Connector pinout for: Ethernet 10/100 base-T
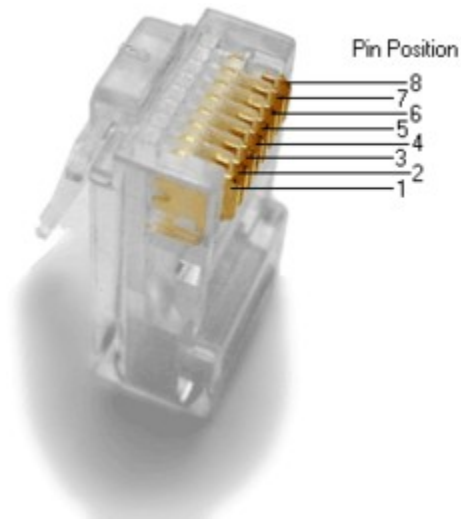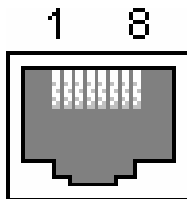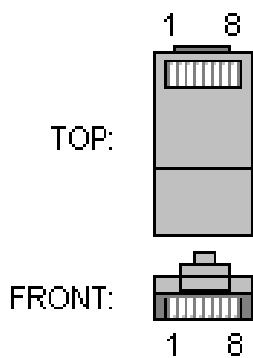
8P8C modular plug pin positioning

8 pin RJ45 (8P8C) female connector at the network interface cards/hubs

8 pin RJ45 (8P8C) male connector at the cables.

Ethernet 10base-T / 100base-TX pinout. Widely used in ethernet network devices. Same connector and pinout for both 10Base-T, 100Base-TX and 1000base-T.

Pin	Name	Description	TIA/EIA 568A	TIA/EIA 568B
1	TX+	Tranceive Data+	white/green	white/orange
2	TX-	Tranceive Data-	green	orange
3	RX+	Receive Data+	white/orange	white/green
4	n/c		blue	blue
5	n/c		white/blue	white/blue
6	RX-	Receive Data-	orange	green
7	n/c		white/brown	white/brown
8	n/c		brown	brown

Notes

- T568A and T568B are the two color codes used for wiring eight-position RJ45 modular plugs. Both are allowed under the ANSI/TIA/EIA wiring standards. The only difference between the two color codes is that the orange and green pairs are interchanged. T568A wiring pattern is recognized as the preferred wiring pattern for this standard because it provides backward compatibility to both one pair and two pair USOC wiring schemes. The T568B standard matches the older ATA&T 258A color code and is/was(?) the most widely used wiring scheme. It is also permitted by the ANSI/TIA/EIA standard, but it provides only a single pair backward compatibility to the USOC wiring scheme. The U.S. Government requires the use of the preferred T568A standard for wiring done under federal contracts.
- Length of CAT5 cable runs should not exceed 100 meters.
- TX and RX signals are swapped on Hub's. Also, please note that it is very important that a single pair be used for pins 1 and 2; 3 and 6. If not, performance will degrade.

References

- http://www.duxcw.com/faq/network/diff568ab.htm
- http://www.zytrax.com/tech/layer_1/cables/tech_lan.htm