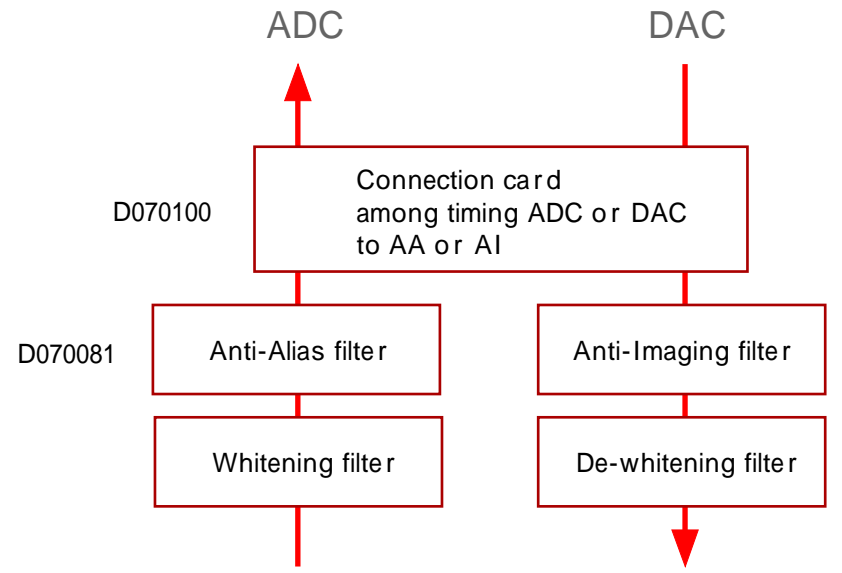
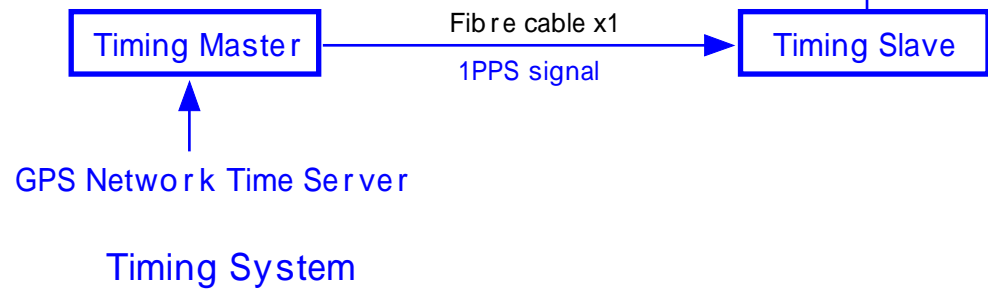
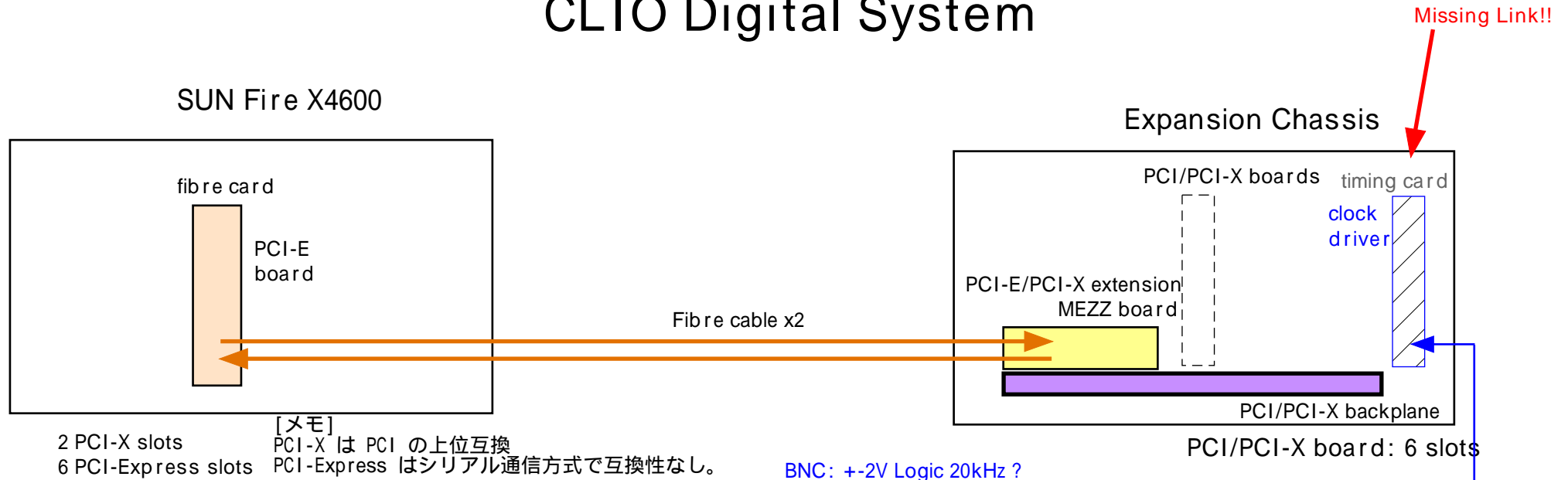


