

# Making Connections Network Cables



Most of our wired networks use Ethernet and will use a network cable. Network cables have continued to evolve and improve with each new version or category (cat) having a different set of characteristics.

Well how fast is it really?

A DVD is about 4.5GB of data so its a good measure of speed. How many DVDs per hour?

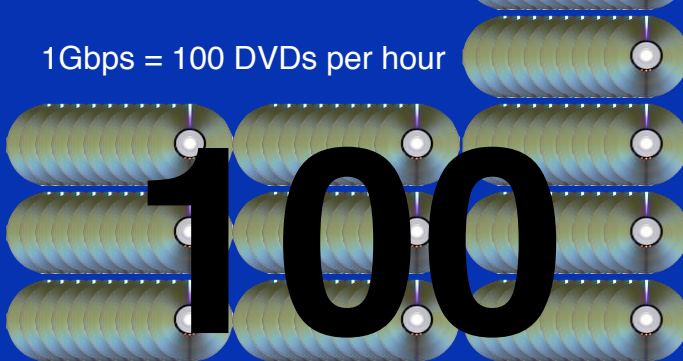
10Mbps = 1 DVD per hour



100Mbps = 10 DVDs per hour



1Gbps = 100 DVDs per hour



UTP, ScTP or STP?

A shield is a thin metal foil that helps to reduce interference.

**UTP** stands for **U**nshielded **T**wisted **P**air, **ScTP** **S**creened **T**wisted **P**air and **STP** **S**hielded **T**wisted **P**air. In **UTP** there is no shielding at all. IN **ScTP** there is a foil wrap around the twisted pair bundle and in **STP** the pairs of wires are individually wrapped and the entire bundle is also wrapped.

**CONNECTED**



Max Speed: **10Mbps**  
Cable Type: **UTP/STP**  
Frequency: **16Mhz**  
Max Length: **100m**

Max Speed: **100Mbps**  
**-1GHz** (cat5 - cat 5e)  
Cable Type: **UTP/STP**  
Frequency: **100Mhz**  
Max Length: **100m**

Max Speed: **10Gbps**  
Cable Type: **UTP/STP**  
Frequency: **500Mhz**  
Max Length: **100m**

Max Speed: **4Mbps**  
(Digital Voice)  
Cable Type: **UTP**  
Frequency: **4Mhz**  
Max Length:

Max Speed: **16Mbps**  
Cable Type: **UTP/STP**  
Frequency: **20Mhz**  
Max Length: **100m**

Max Speed: **10Gbps**  
Cable Type: **UTP/STP**  
Frequency: **250Mhz**  
Max Length: **55m**



Images:

<https://upload.wikimedia.org/wikipedia/commons/thumb/4/47/BusNetwork.svg/220px-BusNetwork.svg.png>  
<https://pixabay.com/en/network-networking-networked-358069/>  
<https://pixabay.com/en/network-cables-network-connector-494645/>  
<https://www.flickr.com/photos/33399192@N02/3113089279/>

