

MINOS KEEPER Module

Memory Map

MINOS TRIGGER-KEEPER Card VME Function Addresses

6/26/03

The MINOS TRIGGER-KEEPER Card is written to or read from through a MINOS MASTER Card.

The Address Modifier for interactions with the TRIGGER-KEEPER Card is 09.

The Card Address ID **must** be set to 31.

The MASTER Card must be in VME Mode.

The VME address that is received by the MASTER Card to interact with the TRIGGER-KEEPER Card is:

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A31                                     A0
GGGG G000 0000 0001 01NN NNNT TTTT TT00

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G = MASTER Card Geographical Address bits

N = TRIGGER-KEEPER Card Address ID bits (Set by switch S1 to 31, N = 1)

T = TRIGGER-KEEPER Card Function Address bits

MASTER Card
Hex Address (h)
Offset (A8-A2)

Function

Hex Address (h) Offset (A8-A2)	Function
h000	WRITE/READ – MINDER VCAL DAC Voltage D15-D0 = DAC voltage word D31-D16 = Undefined
h004	WRITE only – Dynode Discriminator Channel 0 DAC Voltage D11-D0 = DAC voltage word D31-D12 = Undefined
h008	WRITE only – Dynode Discriminator Channel 1 DAC Voltage D11-D0 = DAC voltage word D31-D12 = Undefined
h00C	WRITE only – Dynode Discriminator Channel 2 DAC Voltage D11-D0 = DAC voltage word D31-D12 = Undefined
h010	WRITE only – Dynode Discriminator Channel 3 DAC Voltage D11-D0 = DAC voltage word D31-D12 = Undefined
h01C	READ only – QIE Reset bit D0 = QIE Reset bit D1-D31 = Undefined Bit set = 1 when MINDER Control Bit Register is set to QIE Reset Mode Bit reset = 0 when TCAL is true

h020 WRITE/READ – Trigger Control Enable Register (Enable = 1)
 D0 = Dynode Disc. Ch. 0 Output
 D1 = Dynode Disc. Ch. 1 Output
 D2 = Dynode Disc. Ch. 2 Output
 D3 = Dynode Disc. Ch. 3 Output
 D4 = Delayed TCAL
 D5 = Delayed Flash Trigger
 D6 = Delayed Process Trigger
 D7 = 0
 D31-D8 = Undefined

h024 WRITE/READ – MINDER Control Bit Register
 D2-D0 = MINDER Mode bits *
 D3 = SGATE Enable (Enable = 1)
 D4 = Dynode Trigger Enable (Enable = 1)
 D5 = Ext. Flash Trigger Enable (Enable = 1)
 D6 = TCAL Flash Enable (Enable = 1)
 D7 = Ext. Process Enable (Enable = 1)
 D31-D8 = Undefined

*	D2	D1	D0	
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0	0	0	0	Standby Mode
0	0	1	1	Normal Mode
0	1	0	0	Pedestal Mode
0	1	1	1	DC I Calibrate Mode
1	0	0	0	Diagnostic Mode
1	0	1	1	TCAL1 Mode
1	1	0	0	TCAL2 Mode
1	1	1	1	QIE Reset Mode

h028 WRITE/READ – TCAL Enable Register (Enable = 1)
 D0 = Dynode Disc. Ch. 0 (Not used)
 D1 = Dynode Disc. Ch. 1 (Not used)
 D2 = Dynode Disc. Ch. 2 (Not used)
 D3 = Dynode Disc. Ch. 3 (Not used)
 D7-D4 = 0
 D31-D8 = Undefined

h02C READ only – MINDER Error Register (Error = 1)
 D0 = Clock Error
 D1 = Minder Error 1
 D2 = Minder Error 2
 D3 = Minder Error 3
 D7-D4 = 0
 D31-D8 = Undefined

h030 WRITE only – Initiate a VME Trigger (Data will be written to Buffer 0 on MASTER)
 D31-D0 = No data needed

h034 WRITE only – Initiate a VME Trigger (Data will be written to Buffer 1 on MASTER)
 D31-D0 = No data needed

