

DTMROC Inputs:

Starting from Pin # 1, clockwise:

TR14 – 15 P,N:

tp_bias

tp_even, TP_odd

th_TR0, th_TR1

th_D0, th_D1

Config_select

Shaper_select

ASDBLRpwrsense

ASDBLRpwrjmp

SpareInpsense

spareInpjmp

threshold scan

think it's fine

test pulse scans

high threshold scan....have verified for a few chips

threshold scans

goes to PADJ1, PADJ2 – Mitch checked

goes to Xel – Mitch checked

tested

tested

tested

tested

enable_decoup2

cmd_in_neg, cmd_in_pos

bc_neg, bc_pos

hard_reset_B_neg,....pos

cmd_out_pos, com_out_neg

data_out_net, data_out_pos

enable_decoup1

Mitch is not sure of the status; not important

threshold scan

threshold scan

have checked on scope, polarity has to be correct to work

register readout

threshold scan

Mitch is not sure of the status; not important

TRST,TCK,TDI,TMS,TD0

Address 0-5

NC (JTAG) (needs reviewing for Bjorn's boards)

Known to work on AR1F & AR1B – connected & way we want them.

TR00 – 01 P,N

threshold scan

TR02 – 13 P,N

threshold scan

NAIS Connector to Paddle Card

Do above tests test all signals?

ASDBLR

Power: VCP,VCS,VES,VCD,
VED,VEDR

checked by basic operation

Ternary Inputs:

Ternary Outputs:

PVCDS

PTH_D

PTH_TR

XEL, PADJS1,PADJS2

BLBIAS

TST_O

TST_E

PEN_SH, PEN_BL

MON_A1,MON_B1

ohm-meter test or noise tests on the module

threshold scan

stuffed for what current?

threshold scan

test-pulse scan at high threshold

Mitch looked at

NC

test pulse

test pulse

Mitch

MON_A8, MON_B8

OK – not normally used

Board Level:

Noise Tests: performed for four AR1BS & AR1BL boards, and several AR1FL and AR1FS boards on the module. Verified that which Vdd caps should be removed on AR1FL boards and that copper tape (or equivalent) should be added on AR1FS. Whether or not to remove caps on AR1B boards remains to be checked...**Do we wait for this for AR1B assembly?**

Is the termination correct: have looked at the receiving termination , about 100 ohms. We've never investigated the back termination resistors. Currently it is 120 ohms. Probably OK. But Rick raises issue of size of signal at the PP. Mitch says we see 100+ mV but Rick raises the question of what length of cable. **Mitch – we should test “as stuffed”. Rick would like to review..what is the longest cable we have ever used.**

Value of resistors between analog and digital ground isn't critical. Ben verified that the resistors are all 10 ohms.

Test Pulse – Mitch is happy with the filter components on barrel boards, but would really like to see the response when we try to try high threshold test.

Report from Ben: only two problems on all 8 ARB boards. One shorted input, couldn't locate exactly where it was; one channel which gets much noisier during test pulse.

Would see a 300kHz threshold of 250 or so where most all channels are around 180 (this for an injected charge of 10 DAQ cnts). NOTE: they looked at three other boards and didn't see anything.

So 2 channels out of 1300.

Found a few more channels with large offsets for Gabe to check against his measurements.

Questions:

Ben: do we have a final plan for labeling these boards?

Cooling Plate Mounting – DONE in terms of mates OK and noise measurements. Temperature measurements haven't yet been repeated.