EVB-LAN8700

LAN8700(i) Reference Schematic

+3.3V I/O VDDIO Operation

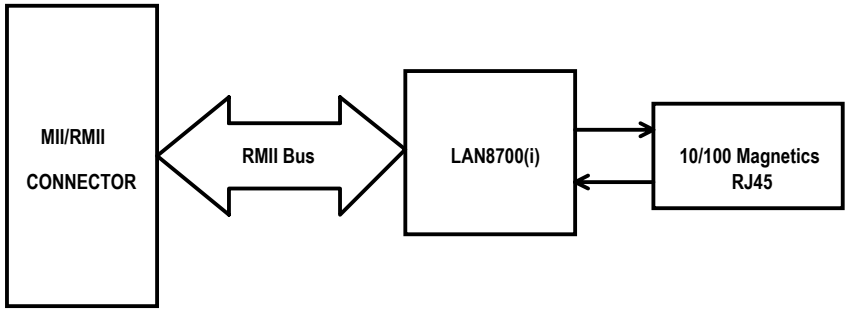
RMII Communication

Schematic Revision A0

Design Details

Board:
Chip: LAN8700(i)
Board Form Factor:
Assembly:

EVB BLOCK DIAGRAM



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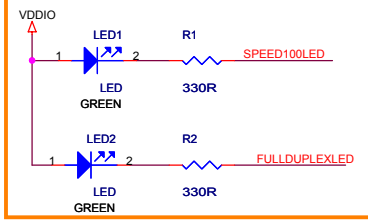
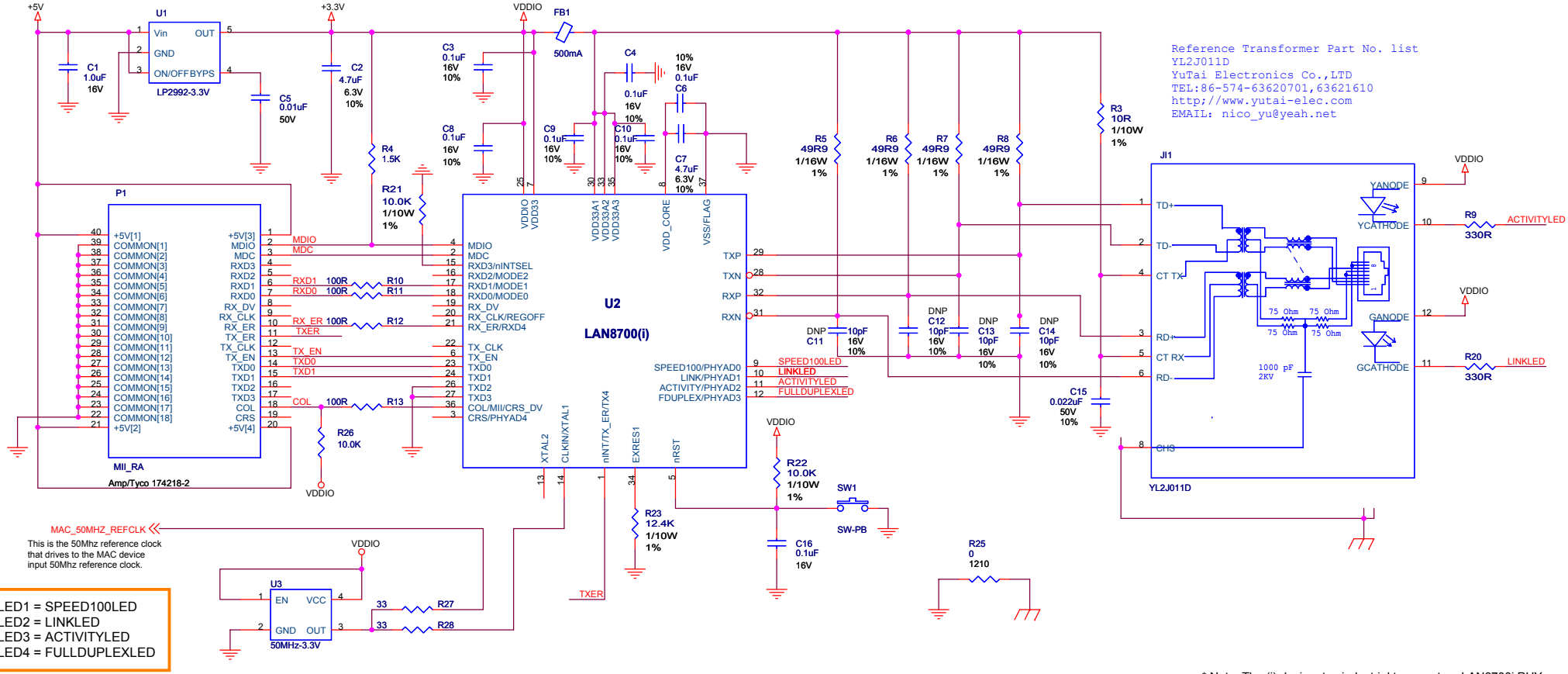
PHY Modes (Default '111')

