16-Channel, 14-Bit, 500 MHz ADC Module

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16-Channel, 14-Bit, 500MHz ADC Board

Populated two Modules
- One module with just two ADC chips
- One module with 8 ADC chips

Fix of the LDO schematic problem

Eliminated the 2.5V LDOs, and installed new LDOs for 2.5V – analog supply for ADCs

Eliminated the 1.25V LDOs.
Changed DC/DC from 1.8V to 1.25V, and used it as analog supply for ADCs

http://edg.uchicago.edu/~bogdan/14BIT_500MHz_ADC_Board/schematics.html
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ADI Calculator Problem

Should be > 200Ohm

Changed Rf, Rg
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VME recorded data – Good Noise even without LDOs for AVDD1 for ADC chips
Noise will get even better on Rev.B, once DC/DC analog power is replaced with LDOs.
16-Channel, 14-Bit, 500MHz ADC Board

Designed and tested small PCB with correct schematic of 1 channel preamp and LDOs.
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- Tested SFP, QSFPs – basic test OK.

- Tested loading .pof on Board 1 (with 2 ADC chips).

- Measured Power Supply Currents:
  - +3.3V – 5A (3A with ADCs in PDWN)
  - +5V – 3A (1.1A with ADCs in PDWN)
  - +7V – 1.13A
  - 07V – 0.84A

Total power 45W (29.5W with ADCs in PDWN).

To do: test X-talk for new RJ45 connections