Report of Calibration
PSC 4CH-MSF-AR-Fast XY Corr_S/N 0019
2025-12-18 10:28:45

Calibration Current standard: BNL PSC ATE S/N 001
Calibration Volt standard: HP 3458A-002 S/N 2823A 23647
Calibration Resistance standard: Fluke 742A-1 S/N 1063008
End Header

lab{2}Chan1
Burden resistor = 33.3333

Measuring initial gains and offsets

| Itest | dacSP | dcct1 | dcct2 | dacRB | err |
|---|---|---|---|---|---|
| -1.002341 | 1.003808 | -1.013428 | -1.011917 | 1.004333 | 0.046908 |
| -27.001758 | 27.029544 | -26.848816 | -26.820999 | 27.093294 | 0.038302 |

| | dacSP | dcct1 | dcct2 | dacRB |
|---|---|---|---|---|
| Initial measured offsets: | -0.000453 | -0.017411 | -0.016914 | 0.000000 |
| Initial measured gains: | 1.001012 | 0.993691 | 0.992679 | 1.002429 |
| Gain corrections: | 1.001012 | 1.006349 | 1.007375 | 1.000000 |

Writing gain and offset corrections for dacSP, dcct1, and dcct2 to PSC

Measuring DAC readback gain and offset

| DAC SP | DAC RB |
|---|---|
| 1.000000 | 1.001910 |
| 27.000000 | 27.091072 |

Measured offset: -0.001519
Measured gain: 1.003429
Gain correction: 0.996582

Writing gain and offset constants for dacRB to PSC

Verification

| Itest | dacSP | dcct1 | dcct2 | dacRB | err |
|---|---|---|---|---|---|
| -1.002299 | 1.002307 | -1.002439 | -1.002712 | 1.002502 | 0.047461 |
| -27.001936 | 27.000971 | -27.001202 | -27.001379 | 27.001030 | 0.036603 |

| | dacSP | dcct1 | dcct2 | dacRB |
|---|---|---|---|---|
| Final measured offsets: | -0.000046 | -0.000175 | -0.000451 | 0.000200 |
| Final measured gains: | 0.999963 | 0.999966 | 0.999963 | 0.999995 |

| | dacSP | dcct1 | dcct2 | dacRB |
|---|---|---|---|---|
| Final measured offsets mean: | 0.019833 | -0.000343 | -0.000308 | 0.000491 |
| Final measured offsets stdev: | 0.039929 | 0.000110 | 0.000108 | 0.000334 |
| Final measured gains mean: | 1.000710 | 0.999970 | 0.999970 | 0.999987 |
| Final measured gains stdev: | 0.001475 | 0.000014 | 0.000014 | 0.000009 |

Saving channel 1 calibration constants to qspi

Burden resistor = 33.3333

Measuring initial gains and offsets

| Itest | dacSP | dcct1 | dcct2 | dacRB | err |
|---|---|---|---|---|---|
| -1.001688 | 1.004599 | -1.012403 | -1.011279 | 0.999630 | 0.055047 |
| -27.001601 | 27.003573 | -26.812025 | -26.828117 | 27.054333 | 0.052202 |

| | dacSP | dcct1 | dcct2 | dacRB |
|---|---|---|---|---|
| Initial measured offsets: | -0.002947 | -0.018432 | -0.016645 | 0.000000 |
| Initial measured gains: | 0.999964 | 0.992296 | 0.992959 | 1.002144 |
| Gain corrections: | 0.999964 | 1.007763 | 1.007091 | 1.000000 |

Writing gain and offset corrections for dacSP, dcct1, and dcct2 to PSC

Measuring DAC readback gain and offset

| DAC SP | DAC RB |
|---|---|
| 1.000000 | 0.997876 |
| 27.000000 | 27.052879 |

Measured offset: -0.004240
Measured gain: 1.002116
Gain correction: 0.997889

Writing gain and offset constants for dacRB to PSC

Verification

| Itest | dacSP | dcct1 | dcct2 | dacRB | err |
|---|---|---|---|---|---|
| -1.001491 | 1.001667 | -1.001679 | -1.001703 | 1.001181 | 0.049778 |
| -27.001413 | 27.001047 | -27.001217 | -27.001167 | 27.000507 | 0.037259 |

| | dacSP | dcct1 | dcct2 | dacRB |
|---|---|---|---|---|
| Final measured offsets: | -0.000197 | -0.000203 | -0.000230 | -0.000484 |
| Final measured gains: | 0.999979 | 0.999985 | 0.999982 | 0.999998 |

| | dacSP | dcct1 | dcct2 | dacRB |
|---|---|---|---|---|
| Final measured offsets mean: | -0.000009 | -0.000179 | -0.000158 | -0.000337 |
| Final measured offsets stdev: | 0.000143 | 0.000139 | 0.000061 | 0.000158 |
| Final measured gains mean: | 0.999978 | 0.999977 | 0.999976 | 1.000002 |
| Final measured gains stdev: | 0.000007 | 0.000007 | 0.000007 | 0.000013 |

