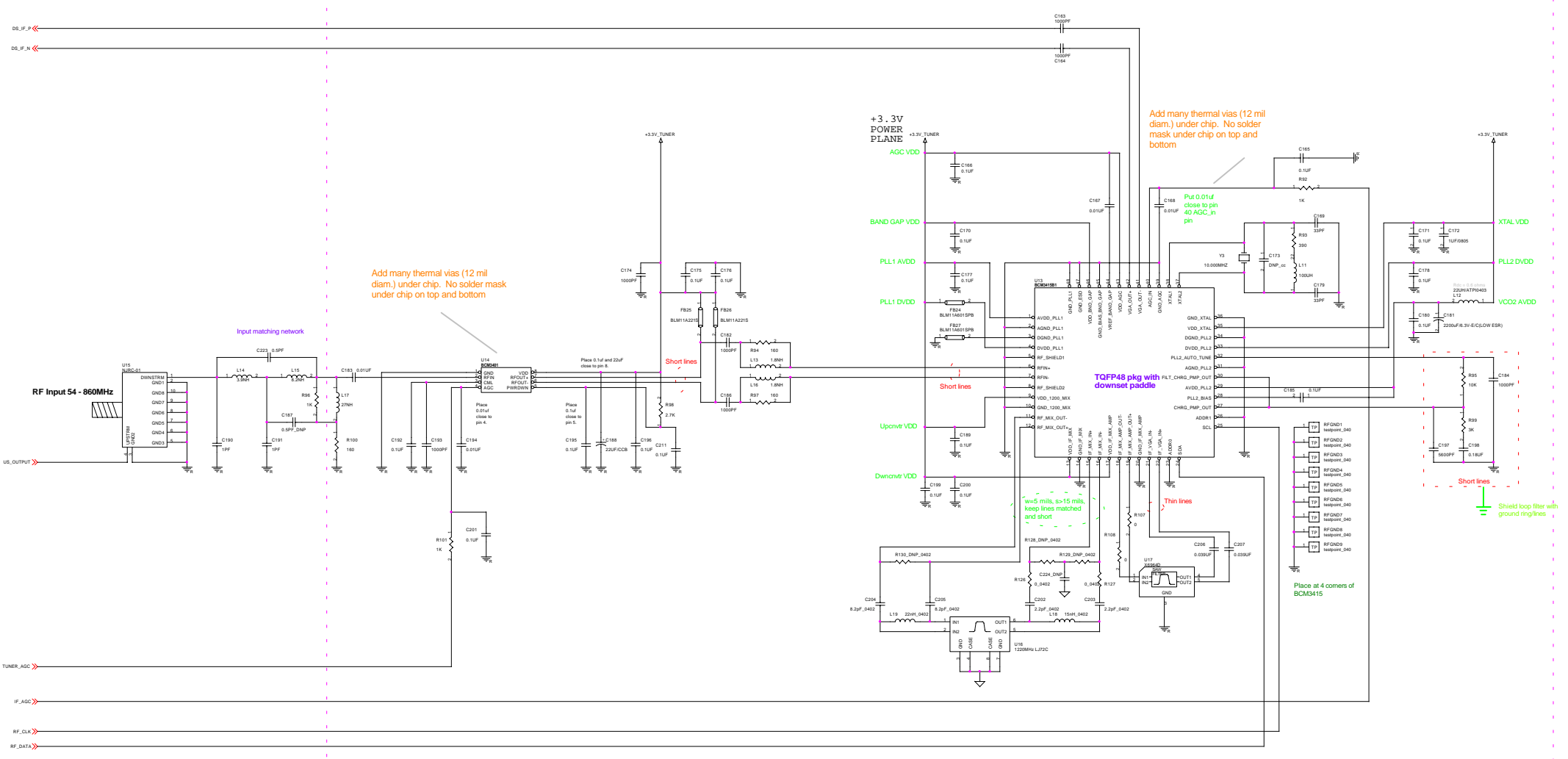


THESE COMPONENTS ARE WITHIN THE BOARD STIFFENER OUTLINE



Add many thermal vias (12 mil diam.) under chip. No solder mask under chip on top and bottom