- Shopping via LIGO
- No needs (at least for 1st step)
- To be checked and to be made

CLIO digital parts list

group	Ref	Qty 1st	Qty2nd	final Qt	Part Number	Description	Vendor
1	1	1	0	1	Fire X4600 ?processors ^o	● Work station	SUN
1	2	2	1	3	D050567-A Not Available	● Expansion chassis	LIGO
1	3	2	1	3	?	● PCI/PCI-X backplane 64/66MHz EXPANSION BACKPLANE	MOBILITY ELECTRONICS, INC.
1	4	2	1	3	?	● PCI EXPRESS TO PCIX EIF PHOENIX MEZZ BOARD	MAGMA
1	5	2	2	4		● 150m Fiber optical patch cableLC-LC Duplex MM	CDW
1	6	2	0	2		● 10m Fiber optical patch cableLC-LC Duplex MM	CDW
1	7	1	4	5	PMC66-16A164SSA-64-50M	● ADC Modules and cables	General Standards
1	8	2	3	5	PMC66-16A016-16-F0-DF	● DAC Modules and cables	General Standards
1	9	2	2	4	PCHIRO-16 ^o	● Binary I/O Modules and cables	CHASSIS PLANS
1	10	5	9	14	D070100	● Connection card among timing ADC or DAC to AA or AI	LIGO
1	11	1	0	1	Tempus LX	● GPS Network Time Server	EndRun TECHNOLOGIES
1	12	1	0	1	D050239 ^o	● Master Timer Sequencer	LIGO
1	13	2	1	3	D050442 ^o	● Timing slave	LIGO
1	14	1	4	5	D990694-A1	● Whitening filter	LIGO
1	15	2	3	5	?	● De-whitening filter	LIGO
1	16	1	4	5	D070081 ^o	● AdL AA filter	LIGO
1	17	2	3	5	D070081 ^o	● AdL AI filter	LIGO
2	18	1	0	1		Matlab, simulink	
2	19	1	0	1		● Real time linux core	Windrevier

