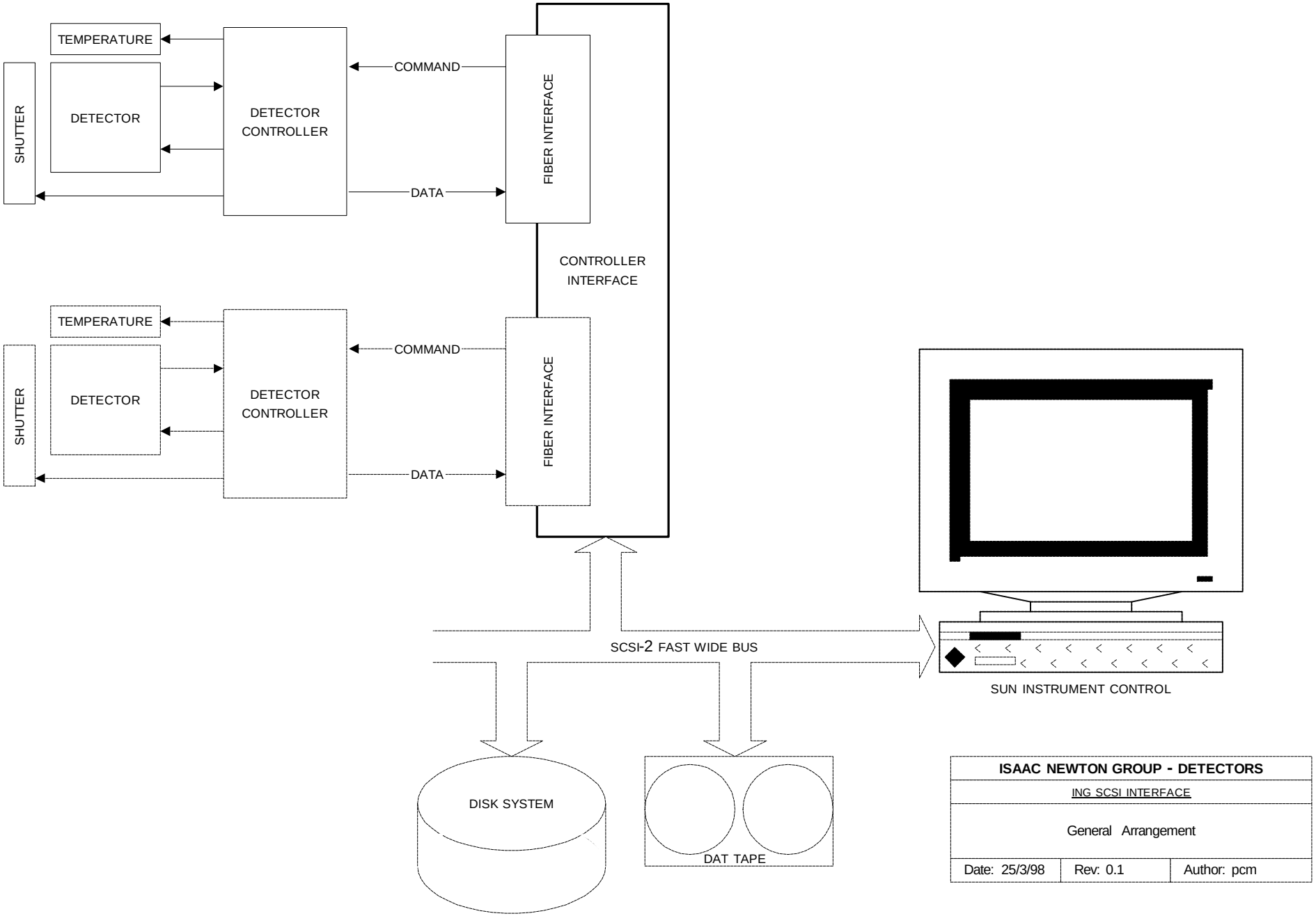