Add many thermal vias (12 mil diam.) under chip. No solder mask under chip on top and bottom

Input matching network

Short lines

Short lines

TQFP48 pkg with downset paddle

Upconvr VDD

Dwnconvr VDD

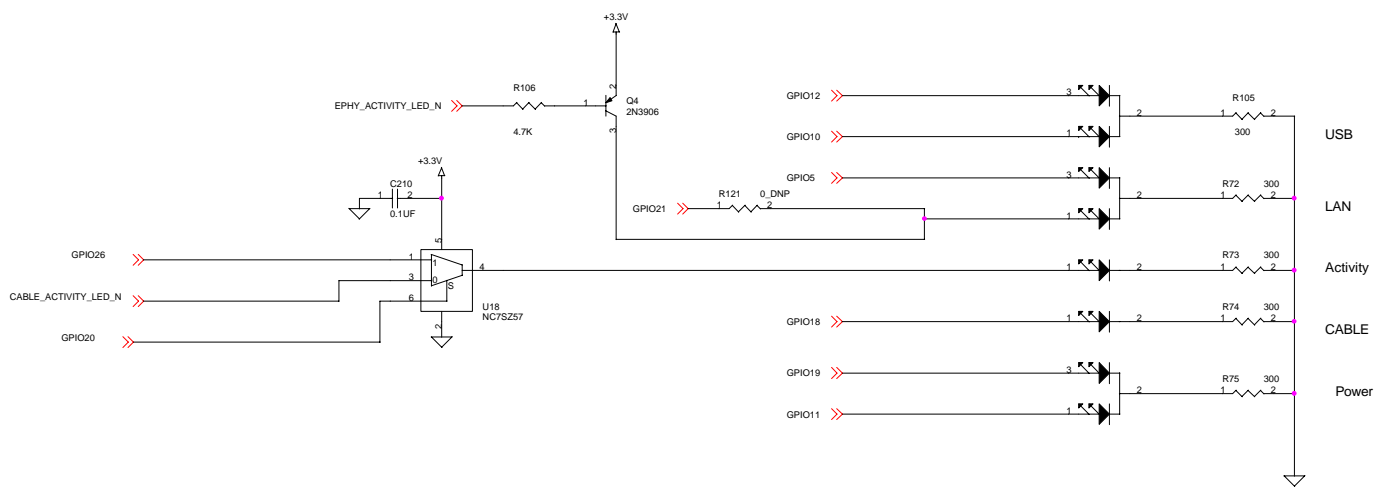
w=5 mils, s>15 mils  
VDD lines matched and short