CLIO Digital System



Analog Interfaces

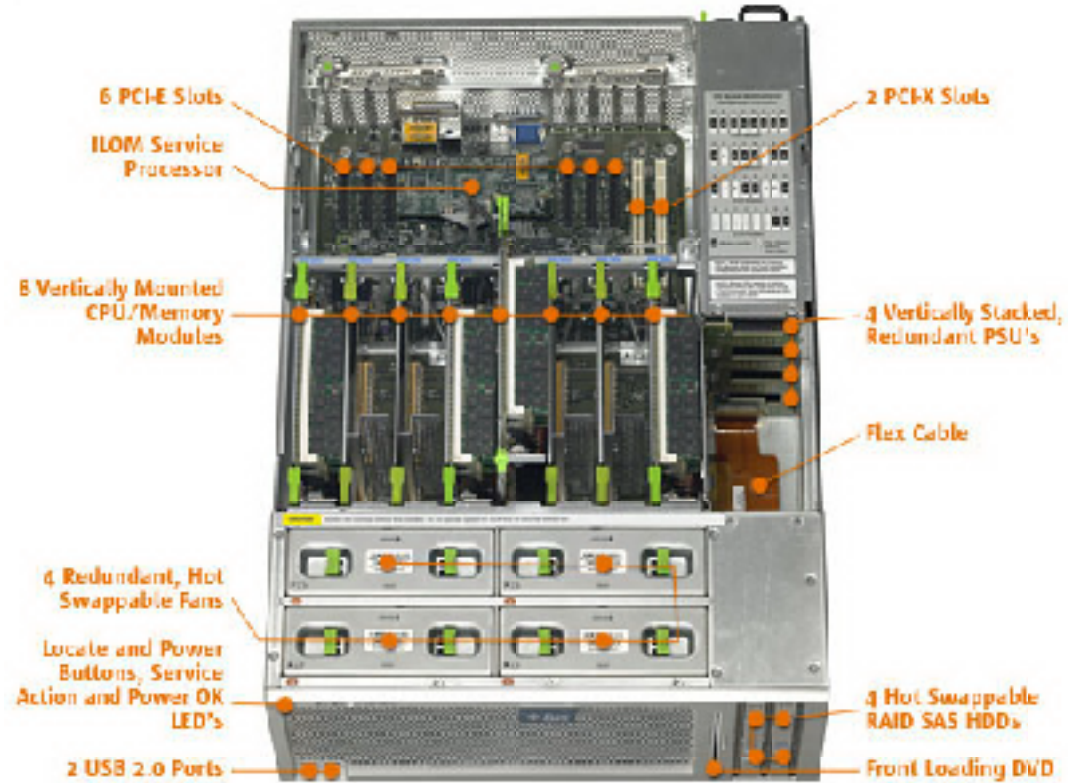
SUN Fire X4600

