



## DATA SHEET

# Cat5e, Cat6 and Cat7 copper cabling



Having a fantastic internet connection is all well and good, but effective voice and data communications within a business begin with a local network infrastructure that's fit for purpose.

Well planned, installed and managed internal network cabling will serve your business keenly for years to come. We'll help you to get all of that right, taking into account your current and future requirements while being mindful of your budget, to deliver the cabling infrastructure that's spot on for your home, office or data centre.

 **ANDY HARDING**  
DIRECTOR, INTERNET CONNECTIONS LTD

## SHIELDED?

Cat5e? Cat6 or Cat7?

We'll be your copper cabling guide, planner and installer – and we'll support you afterwards too.

### Jargon buster

- >> **Alien Crosstalk (ANEXT):** Interference introduced by a twisted pair within one cable to another adjacent cable, which can be mitigated by using the correct category of cable.
- >> **CatX:** "Cat" (Category) identifies the standard and specification of twisted pair ethernet cabling. The different categories (e.g. 5e, 6, 7) of cable are suitable for different applications, dependent on requirements such as transfer speed and environment.
- >> **EMI (Electromagnetic Interference):** Disturbance or noise generated by an external source (for example, from machinery, electronic equipment) that can reduce the effectiveness of cabling.
- >> **Shielding:** Shielded cable (often referred to as STP or Shielded Twisted Pair) helps to maintain cable performance in environments with high levels of EMI. Shielding can come in the form of foil coating, Low Smoke Zero Halogen (LSZH) and PVC jackets.
- >> **STP (Shielded Twisted Pair):** Cable with integrated protection (shielding) from electromagnetic interference (EMI).
- >> **UTP (Unshielded Twisted Pair):** Cable without protection (shielding) from electromagnetic interference (EMI).

Get connected. Stay connected.

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## CLIENT TESTIMONIAL

Having absolute confidence in a network provider is very reassuring. I am happy to say that by choosing Internet Connections we have this assurance.

Simon Chappell, Backup Technology

## Copper cabling category standards

We offer the following cable category standards, and can advise on the most suitable for your specific project:

CATEGORY	FREQUENCY	ETHERNET SUPPORT	SHIELDING	USAGE EXAMPLES
Cat5e	1-100Mhz	10/100BASE-T Gigabit Ethernet	Optional	Home and small office
Cat6	1-250Mhz	10/100BASE-T Gigabit Ethernet	Optional	SME, university, high speed applications
Cat6a	1-500Mhz	10/100BASE-T Gigabit Ethernet 10Gigabit Ethernet	Optional	SME, university, high speed applications
Cat7	1-600Mhz	10/100BASE-T Gigabit Ethernet 10Gigabit Ethernet	Integrated individual pair and overall cable shielding	Enterprise, data centre backbone, high speed applications
Cat7a	1-1000Mhz	10/100BASE-T Gigabit Ethernet 10Gigabit Ethernet	Integrated individual pair and overall cable shielding	Enterprise, data centre backbone, high speed applications

## A comprehensive cabling service

From initial assessment, through to proposal, planning, installation and on-going support - we're here to help.

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