Mode 2	Mode 1	Mode 0		
Empty	Empty	Empty	111	All Capable [Default]
Empty	Empty	10k to GND	110	Power Down Mode
Empty	10k to GND	Empty	101	Repeater Mode
Empty	10k to GND	10k to GND	100	100Base-TX Half duplex Advertised
10k to GND	Empty	Empty	011	100Base-TX Full Duplex Auto Negotiate
10k to GND	Empty	10k to GND	010	100Base-TX Half Duplex Auto Negotiate
10k to GND	10k to GND	Empty	001	10Base-T Full Duplex Auto Negotiate
10k to GND	10k to GND	10k to GND	000	10Base-T Half Duplex Auto Negotiate

To use the variable I/O fleXPWR option connect pin 25 to the desired I/O. When using lower I/O voltages all pull-up resistors should be tied to this VDDIO supply. At low I/O voltage of 1.8V special LED considerations will need to be made.

LEDs





PHY Address (Default '11111' = 31d)

	PHY Address		LED Output	Resistor configuration
LED1	LSB	PHYAD0 = 1	Active Low	Default
	LSB	PHYAD0 = 0	Active High	Populate 10k to GND on pin. Diode needs to be GND referenced
LED2		PHYAD1 = 1	Active Low	Default
		PHYAD1 = 0	Active High	Populate 10k to GND on pin. Diode needs to be GND referenced
LED3		PHYAD2 = 1	Active Low	Default
		PHYAD2 = 0	Active High	Populate 10k to GND on pin. Diode needs to be GND referenced
LED4		PHYAD3 = 1	Active Low	Default
		PHYAD3 = 0	Active High	Populate 10k to GND on pin. Diode needs to be GND referenced
	MSB	PHYAD4 = 1		
	MSB	PHYAD4 = 0		

Integration Considerations:

1. Prior to designing with LAN8700 please read
   SMSC LAN8700 User Guide and Configuration Application Note
   SMSC Magnetics Selection Guide AN8.13
   SMSC LAN8700 Datasheet
2. Please refer to our reference designs online for support during deisgn. (http://www.smsc.com/main/catalog/lan8700.html)
3. Once schematics are complete please submit to SMSC LANcheck for review: (https://www2.smsc.com/mkt/web_lancheck.nsf)
4. Once the layout is complete please submit to SMSC LANcheck for review: (https://www2.smsc.com/mkt/web_lancheck.nsf)

* Note: The (i) designates industrial temperature LAN8700i PHY (-40c to +85c). For industrial temperature applications, SMSC recommends using the LAN8700i with industrial temperature magnetics. Plese refer to APP note 8.13 Magnetics Selection Guide".

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