

# Applying Pericom PI3L301D-A (10/100/1000 BaseT LAN Mux/DeMux)

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Hi all,

This might be a very basic question, but I need to be 100% sure that I can do what I am trying to do. I am adding this switch to a design based on Vitesse VSC8201 PHY. There are 2 cases I need to consider.

1. The PHY is driving a transformer which center tap is not connected to a power source.
2. The PHY is used in a transformerless configuration, instead simple AC coupling caps are used (PICMG 2.16 backplane).

Both of the above are possible because Vitesse PHYs use fully differential active drivers that can both source and sink current. The PHY outputs are biased to about 1.5V.

Now, I need to insert the mux in the subject in between the PHY and either the transformer or the caps. So, the question is it OK to have biasing on one side of the switch only, or do I need to somehow bias the other side? (The switch can only operate with positive signals). If I need biasing on the other side, can I use a simple resistive divider on each of the lines?

Here is a link to the datasheet:

<http://www.pericom.com/pdf/datasheets/PI3L301D-A.pdf>

Thanks,  
/Mikhail