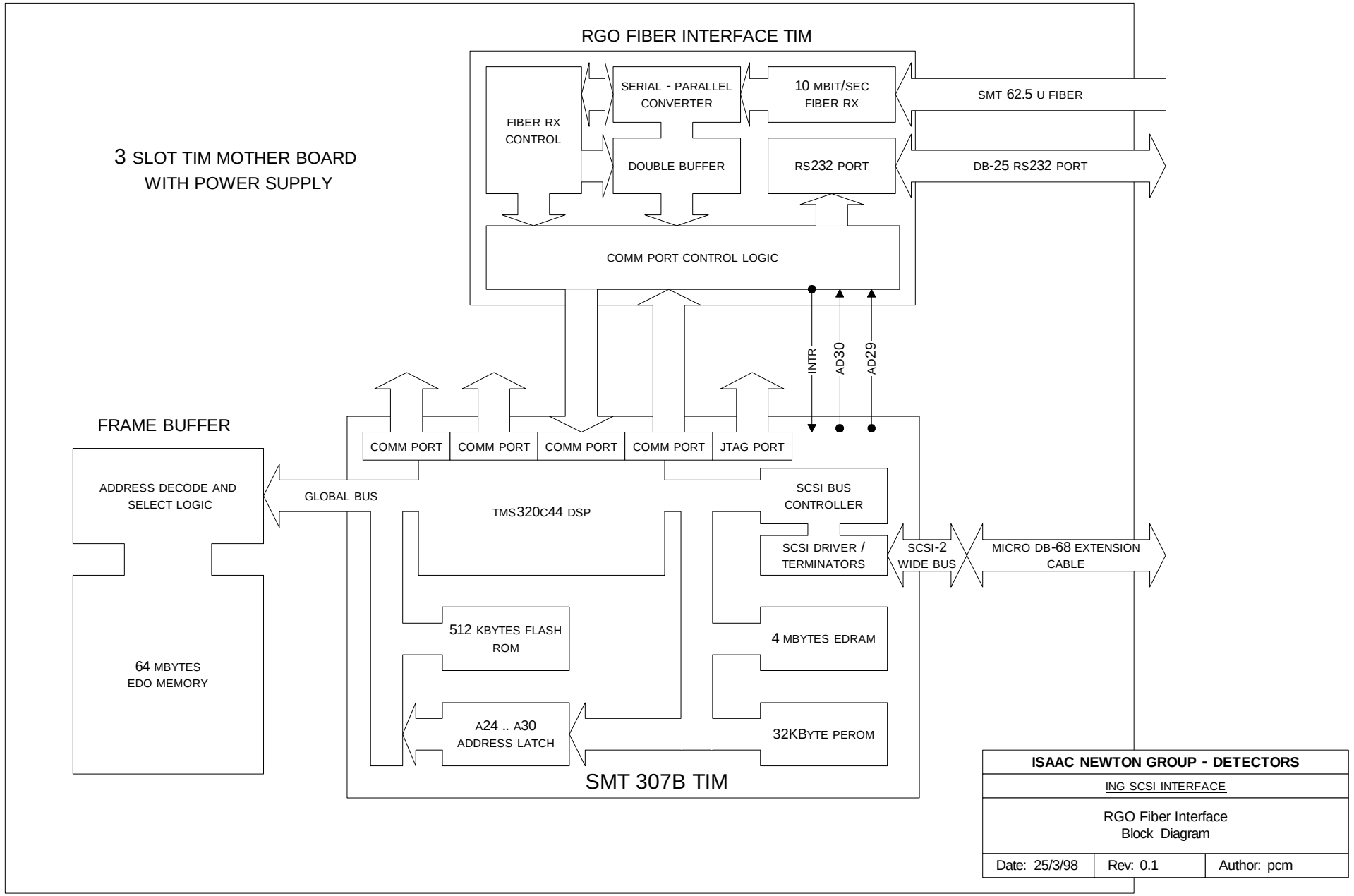
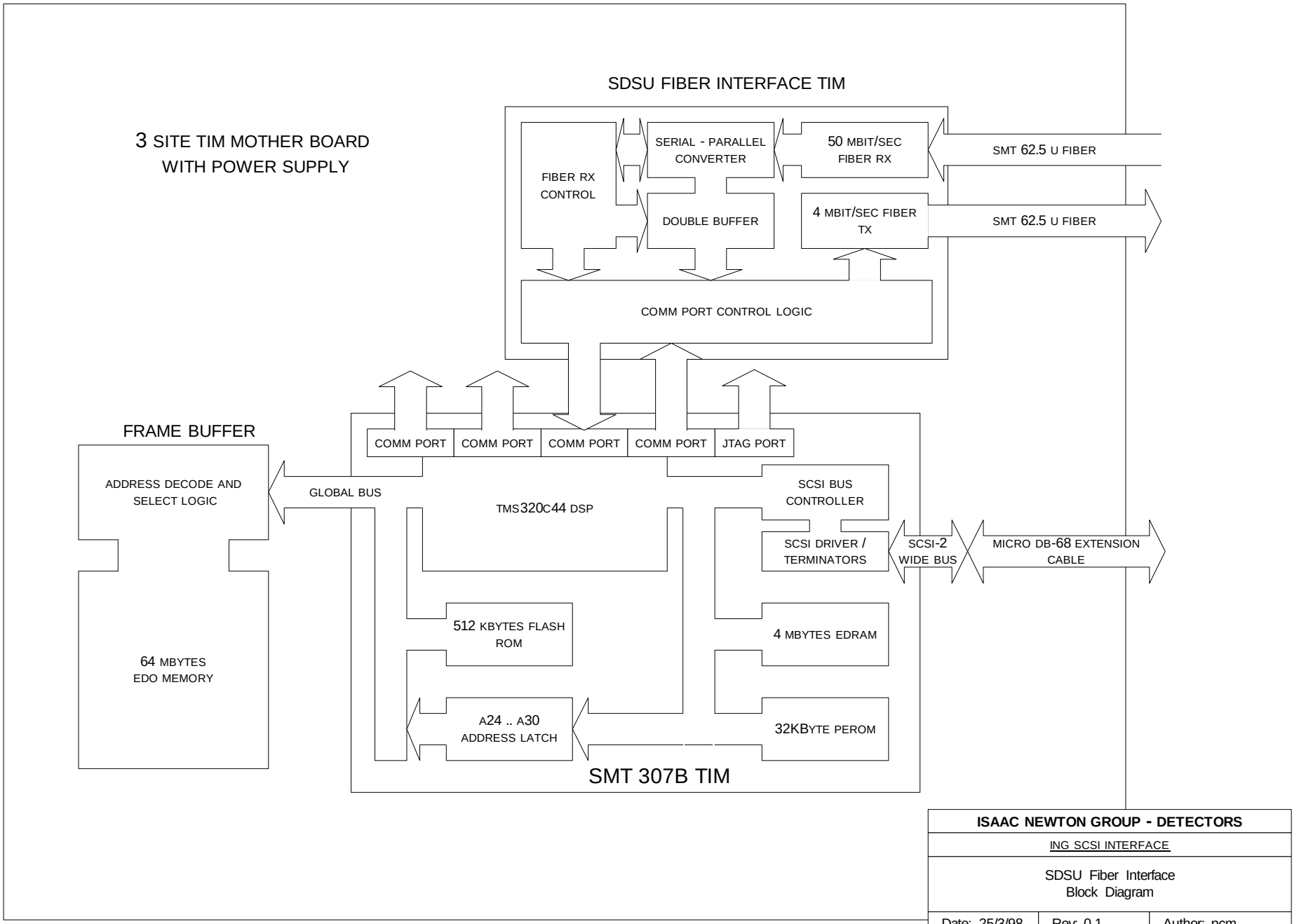