Thin lines

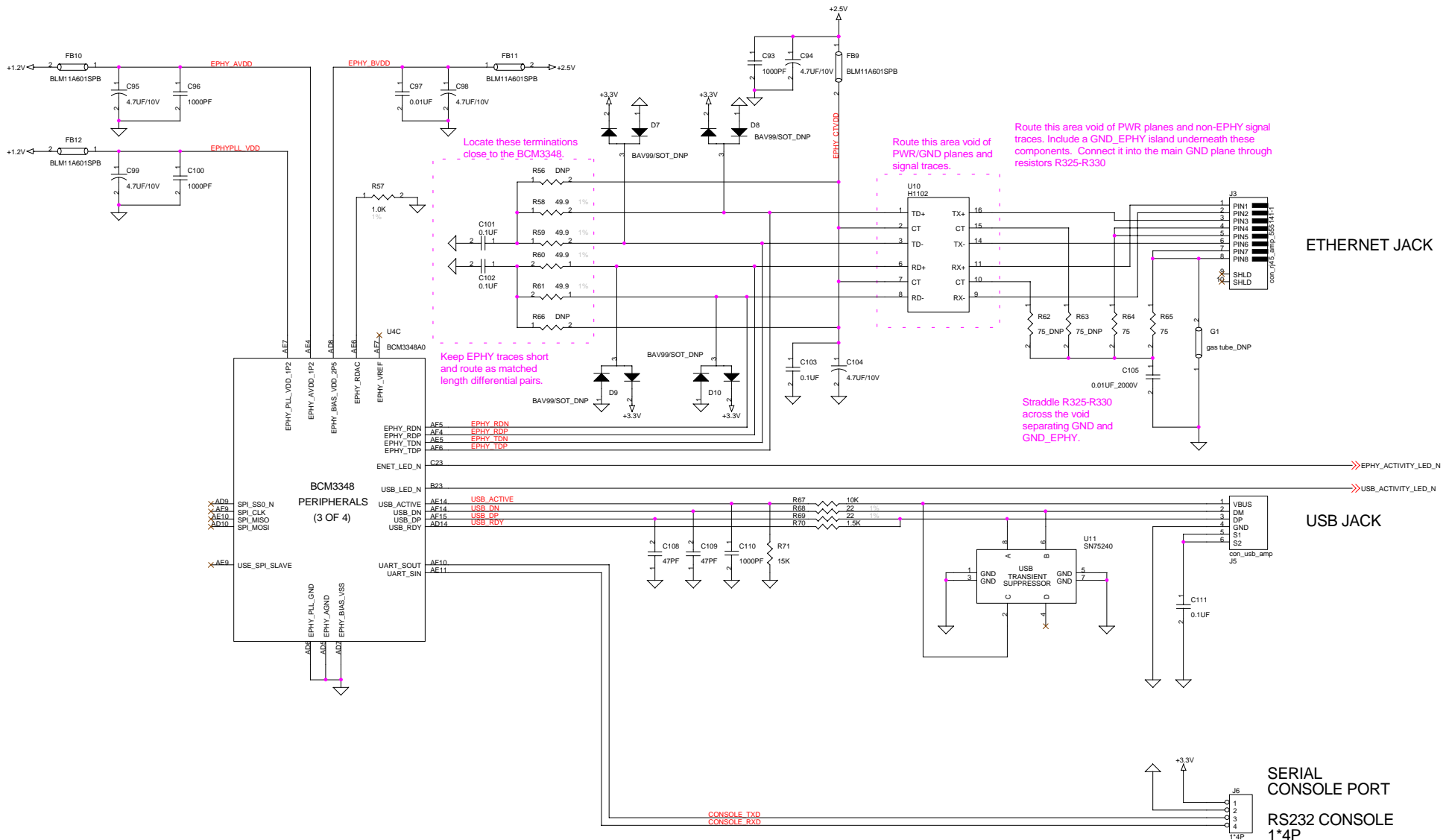
Shield loop filter with ground ring/lines

Place at 4 corners of BCM3415





USB  
LAN  
Activity  
CABLE  
Power



Locate these terminations close to the BCM3348.

Keep EPHY traces short and route as matched length differential pairs.

Route this area void of PWR/GND planes and signal traces.

Route this area void of PWR planes and non-EPHY signal traces. Include a GND\_EPHY island underneath these components. Connect it into the main GND plane through resistors R325-R330

Straddle R325-R330 across the void separating GND and GND\_EPHY.

