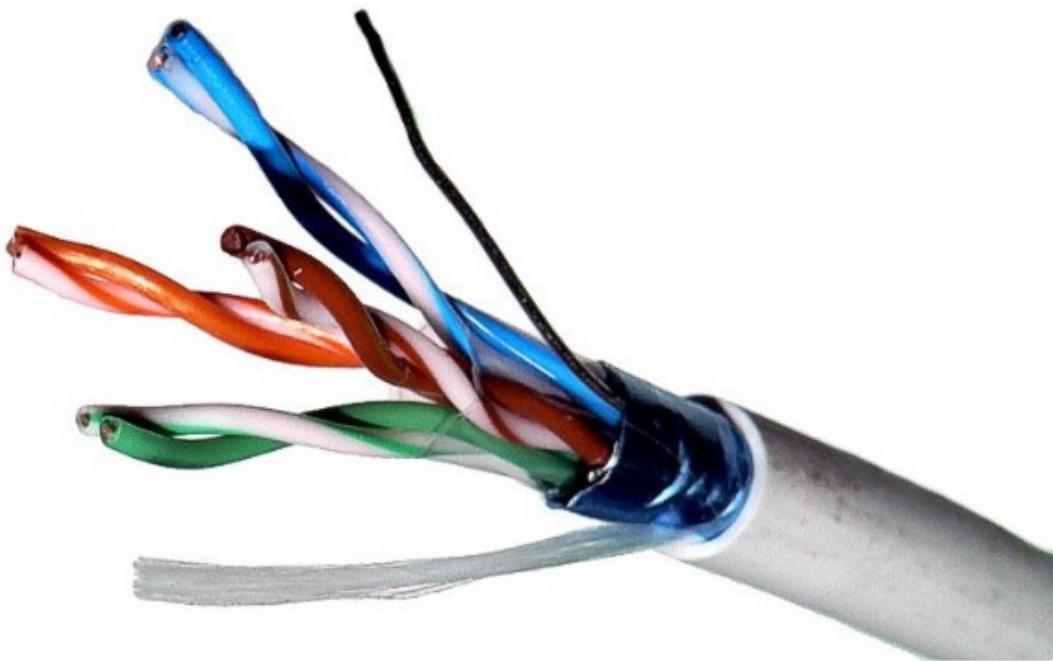


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The screening/shielding elements of shielded cable must be bonded to the connector to prevent the metal from acting as a large antenna and generating interference. Modern F/UTP and S/FTP solutions (using appropriate cable, connectors, and patch panels) facilitate this by incorporating bonding within the design of each element.

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