<http://jp.sun.com/products/servers/x64/x4600/>

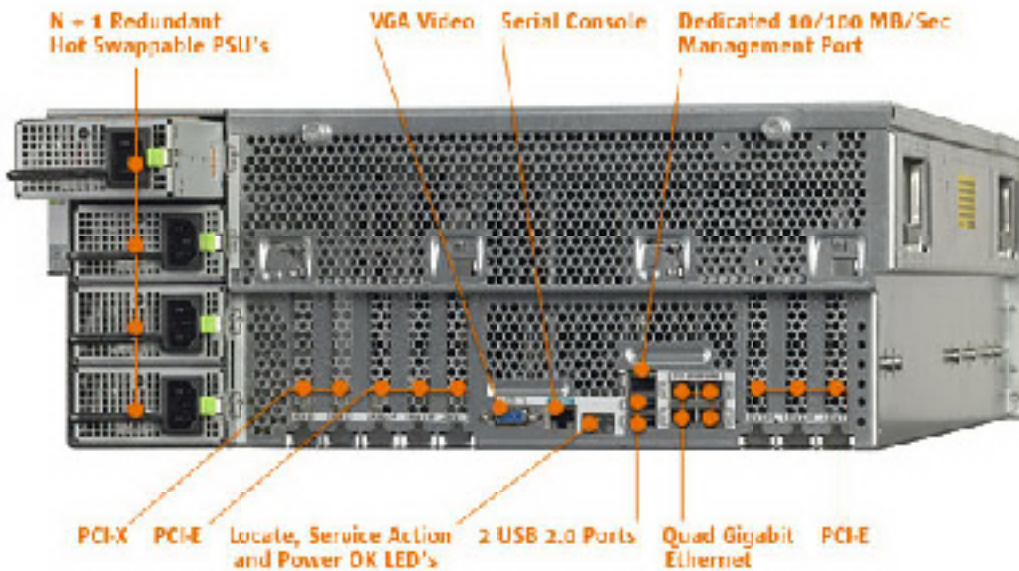
Front View



Top View



Rear View



