

Report of Calibration
PSC 4CH-MSS-AR Slow XY Corr_S/N 1002
2025-12-30 10:15:17

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 = 83.3333

Measuring initial gains and offsets

| Itest | dacSP | dcct1 | dcct2 | dacRB | err |
|------------|-----------|------------|------------|-----------|----------|
| -1.000103 | 0.999547 | -0.998075 | -0.997988 | 0.999730 | 0.000259 |
| -11.001499 | 10.984000 | -10.907447 | -10.908347 | 11.013728 | 0.018948 |

| | dacSP | dcct1 | dcct2 | dacRB |
|---------------------------|-----------|-----------|-----------|----------|
| Initial measured offsets: | -0.001139 | -0.007174 | -0.006988 | 0.000000 |
| Initial measured gains: | 0.998306 | 0.990799 | 0.990898 | 1.002959 |
| Gain corrections: | 0.998306 | 1.009287 | 1.009186 | 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 | 0.999627 |
| 11.000000 | 11.011996 |

Measured offset: -0.001610

Measured gain: 1.001237

Gain correction: 0.998765

Writing gain and offset constants for dacRB to PSC

Verification

| Itest | dacSP | dcct1 | dcct2 | dacRB | err |
|------------|-----------|------------|------------|-----------|-----------|
| -1.000316 | 1.000392 | -1.000482 | -1.000489 | 1.000387 | -0.011383 |
| -11.001540 | 11.001245 | -11.001293 | -11.001279 | 11.001366 | 0.023561 |

| | dacSP | dcct1 | dcct2 | dacRB |
|-------------------------|-----------|-----------|-----------|-----------|
| Final measured offsets: | -0.000113 | -0.000207 | -0.000217 | -0.000017 |
| Final measured gains: | 0.999963 | 0.999959 | 0.999957 | 1.000012 |

| | dacSP | dcct1 | dcct2 | dacRB |
|-------------------------------|--------------|-----------|-----------|-----------|
| Final measured offsets mean: | 9989.239430 | -0.116587 | -0.130188 | -0.000033 |
| Final measured offsets stdev: | 19978.478720 | 0.233034 | 0.260207 | 0.000090 |
| Final measured gains mean: | 9989.455914 | 0.883486 | 0.869901 | 1.000017 |
| Final measured gains stdev: | 19976.911845 | 0.232990 | 0.260166 | 0.000014 |

Saving channel 1 calibration constants to qspi

lab{2}Chan2
Burden resistor = 83.3333

Measuring initial gains and offsets

| Itest | dacSP | dcct1 | dcct2 | dacRB | err |
|------------|-----------|------------|------------|-----------|-----------|
| -1.000572 | 1.000445 | -0.998153 | -0.997383 | 0.997791 | -0.004196 |
| -11.001832 | 10.982185 | -10.904573 | -10.902884 | 10.994285 | 0.012980 |

| | dacSP | dcct1 | dcct2 | dacRB |
|---------------------------|-----------|-----------|-----------|----------|
| Initial measured offsets: | -0.001826 | -0.007070 | -0.006391 | 0.000000 |
| Initial measured gains: | 0.998048 | 0.990517 | 0.990425 | 1.001478 |
| Gain corrections: | 0.998048 | 1.009574 | 1.009667 | 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 | 0.997149 |
| 11.000000 | 10.992558 |

Measured offset: -0.002392

Measured gain: 0.999541

Gain correction: 1.000459

Writing gain and offset constants for dacRB to PSC

Verification

| Itest | dacSP | dcct1 | dcct2 | dacRB | err |
|------------|-----------|------------|------------|-----------|-----------|
| -1.000274 | 1.000253 | -1.000268 | -1.000325 | 1.000392 | -0.004863 |
| -11.001657 | 11.001966 | -11.002028 | -11.002090 | 11.001615 | -0.006677 |

| | dacSP | dcct1 | dcct2 | dacRB |
|-------------------------|----------|----------|-----------|----------|
| Final measured offsets: | 0.000055 | 0.000044 | -0.000012 | 0.000188 |
| Final measured gains: | 1.000033 | 1.000038 | 1.000038 | 0.999951 |

| | dacSP | dcct1 | dcct2 | dacRB |
|-------------------------------|----------|-----------|-----------|----------|
| Final measured offsets mean: | 0.000001 | -0.000076 | -0.000081 | 0.000156 |
| Final measured offsets stdev: | 0.000085 | 0.000086 | 0.000051 | 0.000060 |
| Final measured gains mean: | 1.000022 | 1.000017 | 1.000018 | 0.999969 |
| Final measured gains stdev: | 0.000019 | 0.000018 | 0.000015 | 0.000016 |

