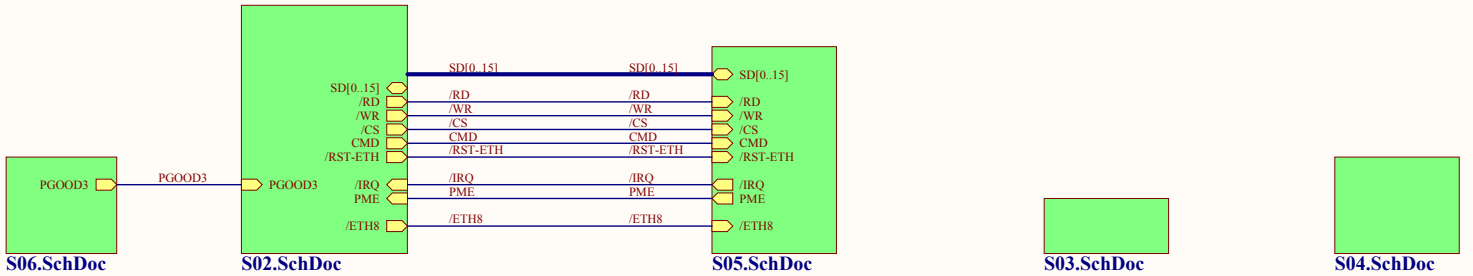

Power Supplies

Amp Board Connector

Ethernet Port & Programming Interface

FireWire Interface

Unused & Bypass

General Conventions:

Signal names begining with a '/' are active low

Unless Specified Otherwise:

- **All resistors are 1% metal film, 1/10W, in 0603 or 0402 package**
- **All non-polarized capacitors are ceramic, in 0603 or 0402 package**
- **All ceramic capacitors up to and including 1,000pF are NPO, 50V or higher, 5% or better**
- **All ceramic capacitors over 1,000pF up to and including 1.0uF are X7R, 16V or higher, 10% or better**
- **All ceramic capacitors over 1.0uF up to and including 10uF are X5R, 6.3V or higher, 20% or better**
- **All ceramic capacitors over 10uF are of type X5R and the specified voltage, 20% or better**
- **All polarized capacitors are Organic Tantalum, of the specified manufacturer/family and voltage, 20% or better**