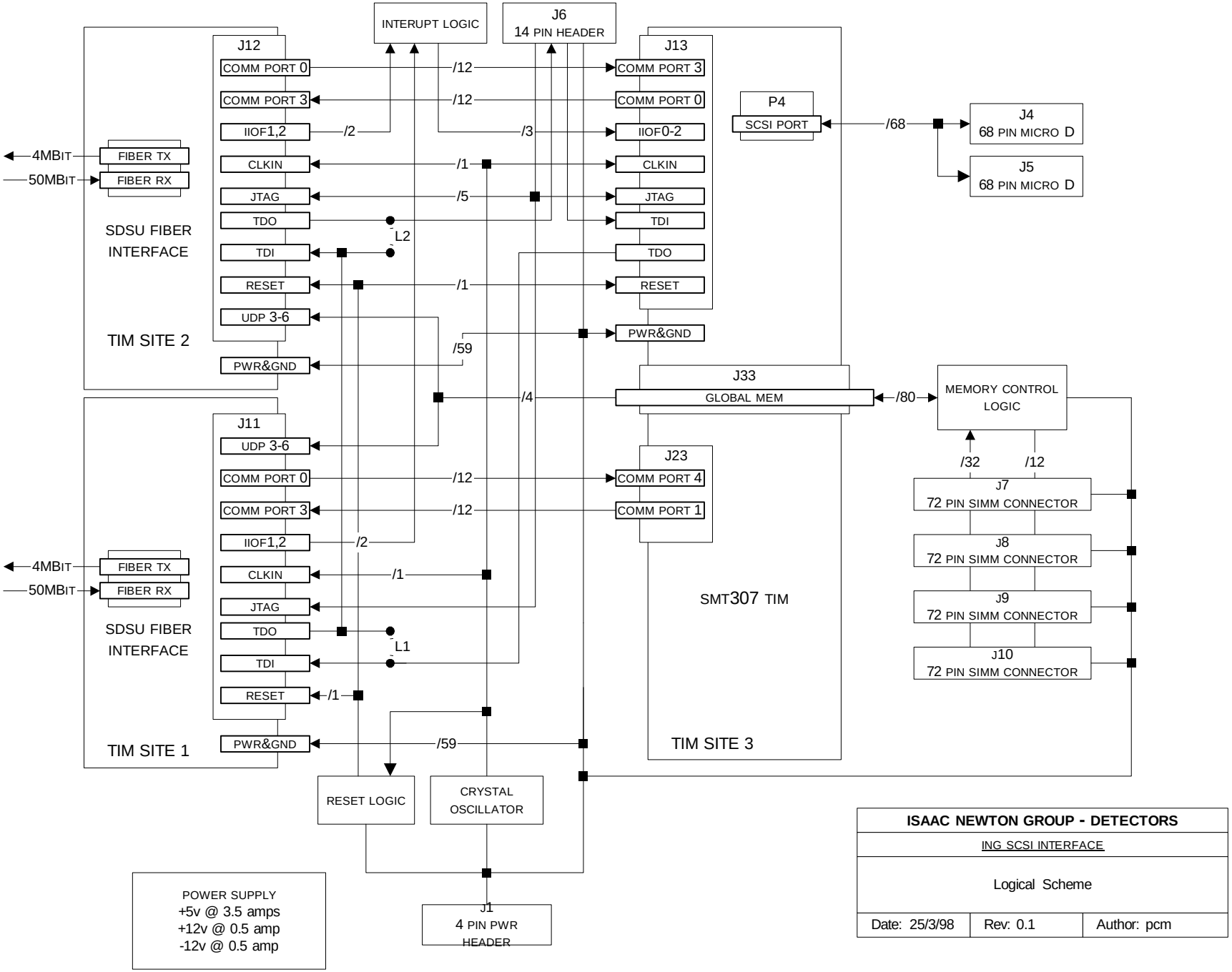