Saving channel 2 calibration constants to qspi

lab{2}Chan3
Burden resistor = 83.3333

Measuring initial gains and offsets

| Itest | dacSP | dcct1 | dcct2 | dacRB | err |
|------------|-----------|------------|------------|-----------|----------|
| -1.000372 | 1.001567 | -0.997805 | -0.997964 | 1.001933 | 0.013265 |
| -11.001579 | 10.985029 | -10.906011 | -10.912395 | 11.026090 | 0.013897 |

| | dacSP | dcct1 | dcct2 | dacRB |
|---------------------------|-----------|-----------|-----------|----------|
| Initial measured offsets: | -0.002969 | -0.006735 | -0.006272 | 0.000000 |
| Initial measured gains: | 0.998226 | 0.990701 | 0.991324 | 1.004076 |
| Gain corrections: | 0.998226 | 1.009386 | 1.008752 | 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 | 1.001506 |
| 11.000000 | 11.024594 |

Measured offset: -0.000803

Measured gain: 1.002309

Gain correction: 0.997696

Writing gain and offset constants for dacRB to PSC

Verification

| Itest | dacSP | dcct1 | dcct2 | dacRB | err |
|------------|-----------|------------|------------|-----------|----------|
| -1.000205 | 1.000241 | -1.000390 | -1.000379 | 1.000383 | 0.005415 |
| -11.001381 | 11.001767 | -11.001851 | -11.001803 | 11.001697 | 0.013042 |

| | dacSP | dcct1 | dcct2 | dacRB |
|-------------------------|-----------|-----------|-----------|----------|
| Final measured offsets: | -0.000001 | -0.000157 | -0.000150 | 0.000164 |
| Final measured gains: | 1.000035 | 1.000028 | 1.000025 | 0.999979 |

| | dacSP | dcct1 | dcct2 | dacRB |
|-------------------------------|----------|-----------|-----------|----------|
| Final measured offsets mean: | 0.000013 | -0.000056 | -0.000015 | 0.000035 |
| Final measured offsets stdev: | 0.000070 | 0.000133 | 0.000109 | 0.000159 |
| Final measured gains mean: | 1.000010 | 1.000006 | 1.000008 | 1.000005 |
| Final measured gains stdev: | 0.000016 | 0.000020 | 0.000017 | 0.000019 |

Saving channel 3 calibration constants to qspi

lab{2}Chan4
Burden resistor = 83.3333

Measuring initial gains and offsets

| Itest | dacSP | dcct1 | dcct2 | dacRB | err |
|------------|-----------|------------|------------|-----------|----------|
| -1.000406 | 1.000624 | -0.997977 | -0.998854 | 0.999725 | 0.000225 |
| -11.001577 | 10.986218 | -10.908875 | -10.912416 | 11.008871 | 0.019500 |

| | dacSP | dcct1 | dcct2 | dacRB |
|---------------------------|-----------|-----------|-----------|----------|
| Initial measured offsets: | -0.001776 | -0.006601 | -0.007211 | 0.000000 |
| Initial measured gains: | 0.998442 | 0.990974 | 0.991240 | 1.002359 |
| Gain corrections: | 0.998442 | 1.009108 | 1.008837 | 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 | 0.999273 |
| 11.000000 | 11.007435 |

Measured offset: -0.001543

Measured gain: 1.000816

Gain correction: 0.999185

Writing gain and offset constants for dacRB to PSC

Verification

| Itest | dacSP | dcct1 | dcct2 | dacRB | err |
|------------|-----------|------------|------------|-----------|-----------|
| -1.000486 | 1.000503 | -1.000551 | -1.000614 | 1.000486 | -0.002303 |
| -11.001603 | 11.001317 | -11.001455 | -11.001542 | 11.001328 | -0.010687 |

| | dacSP | dcct1 | dcct2 | dacRB |
|-------------------------|-----------|-----------|-----------|-----------|
| Final measured offsets: | -0.000048 | -0.000087 | -0.000148 | -0.000020 |
| Final measured gains: | 0.999970 | 0.999979 | 0.999981 | 1.000003 |

| | dacSP | dcct1 | dcct2 | dacRB |
|-------------------------------|-----------|-----------|-----------|-----------|
| Final measured offsets mean: | -0.000073 | -0.000063 | -0.000056 | -0.000040 |
| Final measured offsets stdev: | 0.000147 | 0.000090 | 0.000101 | 0.000089 |
| Final measured gains mean: | 0.999986 | 0.999997 | 0.999996 | 1.000002 |
| Final measured gains stdev: | 0.000025 | 0.000022 | 0.000019 | 0.000010 |

Saving channel 4 calibration constants to qspi

Test data reviewed by _____ Date_____