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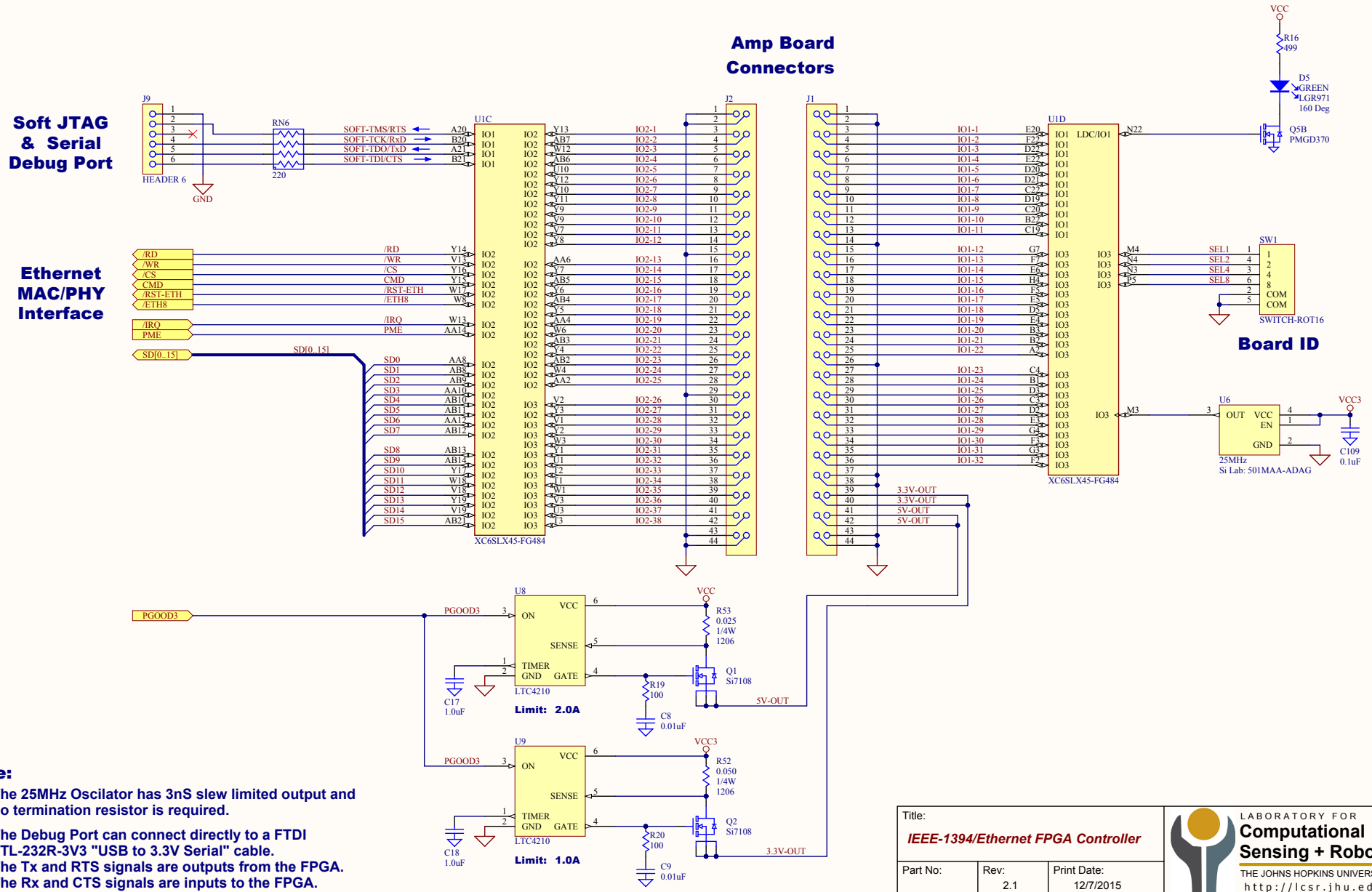
Amp Board Connector



Note:

1) The 25MHz Oscilator has 3nS slew limited output and no termination resistor is required.
2) The Debug Port can connect directly to a FTDI TTL-232R-3V3 "USB to 3.3V Serial" cable. The Tx and RTS signals are outputs from the FPGA. The Rx and CTS signals are inputs to the FPGA.

