



1000Base-T Cross Over Cable pin outs

You may have experienced not being able to connect two 1000baseT NICs or two 1000baseT switch interfaces, using a normal crossed ethernet cable. The reason you can't do this, is that 1000baseT use all four wire pairs available in a Cat5 cable, whereas 100baseTX only uses two wire pairs.

Because of this, the cable pinout is different.

Some smart 1000baseT interfaces (like the ones in Apple's G4 and G5 computers) don't need a crossover cable. They have something known as "auto-mdix", which enable them to sense how the cable is wired, and adjust to that.

But that is not the case for all interfaces.

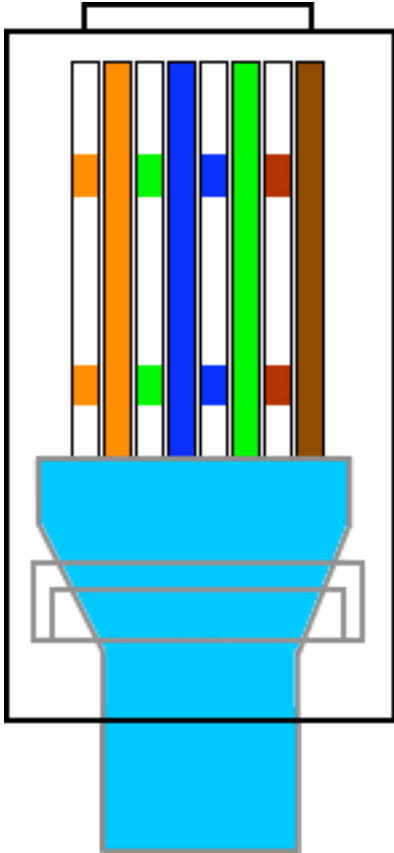
A "normal" straight-trough Cat5 cable is wired like this (according to EIA 568-B):

Pin	Connector #1	Connector #2
1	white/orange	white/orange
2	orange	orange
3	white/green	white/green
4	blue	blue
5	white/blue	white/blue
6	green	green
7	white/brown	white/brown
8	brown	brown

The notation in the above table is based on cables where the strands are either a solid colour, or white with a thin stripe of colour. In other cables the "solid coloured" strands may be mostly a solid colour with a thin stripe or stippling of white..

If you grab the connector and hold it with the fastener pointing away from you, and the cable downwards, it looks like this (pin 1 is to the left):

See diagram below:



A crossover Cat5 cable is wired like this (according to EIA 568-B):

pin	Connector #1	Connector #2
1	white/orange	white/green
2	orange	green
3	white/green	white/orange
4	blue	blue
5	white/blue	white/blue
6	green	orange
7	white/brown	brown
8	brown	white/brown

See final pinout chart below:

Combining this with documentation for a 1000baseT GBIC, we get this pinout for a 1000baseT crossover Cat5 cable:

Pin	Connector #1	Connector #2
1	white/orange	white/green
2	orange	green
3	white/green	white/orange
4	blue	white/brown
5	white/blue	brown
6	green	orange
7	white/brown	blue
8	brown	white/blue