ISAAC NEWTON GROUP - DETECTORS		
ING SCSI INTERFACE		
General Arrangement		
Date: 25/3/98	Rev: 0.1	Author: pcm

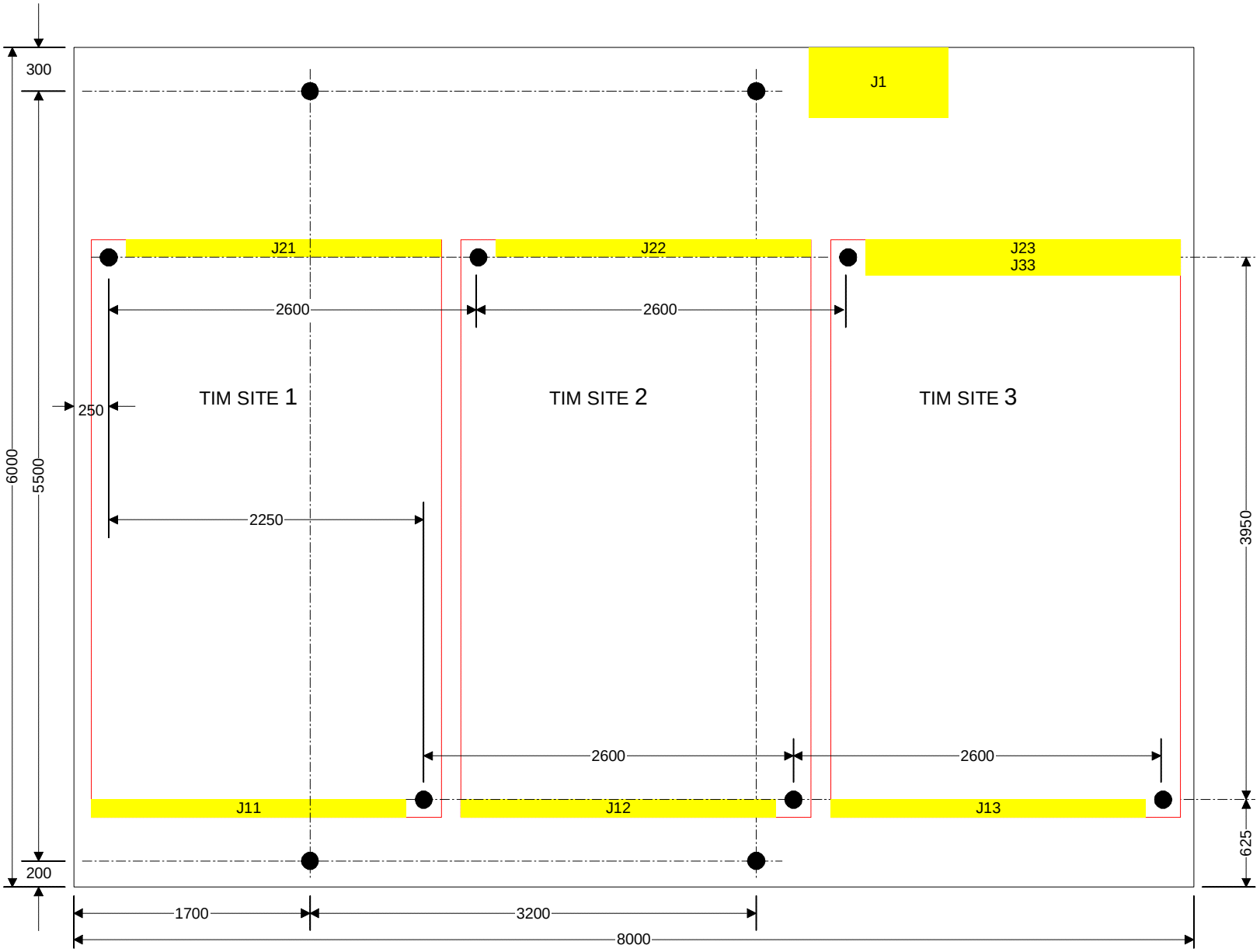

RGO FIBER INTERFACE TIM
3 SLOT TIM MOTHER BOARD
WITH POWER SUPPLY
FIBER RX
CONTROL
SERIAL - PARALLEL
CONVERTER
10 MBIT/SEC
FIBER RX
SMT 62.5 U FIBER
DOUBLE BUFFER
RS232 PORT
DB-25 RS232 PORT
COMM PORT CONTROL LOGIC
INTR
AD30
AD29
FRAME BUFFER
COMM PORT
COMM PORT
COMM PORT
COMM PORT
JTAG PORT
ADDRESS DECODE AND
SELECT LOGIC
GLOBAL BUS
TMS320C44 DSP
SCSI BUS
CONTROLLER
SCSI DRIVER /
TERMINATORS
SCSI-2
WIDE BUS
MICRO DB-68 EXTENSION
CABLE
512 KBYTES FLASH
ROM
4 MBYTES EDRAM
64 MBYTES
EDO MEMORY
A24 .. A30
ADDRESS LATCH
32KBYTE PEROM
SMT 307B TIM
ISAAC NEWTON GROUP - DETECTORS
ING SCSI INTERFACE
RGO Fiber Interface
Block Diagram
Date: 25/3/98
Rev: 0.1
Author: pcm



ISAAC NEWTON GROUP - DETECTORS		
ING SCSI INTERFACE		
SDSU Fiber Interface Block Diagram		
Date: 25/3/98	Rev: 0.1	Author: pcm