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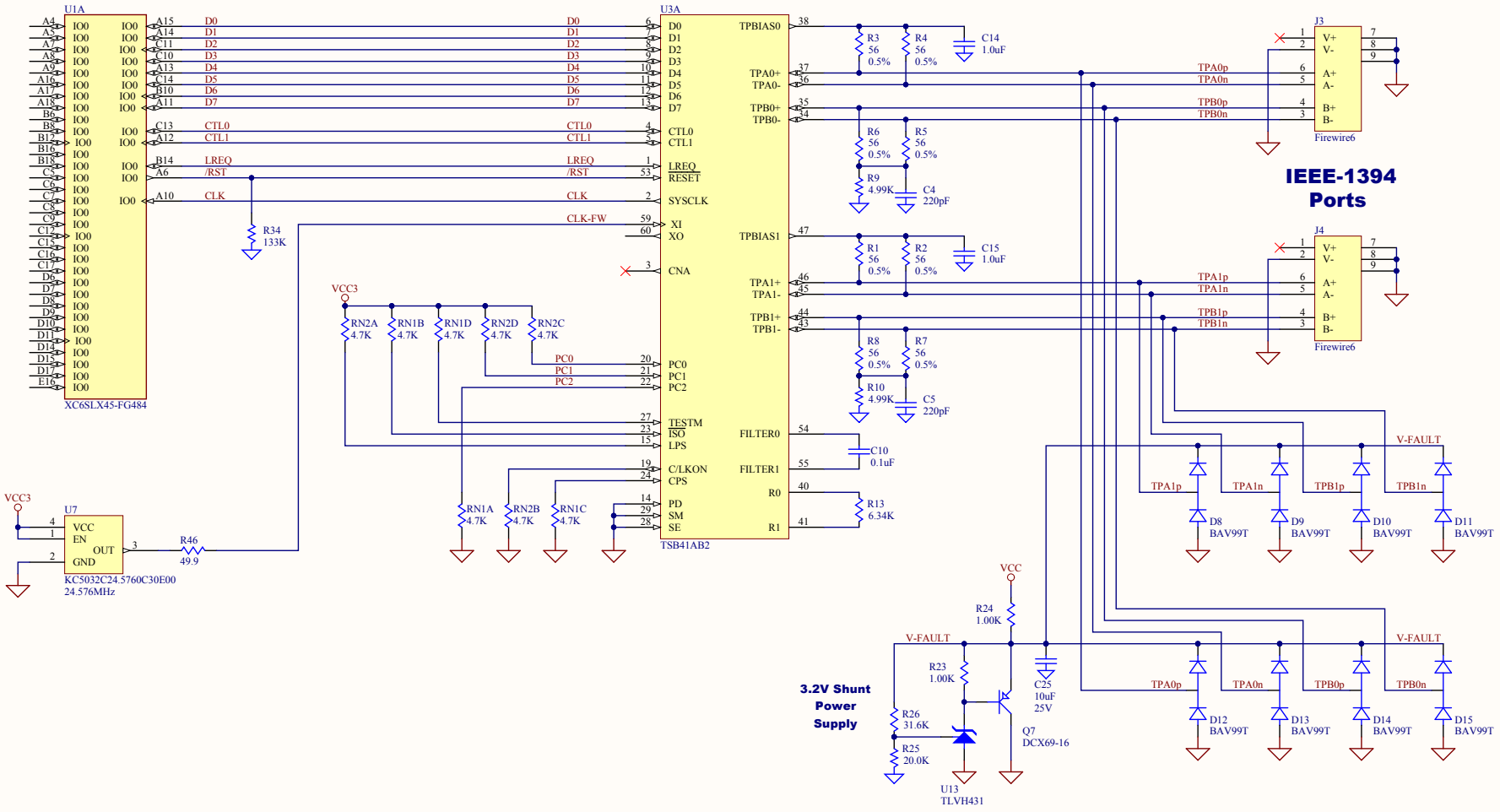
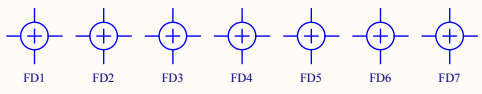
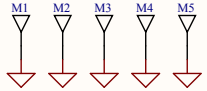
FireWire Controller & Connectors