ETHERNET JACK

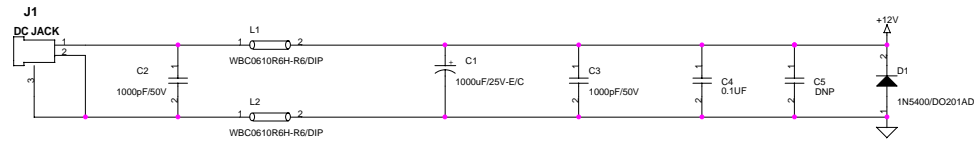
USB JACK

SERIAL CONSOLE PORT  
RS232 CONSOLE  
1\*4P

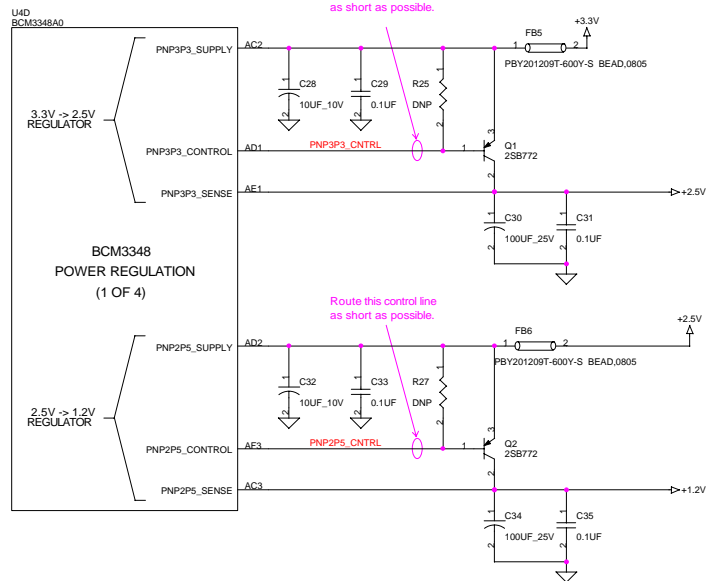
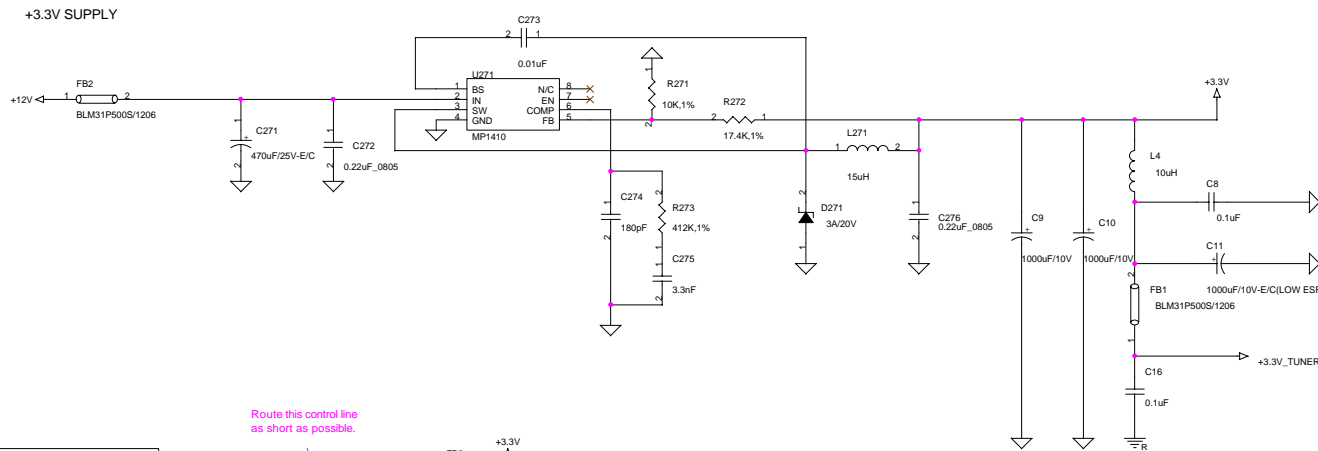
CONSOLE\_TXD  
CONSOLE\_RXD