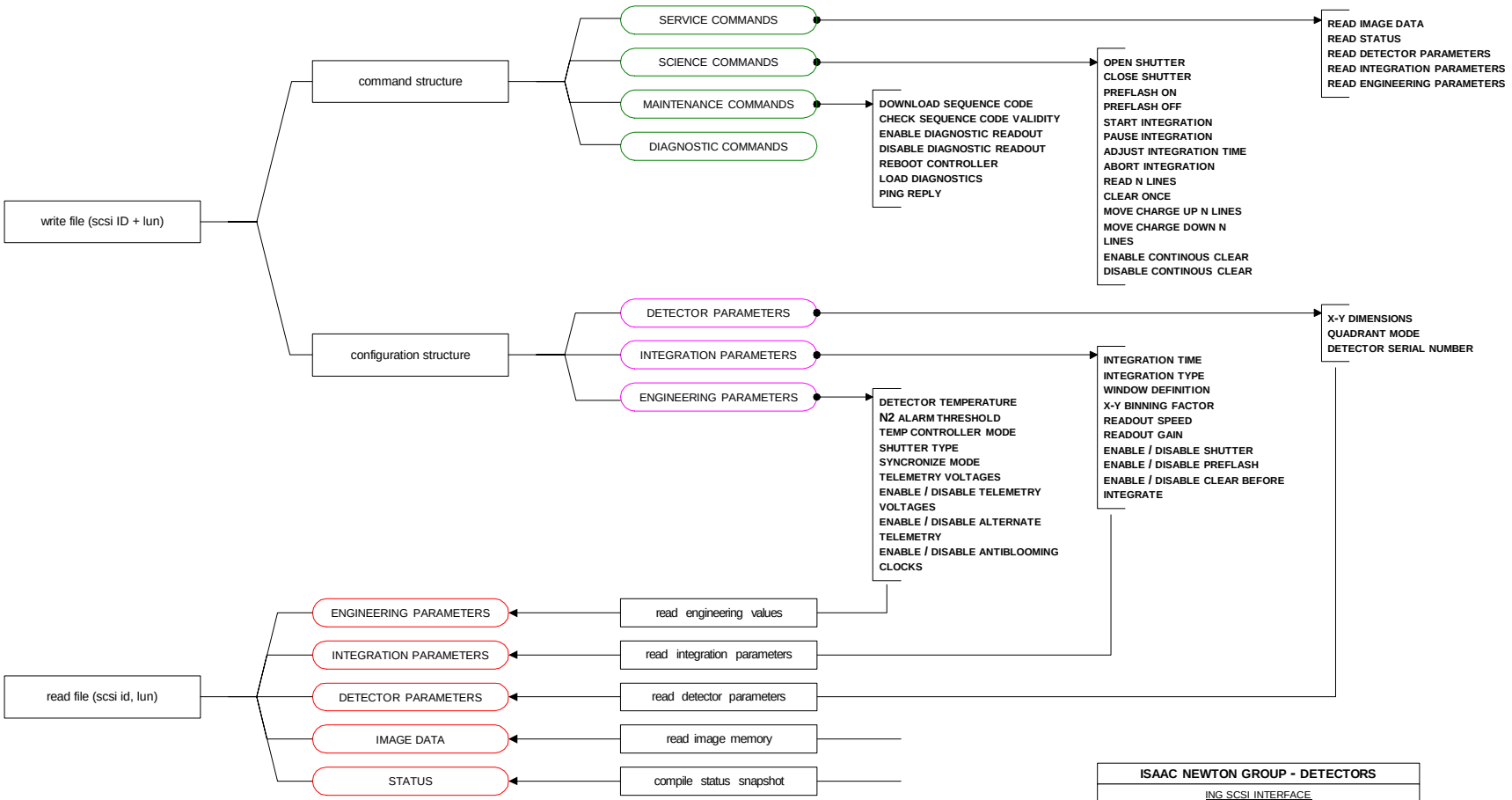


ISAAC NEWTON GROUP - DETECTORS		
ING SCSI INTERFACE		
Logical Scheme		
Date: 25/3/98	Rev: 0.1	Author: pcm

