1K serial EEPROM
Storage for FPGA setup values.
128 by 8 or 64 by 16 organization

Reference resister on ORG pin
By 8 memory with resister installed
By 16 memory with resister not installed

De-caps for the FPGA

De-caps for buffer chips

All 74AHCT16245's are connected to +5V

mLAN

TFC_DATA(20:0)
TFC_CLK
TFC_PDn

DCM_DATA(20:0)
DCM_CLK
DCM_PDn

Calculated value of 1.6K. Use 2 1K's to reduce parts counts.

Red LED

On when board is powered and FPGA not configured
Off when board is powered and FPGA configured
Flash when 4X beam clock present

Place LEDs near the front edge of board

Calculated value of 750. Use a 1K to reduce parts counts.

Green LED

Off when board is powered and FPGA not configured
On when board is powered and FPGA configured
Flash when DCM data is transmitted

Place switch near the front edge of board

3V tolerance set to 10/
5V tolerance set to 10/
Reset outputs are open collectors

U26
EPF10K50EQC240
240-pin Quad Flat Pack
Rev. 980804

VCCINT: 9 total (2.5V)
5, 27, 47, 89, 96, 122, 130, 150, 170

VCCIO: 10 total (2.5V or 3.3V)
16, 37, 57, 77, 112, 140, 160, 189, 205, 224

GNDINT: 18 total
10, 22, 32, 42, 52, 69, 85, 93, 104,
125, 135, 145, 155, 165, 176, 197, 216, 232.

VCCINT=+2.5V,VCCIO=+3.3V,GNDINT=GROUND

D1A(10:0)
D1B(10:0)
D2B(10:0)
D2A(10:0)
W_ADDR(5:0)
R_ADDR(5:0)
CNTL(6:0)
ADDR(4:0)
S_ADDR(4:0)
AUX(19:0)
AUXRX(19:0)

ADC_1A(10:0)
ADC_FSC_1A
ADC_1B(10:0)
ADC_FSC_1B
ADC_2A(10:0)
ADC_FSC_2A
ADC_2B(10:0)
ADC_FSC_2B
AMU_W_ADDR(5:0)
AMU_W_EN
AMU_R_ADDR(5:0)
AMU_R_EN
AMU_CNTL(6:0)
ADC_ADDR(4:0)
SER_ADDR(4:0)

All AMUADC signals enabled after FPGA is configured

SER_SD_IN is ArcNet data from outside to the CROCs

ArcNet signals always enabled

SER_SD_A and SER_SD_B is ArcNet data from the CROCs to the outside

ArcNet NODE ID
Open = 0, Closed = 1

De-caps for 74ALS chips

De-caps for EPC2

REVISION LETTER	CLASS REVIEW	REVISIONS	DATE	CHANGED BY	CHECKED BY	APPROVED BY
		ORIGINAL ISSUE				

Engineer:	SCOTT
Drawn:	SCOTT
Checked:	PERSON
Released:	PERSON
Release Date:	July 20, 1999
Changed by:	G.SAEWERT
Date:	1-11-00

LOS ALAMOS
LOS ALAMOS NATIONAL LABORATORY
LOS ALAMOS, NEW MEXICO 87545

TITLE:
CNTL
Cathodes Controler Card
Muon Tracker / PHENIX Project

NUM SHEETS | DRAWING NO. 10Y-226430 D4 | SIZE E | SHEET 1 of 2