

PCI Trace Routing Guidelines

Parameter	Trace Routing
Transfer Rate @ 33MHz	132 MB/sec
Maximum data and control signal length allowance for the COM Express Carrier Board.	10 inches
Maximum clock signal length allowance for the COM Express Carrier Board.	8.88 inches
Single-ended Impedance	55 Ω +/-15%
Trace width (W)	5mils (microstrip routing) (*)
Spacing between signals (inter-signal) (S)	7mils (microstrip routing) (*)
Length matching between single ended signals	Max. 200mils
Length matching between clock signals	Max. 200mils
Spacing from edge of plane	Min. 40mils
Reference plane	GND referenced preferred
Via Usage	Try to minimize number of vias
Decoupling capacitors for each PCI slot.	<p>Min. 1x22μF, 2x 100nF @ VCC 5V Min. 2x22μF, 4x 100nF @ VCC 3.3V Min. 1x22μF, 2x 100nF @ +12V (if used) Min. 1x22μF, 2x 100nF @ -12V (if used)</p> <p>The decoupling capacitors for the power rails should be placed as close as possible to the slot power pins, connected with wide traces.</p>