Schematic view of Expansion Chassis

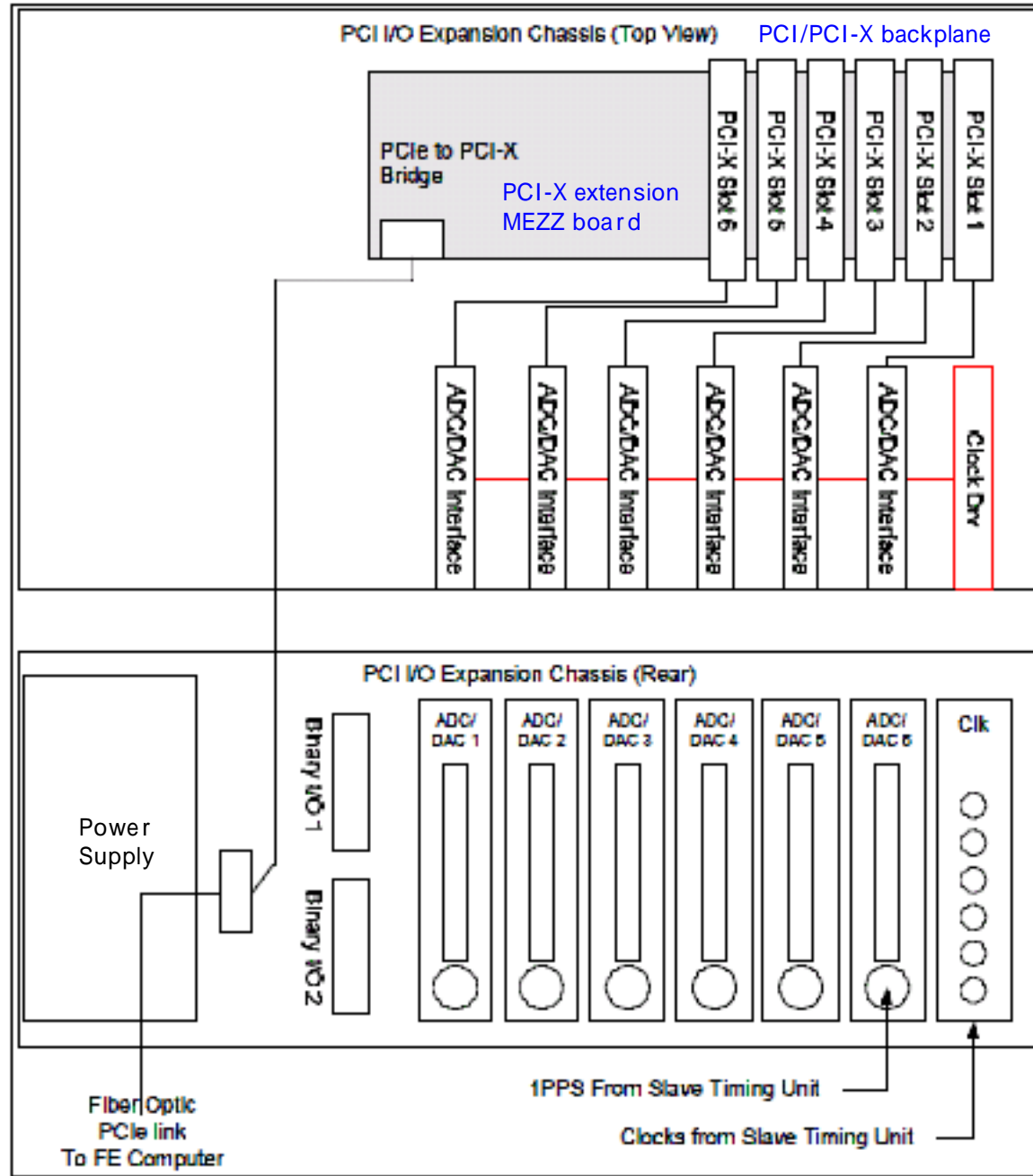
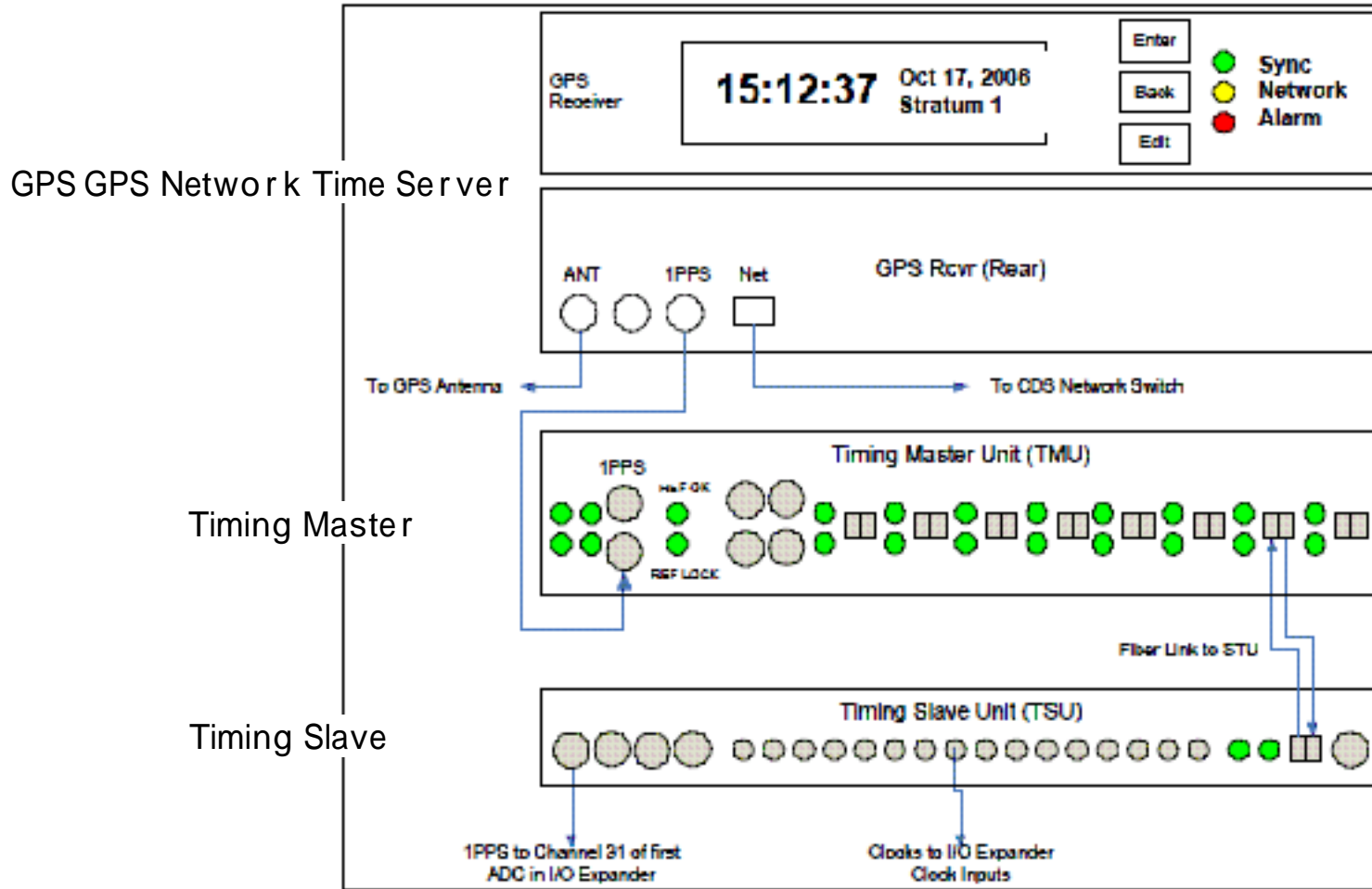


