

What Do UTP, S/UTP, FTP, STP, and SFTP Mean?

When selecting copper cabling, the variety of shielding options can feel overwhelming due to numerous acronyms and technical jargon. This guide simplifies the key terms and explains how different shielding methods work.

Shielding in cables protects against electromagnetic interference (EMI), radio frequency interference (RFI), and crosstalk between wire pairs or adjacent cables. It also prevents the cable's signal from affecting nearby devices. Different types of shielding are suited to various uses, offering unique advantages.

U/UTP: Unshielded Twisted Pairs



- **Commonly Known As:** UTP
 - **Features:** Pairs of wires are twisted together without any shielding.
 - **How It Works:** The twisting balances the transmission line, reducing electrical noise and EMI. Varying twist rates also help minimise crosstalk.
 - **Common Use:** Basic, affordable option for general use.
 - **Advanced Features:** In higher-grade cables, cross-web fillers are used to further reduce interference.
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F/UTP: Foiled with Unshielded Twisted Pairs



- **Commonly Known As:** FTP
 - **Features:** A foil shield wraps around the unshielded twisted pairs with a drain wire.
 - **Benefits:** Directs unwanted noise to the ground, providing enhanced EMI and RFI protection.
 - **Ideal For:** Environments with moderate interference.
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S/UTP: Shielded with Unshielded Twisted Pairs



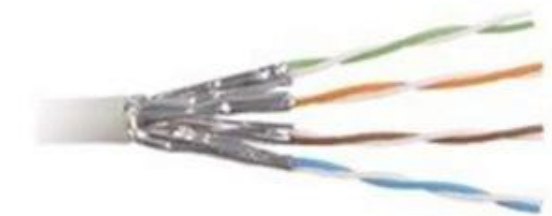
- **Commonly Known As:** STP (with caution as the term can vary)
 - **Features:** Includes an overall braid shield and unshielded twisted pairs.
 - **Benefits:** Stronger mechanical durability, better grounding, and supports higher data transmission over longer distances.
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SF/UTP: Shielded and Foiled with Unshielded Twisted Pairs



- **Features:** Combines a braid shield and foil shield over unshielded twisted pairs.
 - **Benefits:** Provides dual-layer protection against EMI and better grounding.
 - **Use Case:** For areas with high interference risks.
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U/FTP: Unshielded with Foiled Twisted Pairs



- **Features:** No overall shield, but each twisted pair is individually foil-wrapped.
 - **Benefits:** Limits interference from adjacent cables and provides moderate EMI protection.
 - **Ideal Application:** When internal shielding is sufficient.
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F/FTP: Foiled with Foiled Twisted Pairs



- **Features:** Each twisted pair is individually foil-wrapped, with an additional overall foil shield.
 - **Benefits:** Adds robust protection against EMI and crosstalk.
 - **Typical Use:** Environments requiring enhanced interference control.
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S/FTP: Shielded with Foiled Twisted Pairs



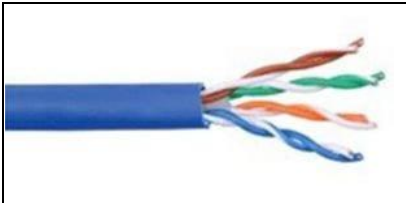

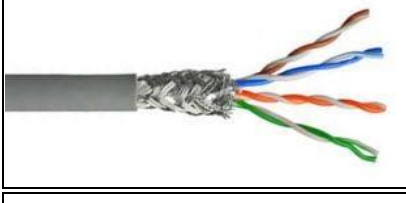
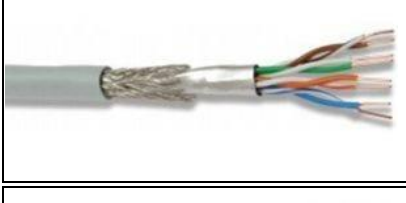
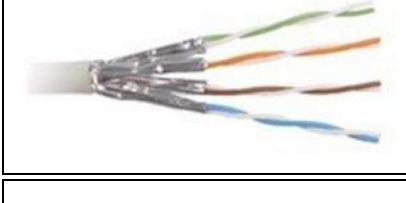
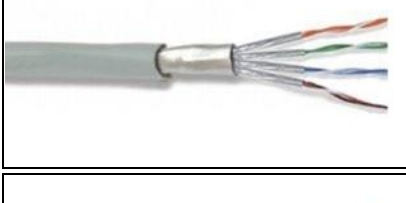
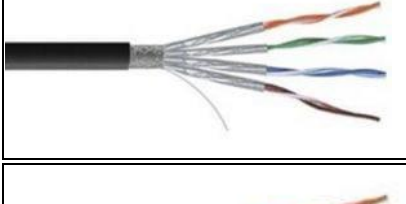

- **Features:** Individually foil-wrapped pairs enclosed in a braid shield.
 - **Benefits:** Reduces crosstalk effectively and offers strong grounding.
 - **Application:** High-performance setups needing strong shielding.
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SF/FTP: Shielded and Foiled with Foiled Twisted Pairs



- **Features:** Combines an overall braid and foil shield with individually foil-wrapped twisted pairs.
 - **Benefits:** Maximum protection against EMI, RFI, and all types of crosstalk. Provides excellent grounding.
 - **Ideal For:** Mission-critical installations with heavy interference.
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Common Shielding Types with Visuals

ISO/IEC11801 Name	Common Industry Acronyms	Cable Shield	Pair Shield	Example	Uses
U/UTP	UTP	None	None		Basic use, low EMI.
F/UTP	FTP, STP, ScTP	Foil	None		Moderate interference.
S/UTP	STP, ScTP	Braiding	None		Longer distances.
SF/UTP	SFTP, S-FTP, STP	Foil & Braiding	None		High EMI environments.
U/FTP	STP, ScTP, PiMF	None	Foil		Reducing crosstalk.
F/FTP	FFTP	Foil	Foil		Sensitive data setups.
S/FTP	SSTP, SFTP, STP, PiMF	Braiding	Foil		Industrial settings.
SF/FTP	SSTP, SFTP	Foil & Braiding	Foil		Critical applications.