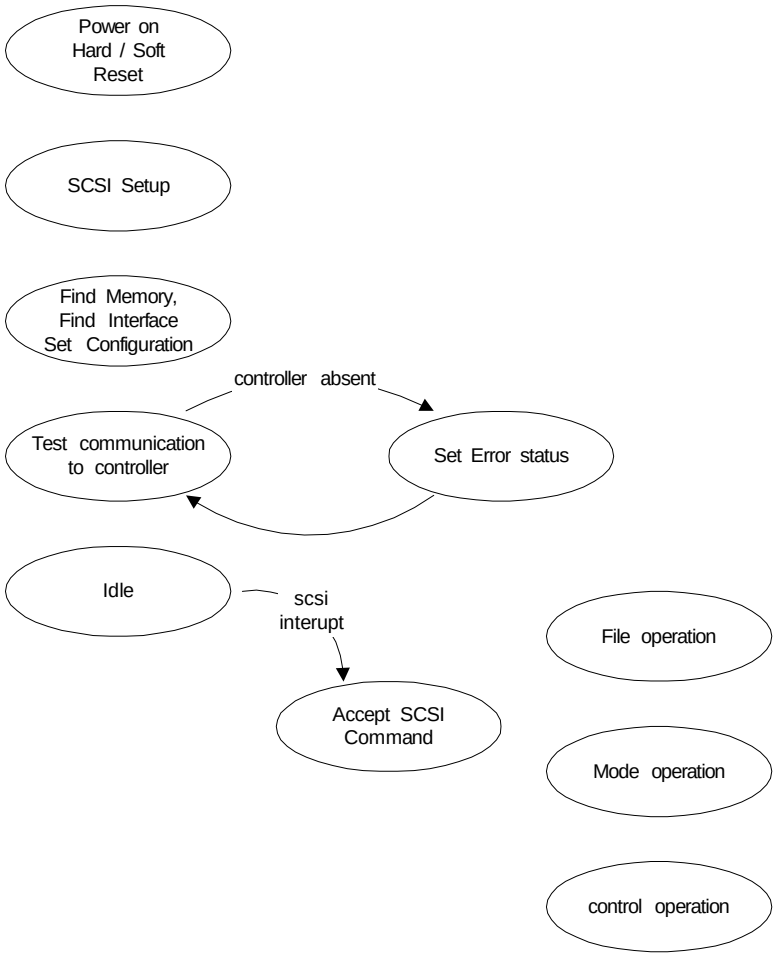


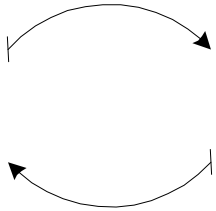
all dimensions in thou's
of an inch

ISAAC NEWTON GROUP - DETECTORS		
ING SCSI INTERFACE		
Mother Board Mechanical Layout		
Date: 25/3/98	Rev: 0.1	Author: pcm

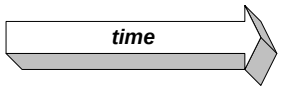


ISAAC NEWTON GROUP - DETECTORS		
ING_SCSI_INTERFACE		
Software Command Set and Hierarchy		
Date: 25/3/98	Rev: 0.1	Author: pcm

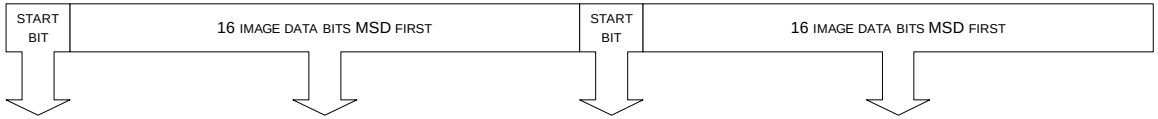




ISAAC NEWTON GROUP - DETECTORS		
ING SCSI INTERFACE		
Software Logical Structure		
Date: 25/3/98	Rev: 0.1	Author: pcm