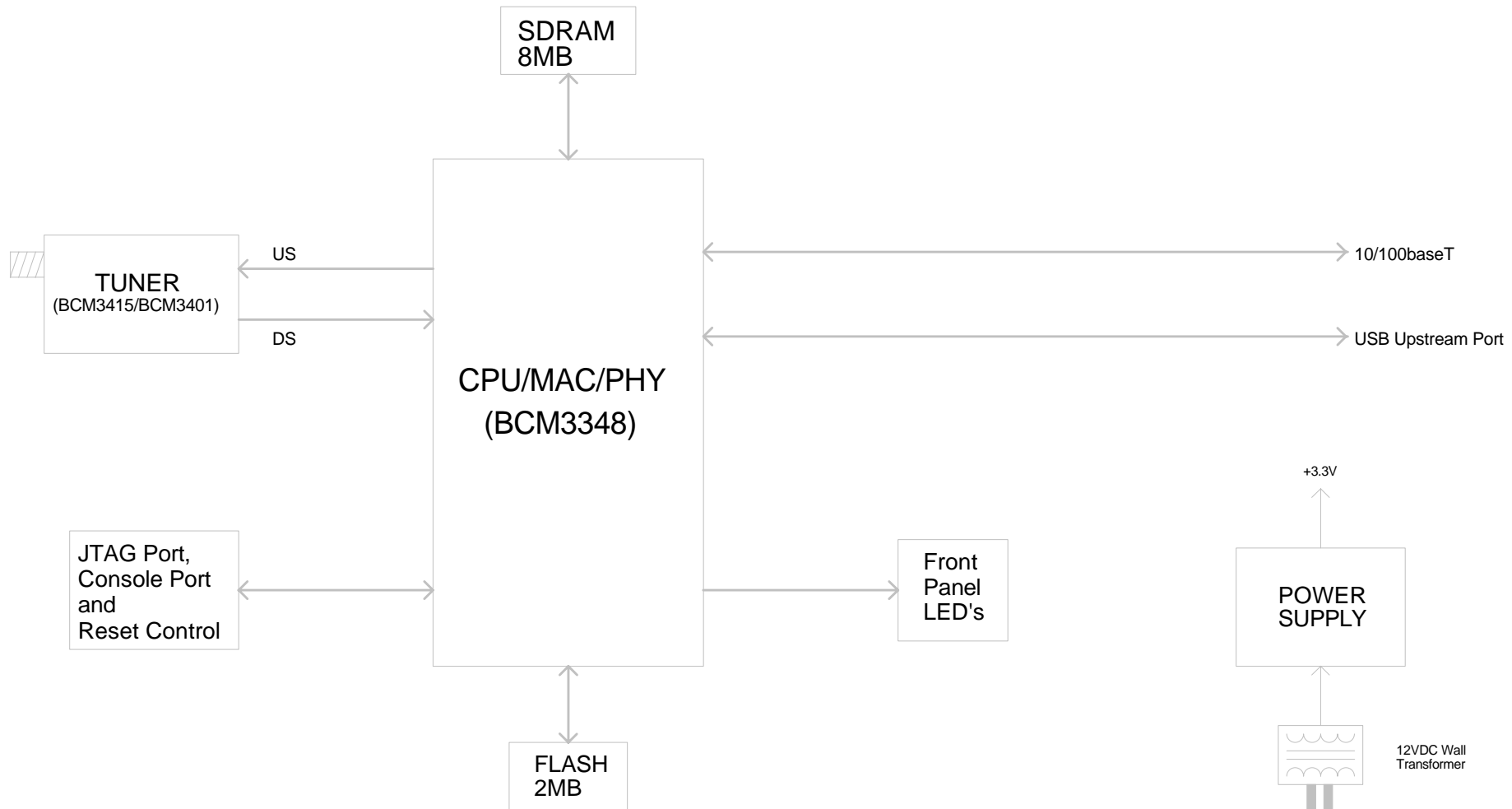


Locate power connector on rear panel as far from the diplexer as possible.



Straddle these resistors across the GND plane cutout between the RF and DIGITAL areas of the board.





**CME105-D40 Cable Modem Reference Design Block Diagram**