Figure 9: PCI I/O Expansion Chassis

Schematic view of Timing System

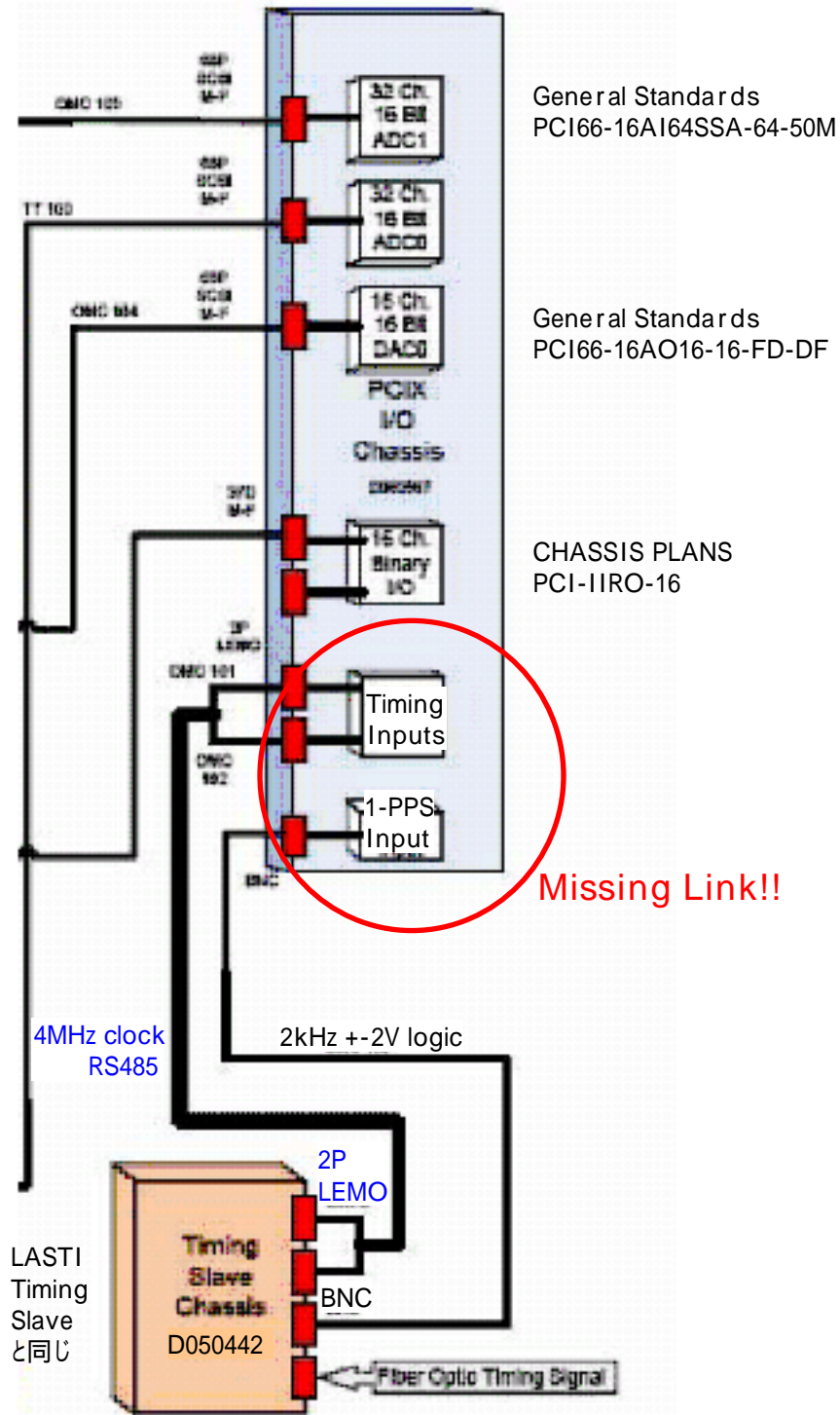


Produced by EndRUN

1PPS = 1 pulse per second

Figure 3: Timing Distribution System

Expansion Chassis