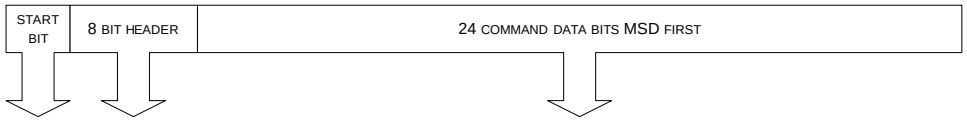


SDSU DATA PROTOCOL



50 Mbit / sec Scrambled NRZ

SDSU MESSAGE PROTOCOL

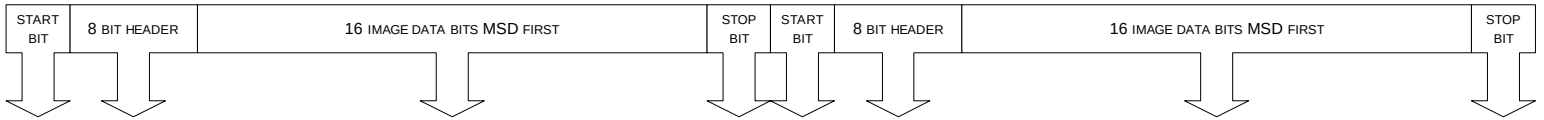


4 Mbit / sec Scrambled NRZ

SDSU MESSAGE PROTOCOL

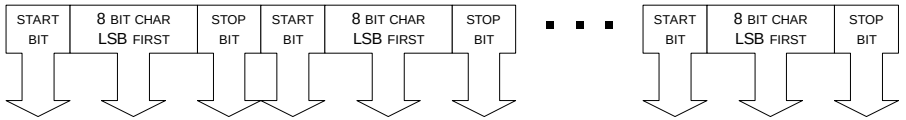
50 Mbit / sec Scrambled NRZ

RGO DATA PROTOCOL



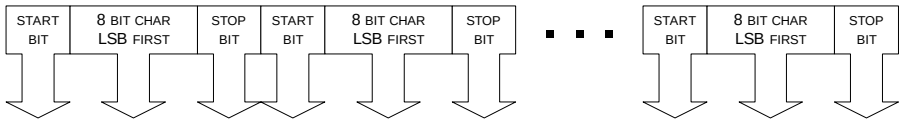
Manchester encoded 10 Mbit / sec

RGO COMMAND PROTOCOL



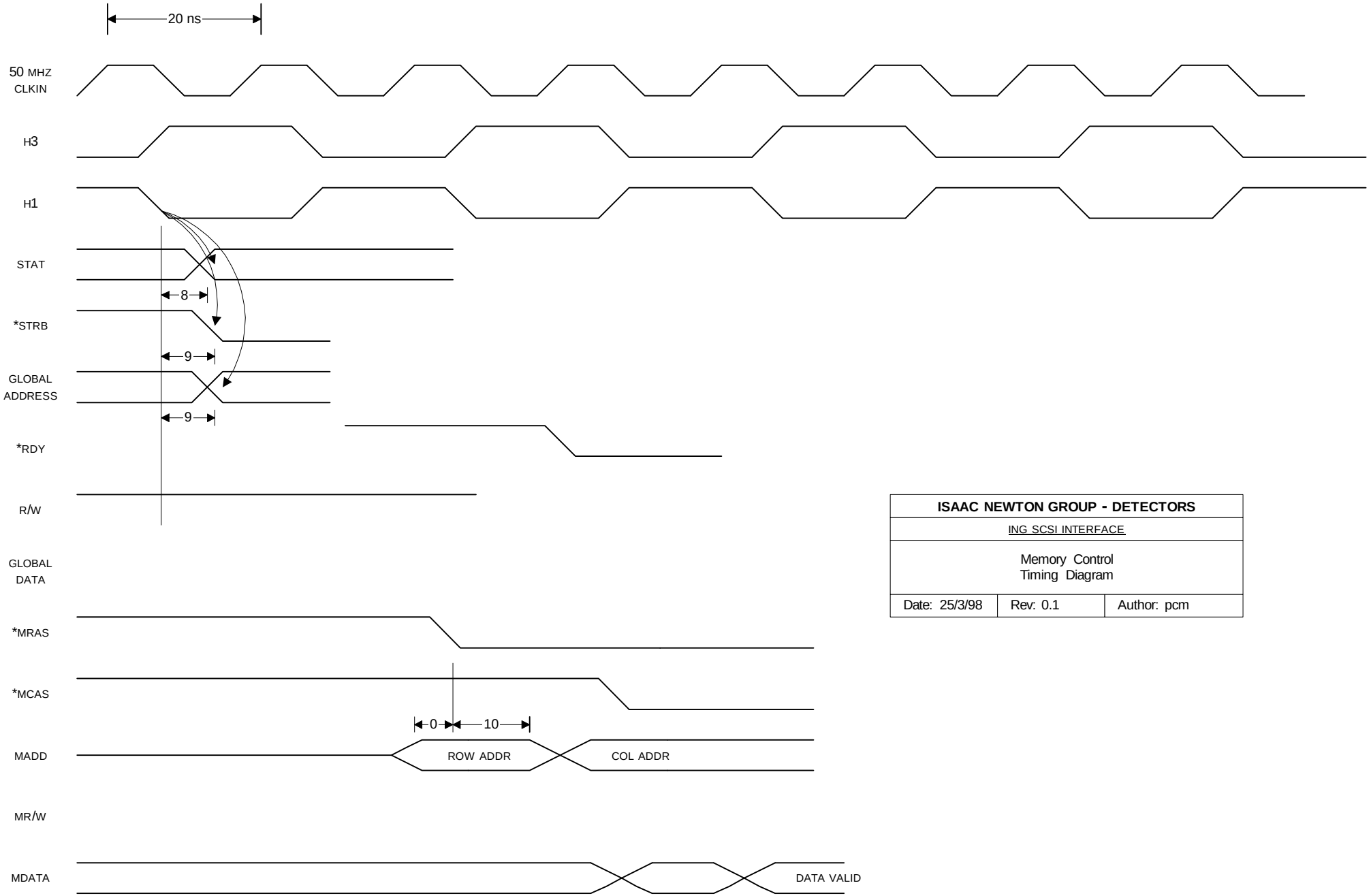
RS232 9600 baud Multi character / variable length