Saving channel 2 calibration constants to qspi

Burden resistor = 33.3333

Measuring initial gains and offsets

| Itest | dacSP | dcct1 | dcct2 | dacRB | err |
|---|---|---|---|---|---|
| -1.001138 | 1.003835 | -1.010822 | -1.010631 | 1.005222 | 0.015361 |
| -27.001189 | 27.002698 | -26.815105 | -26.823921 | 27.093613 | 0.045117 |

| | dacSP | dcct1 | dcct2 | dacRB |
|---|---|---|---|---|
| Initial measured offsets: | -0.002743 | -0.017222 | -0.016684 | 0.000000 |
| Initial measured gains: | 0.999954 | 0.992470 | 0.992817 | 1.003444 |
| Gain corrections: | 0.999954 | 1.007587 | 1.007235 | 1.000000 |

Writing gain and offset corrections for dacSP, dcct1, and dcct2 to PSC

Measuring DAC readback gain and offset

| DAC SP | DAC RB |
|---|---|
| 1.000000 | 1.004065 |
| 27.000000 | 27.092157 |

Measured offset: 0.000677
Measured gain: 1.003388
Gain correction: 0.996623

Writing gain and offset constants for dacRB to PSC

Verification

| Itest | dacSP | dcct1 | dcct2 | dacRB | err |
|---|---|---|---|---|---|
| -1.001032 | 1.001415 | -1.001115 | -1.001366 | 1.002623 | 0.054756 |
| -27.001232 | 27.001489 | -27.001564 | -27.001585 | 27.003063 | 0.057527 |

| | dacSP | dcct1 | dcct2 | dacRB |
|---|---|---|---|---|
| Final measured offsets: | -0.000388 | -0.000074 | -0.000334 | 0.001194 |
| Final measured gains: | 0.999995 | 1.000010 | 1.000001 | 1.000014 |

| | dacSP | dcct1 | dcct2 | dacRB |
|---|---|---|---|---|
| Final measured offsets mean: | 0.000010 | -0.000088 | -0.000293 | 0.001106 |
| Final measured offsets stdev: | 0.000307 | 0.000092 | 0.000156 | 0.000200 |
| Final measured gains mean: | 0.999991 | 0.999992 | 0.999983 | 1.000003 |
| Final measured gains stdev: | 0.000016 | 0.000014 | 0.000017 | 0.000010 |

Saving channel 3 calibration constants to qspi

Burden resistor = 33.3333

Measuring initial gains and offsets

| Itest | dacSP | dcct1 | dcct2 | dacRB | err |
|---|---|---|---|---|---|
| -1.001139 | 1.006634 | -1.010793 | -1.010922 | 1.001461 | 0.009989 |
| -27.001597 | 26.998197 | -26.808586 | -26.819256 | 27.068209 | 0.031208 |

| | dacSP | dcct1 | dcct2 | dacRB |
|---|---|---|---|---|
| Initial measured offsets: | -0.005838 | -0.017458 | -0.017181 | 0.000000 |
| Initial measured gains: | 0.999658 | 0.992205 | 0.992611 | 1.002893 |
| Gain corrections: | 0.999658 | 1.007856 | 1.007444 | 1.000000 |

Writing gain and offset corrections for dacSP, dcct1, and dcct2 to PSC

Measuring DAC readback gain and offset

| DAC SP | DAC RB |
|---|---|
| 1.000000 | 1.000342 |
| 27.000000 | 27.066782 |

Measured offset: -0.002213
Measured gain: 1.002555
Gain correction: 0.997451

Writing gain and offset constants for dacRB to PSC

Verification

| Itest | dacSP | dcct1 | dcct2 | dacRB | err |
|---|---|---|---|---|---|
| -1.001168 | 1.001618 | -1.001618 | -1.001559 | 1.001878 | 0.042429 |
| -27.001463 | 27.000711 | -27.000973 | -27.000965 | 27.000759 | 0.008746 |

| | dacSP | dcct1 | dcct2 | dacRB |
|---|---|---|---|---|
| Final measured offsets: | -0.000497 | -0.000487 | -0.000426 | 0.000268 |
| Final measured gains: | 0.999954 | 0.999964 | 0.999966 | 0.999992 |

| | dacSP | dcct1 | dcct2 | dacRB |
|---|---|---|---|---|
| Final measured offsets mean: | -0.000223 | -0.000315 | -0.000289 | 0.000362 |
| Final measured offsets stdev: | 0.000189 | 0.000174 | 0.000219 | 0.000304 |
| Final measured gains mean: | 0.999973 | 0.999977 | 0.999973 | 0.999999 |
| Final measured gains stdev: | 0.000021 | 0.000012 | 0.000009 | 0.000016 |

Saving channel 4 calibration constants to qspi

Test data reviewed by _____ Date_____