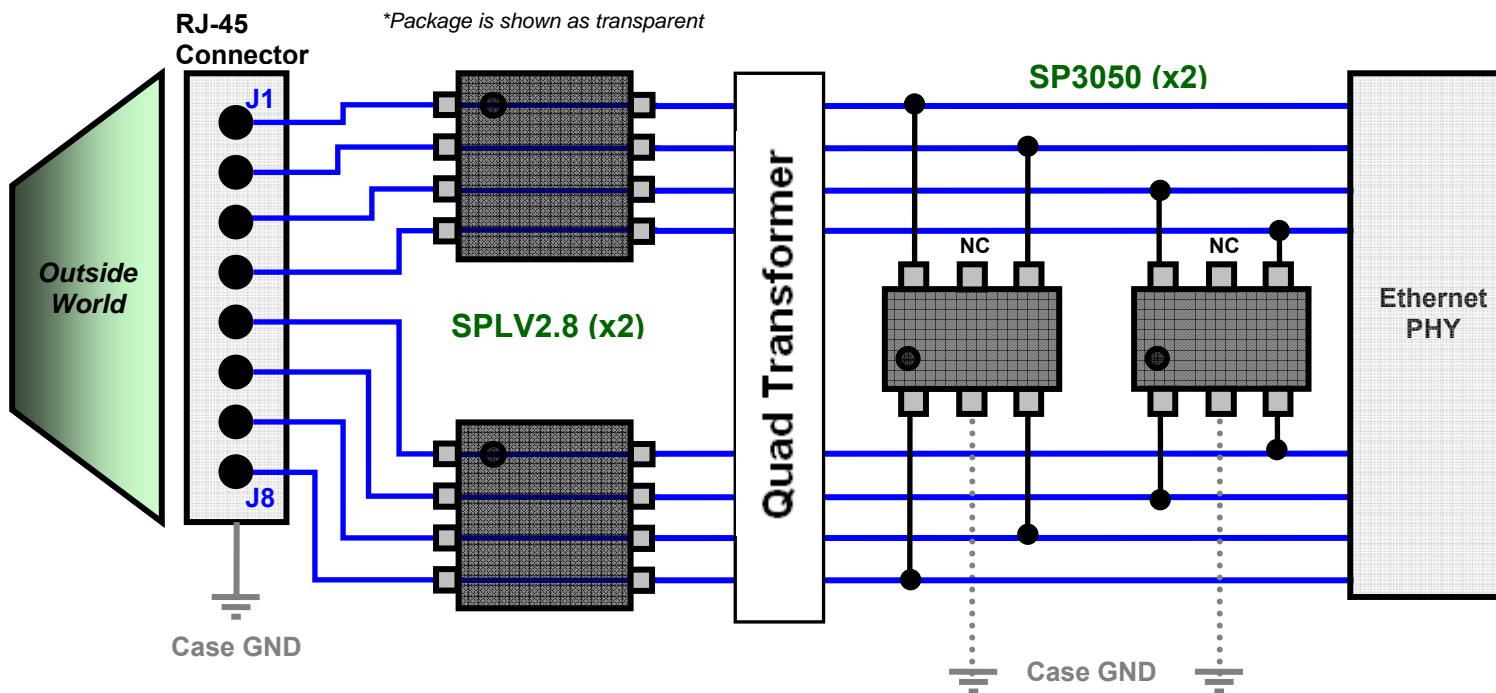


Application Guide 1000/Gigabit Ethernet

Considerations:

- 1000 relates to the data rate in Mbps (i.e. 1000Mbps)
→ For 1000Base-T data is transmitted over 4 UTP (unshielded twisted pairs) using a 125MHz clock
- For this data rate the parasitic capacitance should certainly be taken into account
- The 8 data lines below (Tx0:3 and Rx0:3) are being protected against lightning transients by a two stage protection scheme
→ The SP03 series (x4) should be used in place of the SPLV2.8-4 if higher levels of protection are required
→ The SP4060 series can be used in place of the SP3050 devices if the voltage does not exceed 2.5V

Application Schematic:



Recommended SPA Devices:

Ordering Number	ESD Level (Contact)	Lightning ($t_p=8/20\mu s$)	I/O Capacitance	# of Channels	V_{RWM}	Packaging
SPLV2.8-4BTG	±30kV	24A	4pF	4	2.8V	SOIC-8
SP3050-04HTG	±20kV	10A	2.4pF	4	6V	SOT23-6
SP4060-08ATG	±30kV	20A	4.4pF	8	2.5V	MSOP-8