RGO MESSAGE PROTOCOL

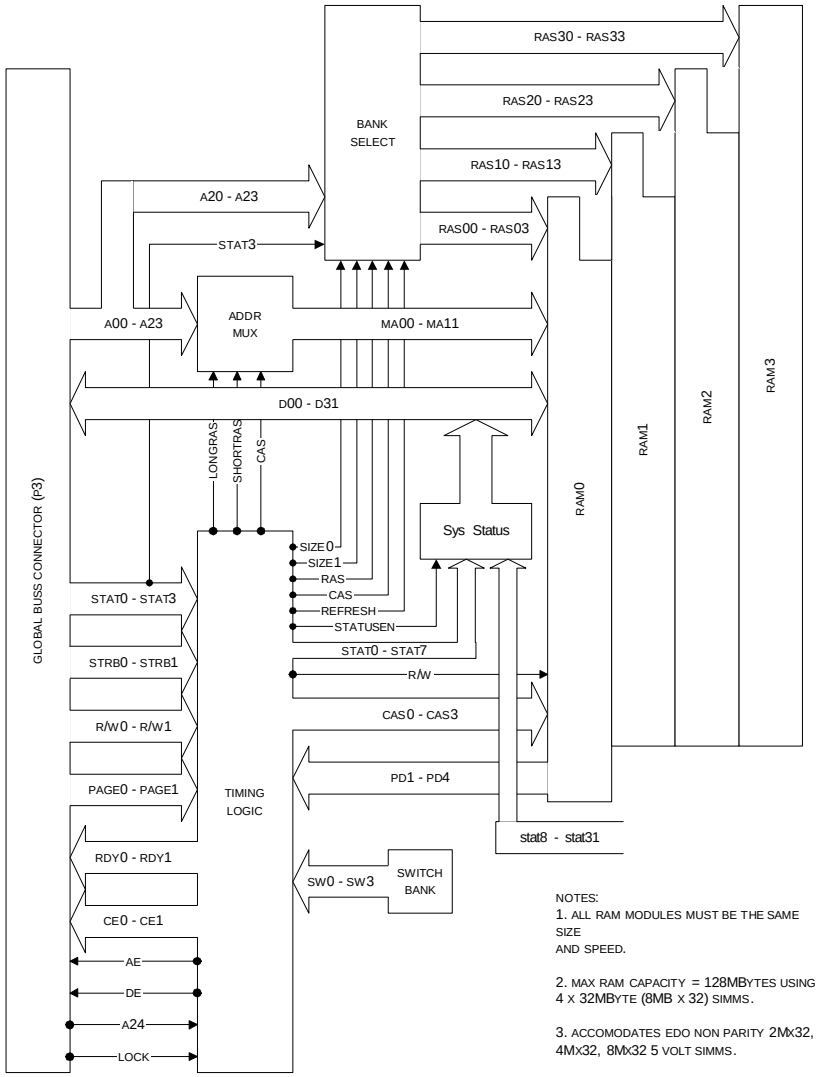


RS232 9600 baud Multi character / variable length

ISAAC NEWTON GROUP - DETECTORS		
ING_SCSI_INTERFACE		
Software Fiber Protocols		
Date: 25/3/98	Rev: 0.1	Author: pcm



ISAAC NEWTON GROUP - DETECTORS		
ING SCSI INTERFACE		
Memory Control Timing Diagram		
Date: 25/3/98	Rev: 0.1	Author: pcm



NOTES:

1. ALL RAM MODULES MUST BE THE SAME SIZE AND SPEED.

2. MAX RAM CAPACITY = 128MBYTES USING 4 X 32MBYTE (8MB X 32) SIMMS.

3. ACCOMODATES EDO NON PARITY 2Mx32, 4Mx32, 8Mx32 5 VOLT SIMMS.

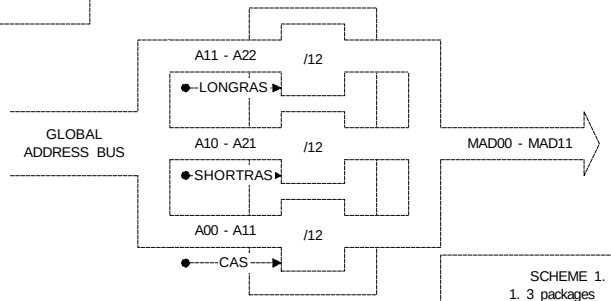
4. LOCK SIGNAL IS USED BY SOFTWARE REFRESH ACCESS

5. A24 ENABLES MEMORY BANK WHEN 8Mx32 SIMMS USED

ISAAC NEWTON GROUP - DETECTORS		
ING_SCSI_INTERFACE		
Memory Control Logic Block Diagram		
Date: 25/3/98	Rev: 0.1	Author: pcm

SIZE MBYTE	ADDRESS SPACE	32MBit SIMM	16MBit SIMM	8MBit SIMM
8	8000000 - 81FFFFF	J7	J7	J7
16	8200000 - 83FFFFF			J8
24	8400000 - 85FFFFF		J8	J9
32	8600000 - 87FFFFF			J10
40	8800000 - 89FFFFF	J8	J9	
48	8A00000 - 8BFFFFF			
56	8C00000 - 8DFFFFF		J10	
64	8E00000 - 8FFFFFF			
72	9000000 - 91FFFFF	J9		
80	9200000 - 93FFFFF			
88	9400000 - 95FFFFF			
96	9600000 - 97FFFFF			
104	9800000 - 99FFFFF	J10		
112	9A00000 - 9BFFFFF			
120	9C00000 - 9DFFFFF			
128	9E00000 - 9FFFFFF			

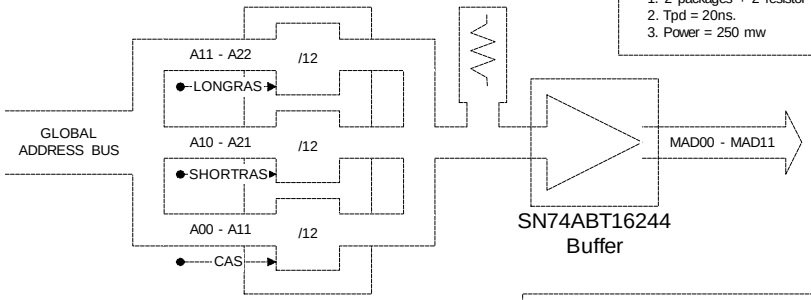
Scheme 1. High Speed



3 x SN74ABT16244
Buss Drivers

SCHEME 1.
1. 3 packages
2. Tpd = 6ns.
3. Power = 670 mw

SCHEME 2.
1. 2 packages + 2 resistor packs
2. Tpd = 20ns.
3. Power = 250 mw



SN74ABT16244
Buffer

Scheme 2. Low Power

SN74CBT16214
Buss Switch

ISAAC NEWTON GROUP - DETECTORS		
ING_SCSI_INTERFACE		
Memory Control Logic Address Mux		
Date: 25/3/98	Rev: 0.1	Author: pcm

RAS00

ISAAC NEWTON GROUP - DETECTORS		
ING SCSI INTERFACE		
Memory Control Logic Address Decode		
Date: 25/3/98	Rev: 0.1	Author: pcm