Fiducials



Mounting Holes



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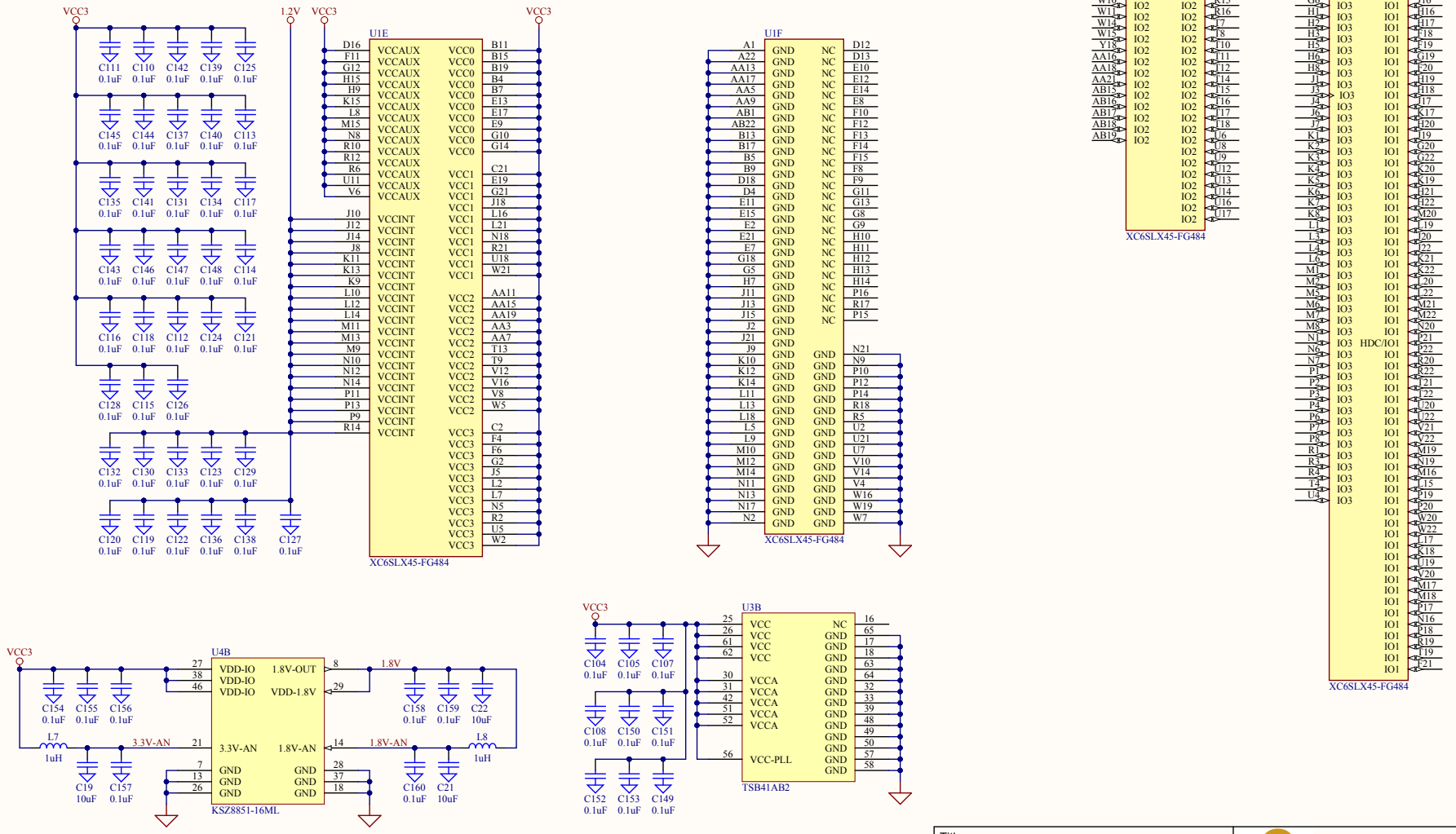
2.1 Rev:

Power Pins & Unused



Title:	*IEEE-1394/Ethernet FPGA Controller*		
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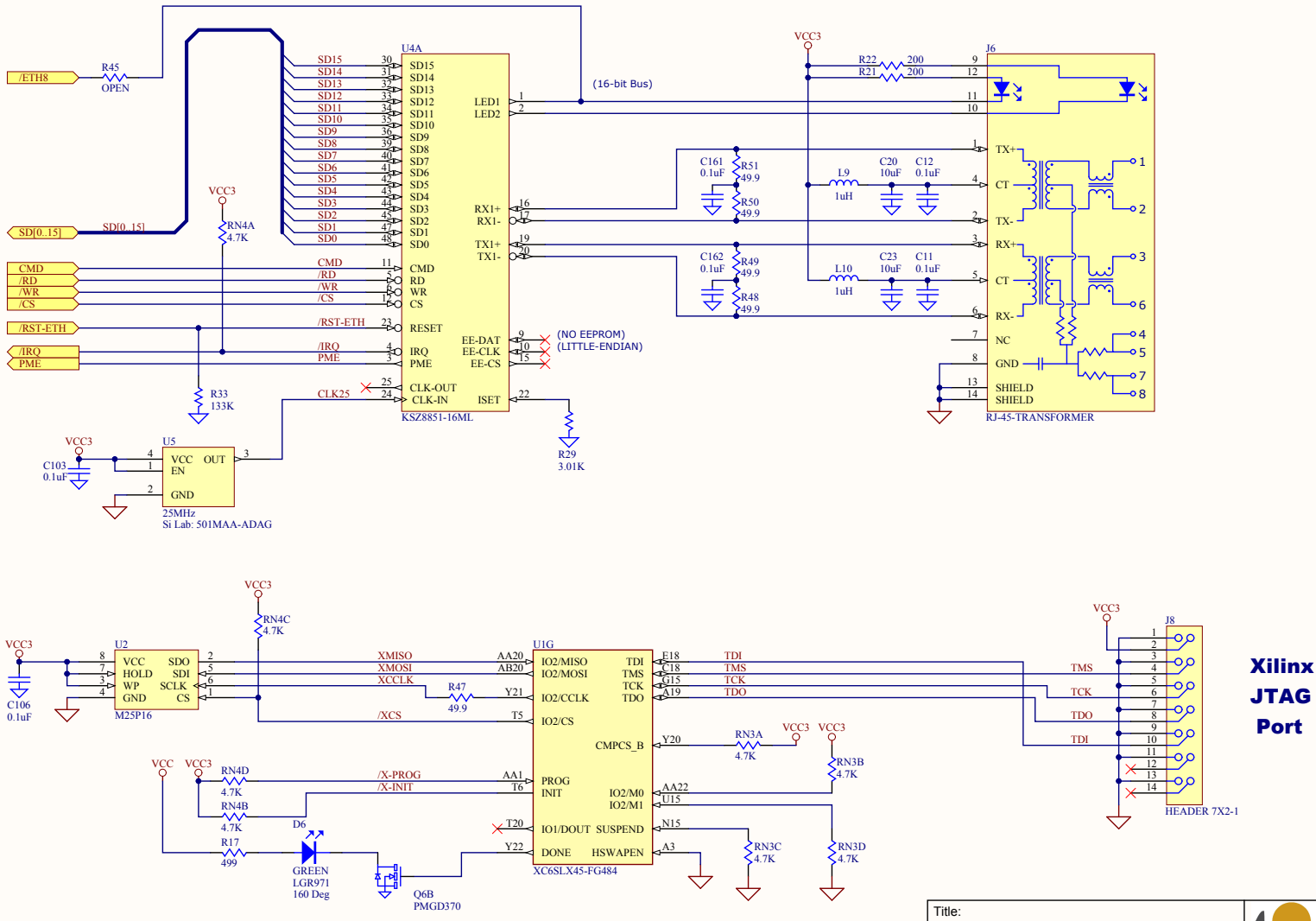
Ethernet/FPGA Init



Note:

1) The 25MHz Oscilator has 3nS slew limited output and no termination resistor is required.

