DC Characterstics Issue:

DC Characterstics of DP83867IRPAPT High Immunity 10/100/1000 Ethernet Physical Layer Transceiver:-

1.8 V V_{DDIO}				
V_{OH}	High Level Output Voltage	I_{OH} = -1 mA	VDDIO – 0.2	V
V_{OL}	Low Level Output Voltage	I_{OL} = 1 mA	0.2	V
V_{IH}	High Level Input Voltage		0.7 * VDDIO	V
V_{IL}	Low Level Input Voltage		0.2 * VDDIO	V

DC Characterstics of ZYNQ XC7Z030-1FBG676I:-

PS I/O Levels

Table 9: **PS DC Input and Output Levels**(1)

Bank	I/O Standard	V_{IL}		V_{IH}		V_{OL}	V_{OH}	I_{OL}	I_{OH}
		V, Min	V, Max	V, Min	V, Max	V, Max	V, Min	mA	mA
MIO	LVCMOS18	–0.300	35% V_{CCO_MIO}	65% V_{CCO_MIO}	V_{CCO_MIO} + 0.300	0.450	V_{CCO_MIO} – 0.450	8	–8

Sl. No.	Voltage Parameters		ZYNQ		PHY		Current parameters	Current levels	
	ZYNQ	PHY	Voltage levels		Voltage levels			ZYNQ	PHY
			Min (V)	Max (V)	Min (V)	Max (V)			
1	V_{CCO}	DV_{DD}	1.71	3.465	1.71	1.89			
2	V_{IL}	V_{OL}	-0.3	0.63	-	0.2	I_{IL}	-	-10 µA
3	V_{IH}	V_{OH}	1.17	3.6	1.6	-	I_{IH}	-	10 µA
4	V_{OL}	V_{IL}	-	0.45	-	0.36	I_{OL}	8 mA	1.0 mA
5	V_{OH}	V_{IH}	1.35	-	1.26	-	I_{OH}	-8 mA	-1.0 mA

Table 15: DC characteristics of ZYNQ (LVCMOS33) and Ethernet Physical layer transceiver

We are interfacing DP83867IRPAPT Ethernet Physical Layer Transceiver to ZYNQ XC7Z030-1FBG676I and we found fallowing issue please help.

As per DC analysis V_{IL} (0.36V) of Ethernet Physical Layer Transceiver should be higher than V_{OL} (0.45V) of ZYNQ.

Please go through the above DC analysis and let us know the solutions and feasibility of this design.