

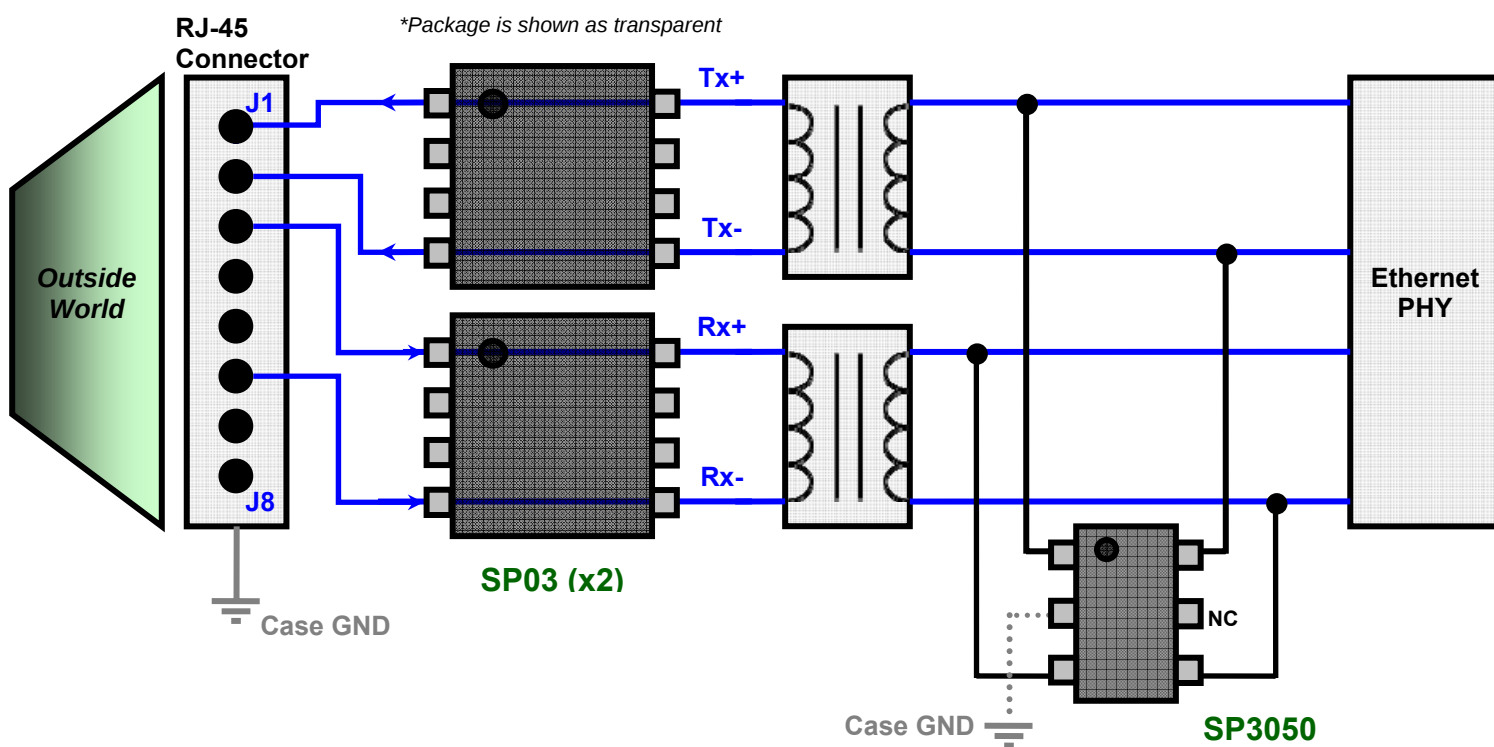
Application Guide

10/100 Ethernet

Considerations:

- 10/100 relates to the data rate in Mbps (i.e. 10Mbps and 100Mbps)
 - For 10 Base-T, data is transmitted over 2 UTP (unshielded twisted pairs) using a 10MHz clock
 - For 100Base-TX, data is transmitted over 2 UTP using a 125MHz clock
- For these data rates the parasitic capacitance needs to be taken into account to preserve signal integrity
- The 4 data lines below (Tx+/- and Rx+/-) are being protected against intra-building (i.e. 100A, $t_p=8/20\mu s$) lightning transients by a two stage protection scheme

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
SP03-xBTG	$\pm 30kV$	150A	16pF	2	3.3V, 6V	SOIC-8
SP3050-04HTG	$\pm 20kV$	10A	2.4pF	4	6V	SOT23-6