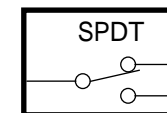
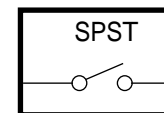


16ch Digital Input (Diode bridge + Opt-isolator)

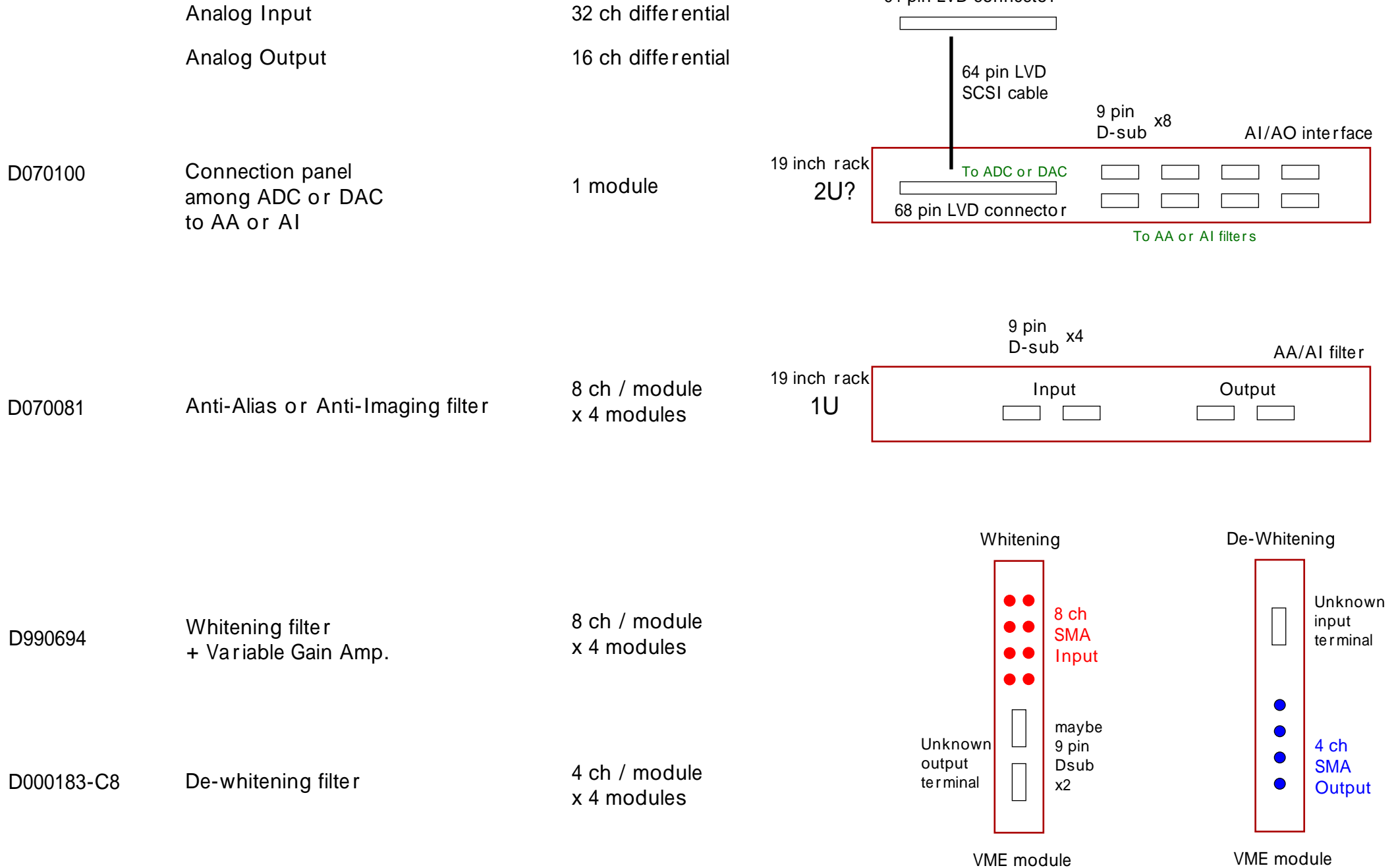
10ch SPDT relays (1 input, 2 outputs)

