

Signal Integrity in High Speed Designs

High-speed data transfer: parallel vs. serial communication, synchronous vs. asynchronous, common mode noise & differential signaling, examples such as Gigabit Ethernet and DDR memories.

Signal integrity on PCB: multilayer boards, power and ground planes, placement of components and vias, separation of analogue and digital circuits.

Signal integrity inside ICs: decoupling, low-inductance packaging, lossy propagation, crosstalk, power and clock distribution, timing closure.

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