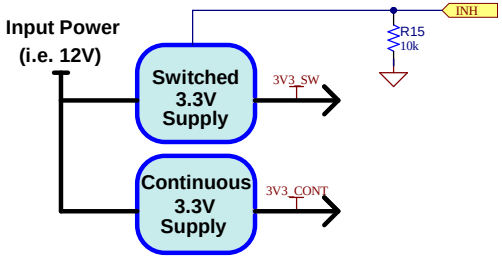
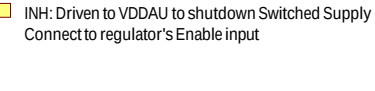
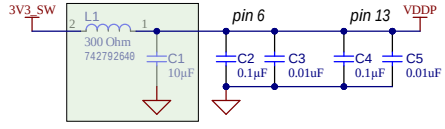
LAN8671 RMII Application - With Wake/Sleep

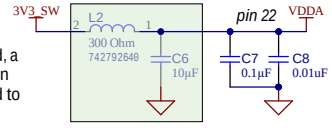




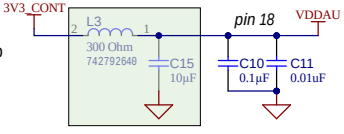
INH: Driven to VDDAU to shutdown Switched Supply
Connect to regulator's Enable input



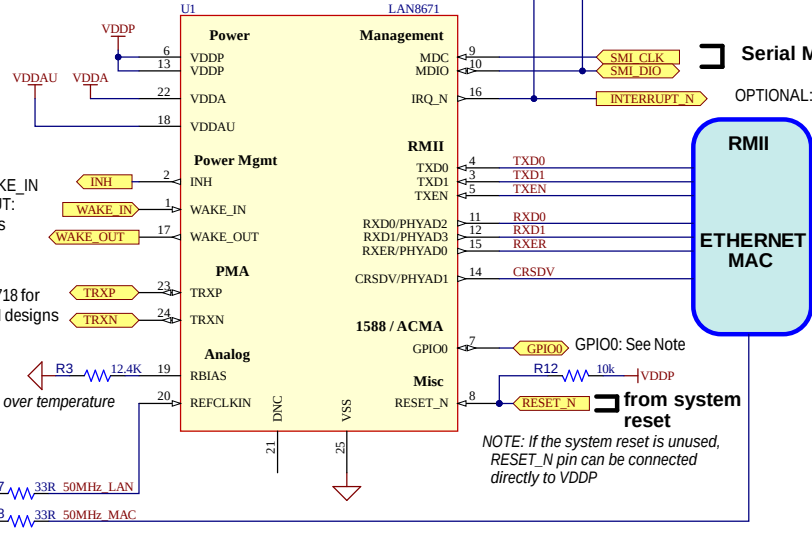
LAYOUT NOTE: Place one 0.01uF and one 0.1uF at each power pin. The 0.01uF must be closest to the pin.



Ferrite beads are optional. If used, a bulk capacitor is recommended on the device side of the ferrite bead to dampen potential oscillation.



VDDAU:
Continuous supply for wake/sleep



MDIO pull-up resistor:
Value based on capacitive bus loading. For light loading, 10k Ohms is a good starting value.

Serial Management Interface (SMI)

OPTIONAL: IRQ_N: If used, a pull-up resistor is required

INH / WAKE_IN
WAKEOUT:
See Notes

See AN1718 for latest BIN designs

RBIAS: +/- 1% over temperature

GPIO0: See Note

from system reset

NOTE: If the system reset is unused, RESET_N pin can be connected directly to VDDP

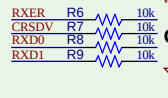
LAYOUT NOTE: 50MHz_LAN and 50MHz_MAC PCB traces should be length matched.

Hardware Configuration Straps:

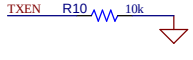
Values are latched upon POR RESET_N negated.

EXTERNAL RESISTORS (REQUIRED)

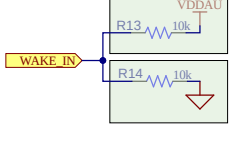
10k Ohm typical Strap resistors.
Strap resistor value is dependent on the Ethernet MAC internal resistor values.
Strap resistors must be able to override the Ethernet MAC internal pull-up or down resistor to set a logic low or high.



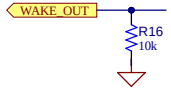
PHYAD[3:0]
0x00h - 0x0Fh valid address range



NOTE: When the MAC sublayer is in reset or unconfigured, the TXEN output pin may become high impedance and floating. A pull-down can be added to prevent false TXEN assertions and accidental transmissions.



WAKE_IN: polarity configured pull-up or pulldown
(install R13 or R14 ,never both)
(if unused, connect to VSS)



WAKE_OUT: asserted when part wakes
(if unused, leave unconnected)

GPIO0: Configurable as ACMA, TXPI, RXPI or RXTXPI
(if unused, leave unconnected)