6ch SPST relays (1 input, 1 output)

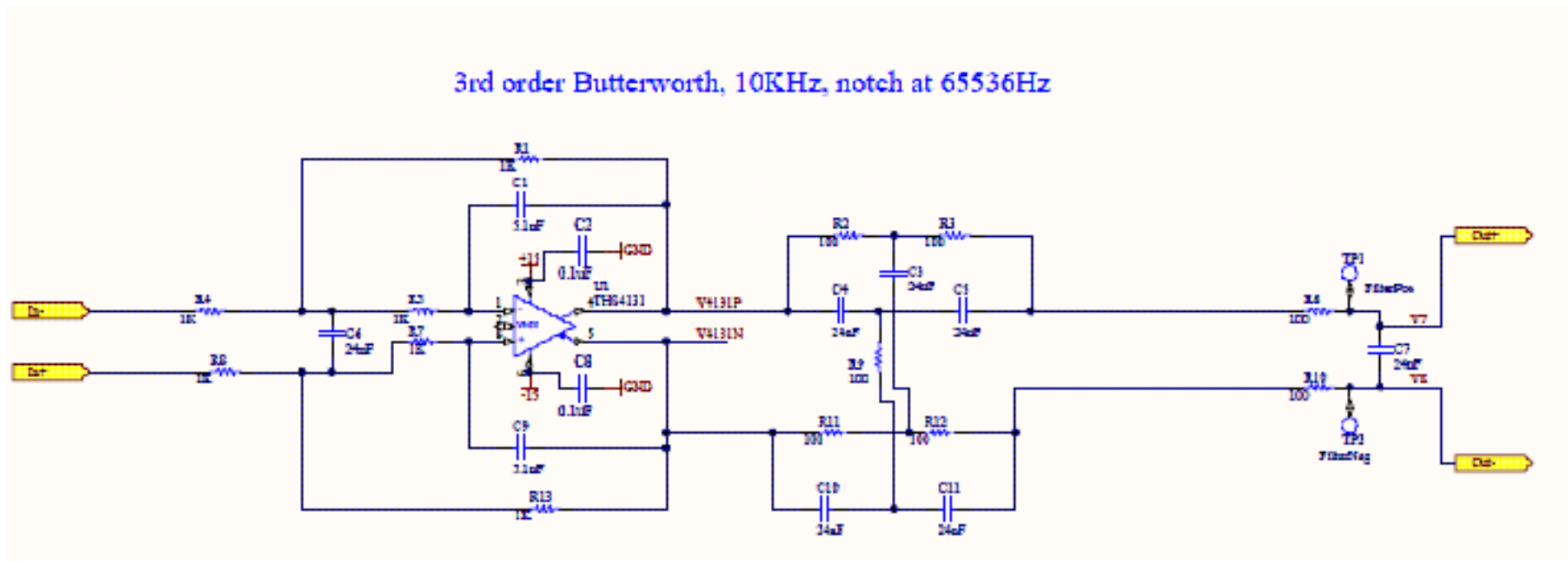
* 5ms response time



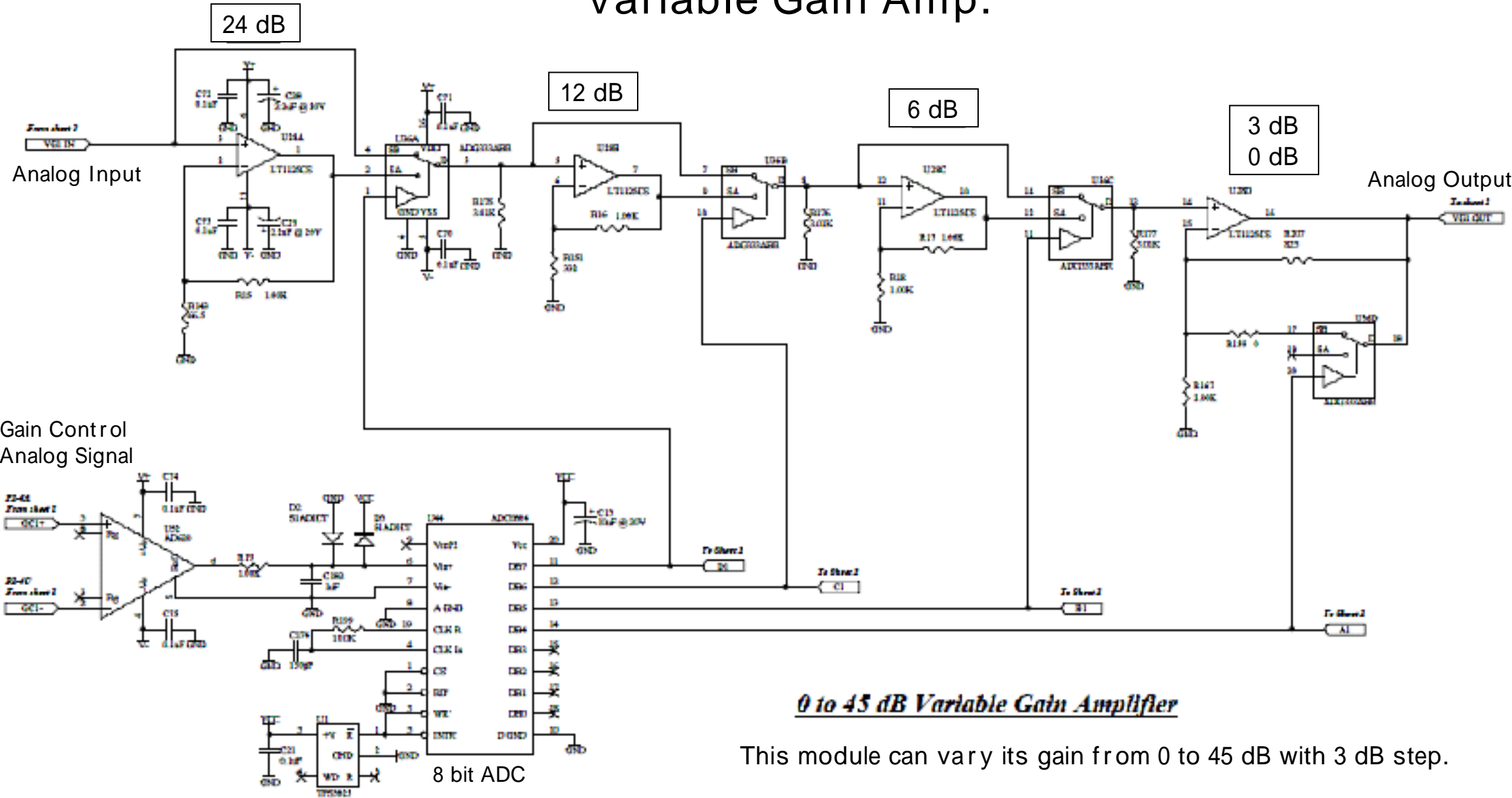
LIGO as of 2008



Schematic view of Anti-Alias and Anti-Imaging filter



Schematic view of Variable Gain Amp.



0 to 45 dB Variable Gain Amplifier

This module can vary its gain from 0 to 45 dB with 3 dB step.