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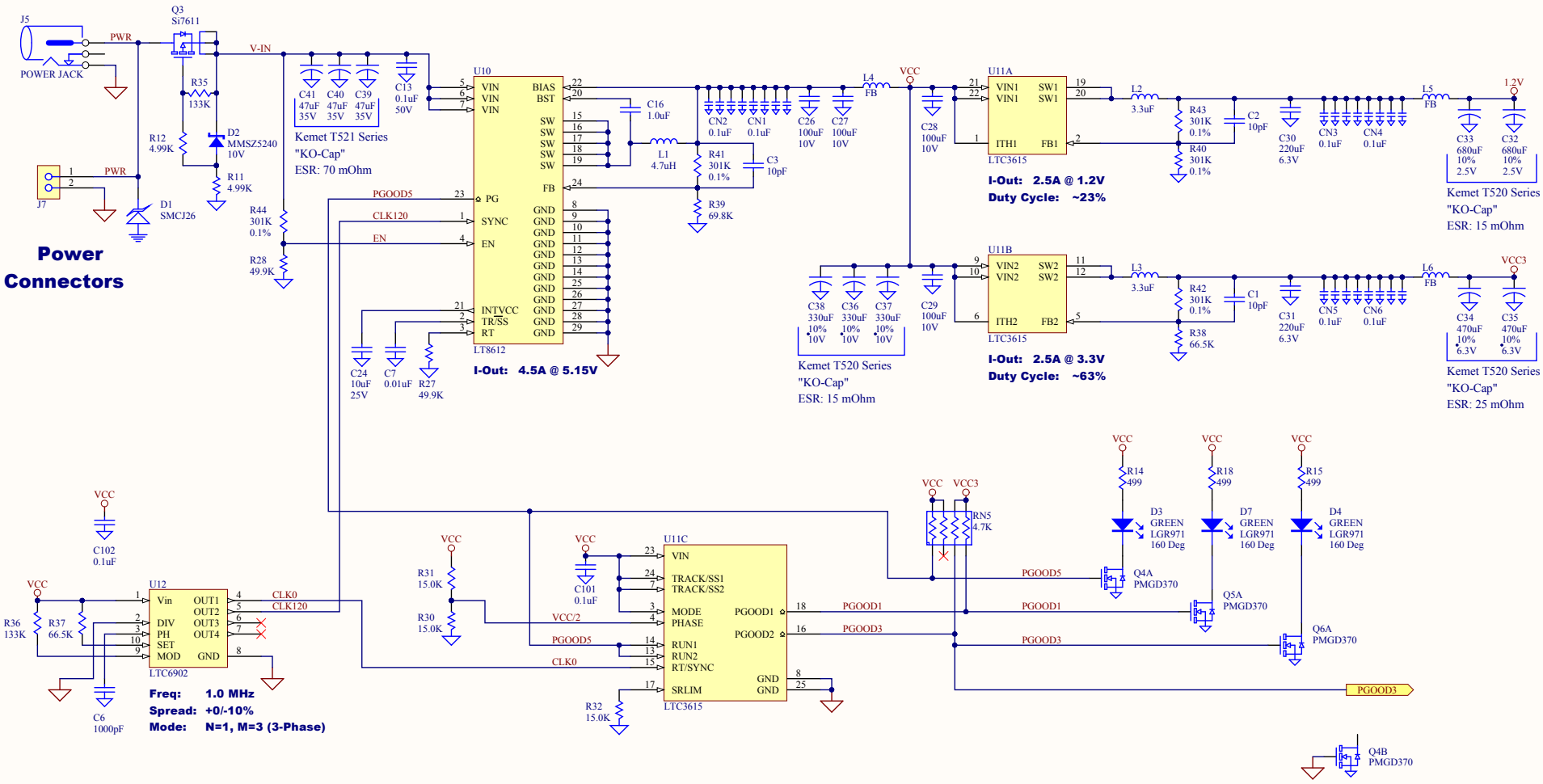
Power Supplies



Note:

1) Even though the power supply chips are rated for higher current, the power supplies, including the inductors and traces, are designed for and tested to the specified current.

2) The clock uses spread spectrum to reduce EMI and noise. The nominal frequency is 1.0MHz which is spread down by 10% The two DC-DC converter chips are synchronized 120° out of phase.

3) The two DC-DC converters in the LTC3615 are 90° out of phase with respect to each other. This results in the top switches in the three DC-DC converters getting enabled at 0°, 90° and 120°

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