

Report of Calibration
PSC 2CH-HSS-AR-QD-QF_S/N 0031
2025-11-07 17:49:19

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{5}Chan1
Burden resistor = 18.0000

Measuring initial gains and offsets

| Itest | dacSP | dcct1 | dcct2 | dacRB | err |
|------------|-----------|------------|------------|-----------|----------|
| -0.999244 | 1.007745 | -1.026399 | -1.026909 | 0.998309 | 0.040905 |
| -50.004216 | 50.031228 | -49.666180 | -49.654778 | 50.040520 | 0.075283 |

| | dacSP | dcct1 | dcct2 | dacRB |
|---------------------------|-----------|-----------|-----------|----------|
| Initial measured offsets: | -0.008124 | -0.034602 | -0.035354 | 0.000000 |
| Initial measured gains: | 1.000378 | 0.992548 | 0.992305 | 1.000382 |
| Gain corrections: | 1.000378 | 1.007508 | 1.007755 | 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 | 0.998938 |
| 50.000000 | 50.036877 |

Measured offset: -0.001836

Measured gain: 1.000774

Gain correction: 0.999226

Writing gain and offset constants for dacRB to PSC

Verification

| Itest | dacSP | dcct1 | dcct2 | dacRB | err |
|------------|-----------|------------|------------|-----------|----------|
| -0.999349 | 0.999177 | -0.999394 | -0.999357 | 0.999842 | 0.034677 |
| -50.004409 | 50.003729 | -50.003735 | -50.003876 | 50.004490 | 0.074253 |

| | dacSP | dcct1 | dcct2 | dacRB |
|-------------------------|----------|-----------|-----------|----------|
| Final measured offsets: | 0.000162 | -0.000059 | -0.000018 | 0.000662 |
| Final measured gains: | 0.999990 | 0.999985 | 0.999989 | 1.000002 |

| | dacSP | dcct1 | dcct2 | dacRB |
|-------------------------------|-----------|-----------|-----------|----------|
| Final measured offsets mean: | -0.000135 | -0.000148 | -0.000163 | 0.000485 |
| Final measured offsets stdev: | 0.000188 | 0.000067 | 0.000081 | 0.000153 |
| Final measured gains mean: | 0.999979 | 0.999979 | 0.999980 | 0.999993 |
| Final measured gains stdev: | 0.000009 | 0.000005 | 0.000006 | 0.000009 |

Saving channel 1 calibration constants to qspi

lab{5}Chan2
Burden resistor = 9.0000

Measuring initial gains and offsets

| Itest | dacSP | dcct1 | dcct2 | dacRB | err |
|-------------|------------|------------|------------|------------|----------|
| -0.998966 | 1.007441 | -1.047727 | -1.055983 | 0.994329 | 0.027568 |
| -100.009056 | 100.041850 | -99.291275 | -99.315704 | 100.380577 | 0.155921 |

| | dacSP | dcct1 | dcct2 | dacRB |
|---------------------------|-----------|-----------|-----------|----------|
| Initial measured offsets: | -0.008230 | -0.056496 | -0.064589 | 0.000000 |
| Initial measured gains: | 1.000246 | 0.992258 | 0.992421 | 1.003553 |
| Gain corrections: | 1.000246 | 1.007802 | 1.007637 | 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 | 0.995385 |
| 100.000000 | 100.372498 |

Measured offset: -0.008425

Measured gain: 1.003809

Gain correction: 0.996205

Writing gain and offset constants for dacRB to PSC

Verification

| Itest | dacSP | dcct1 | dcct2 | dacRB | err |
|-------------|------------|-------------|-------------|------------|----------|
| -0.999006 | 0.998909 | -0.999394 | -0.999391 | 0.997639 | 0.020312 |
| -100.008944 | 100.007765 | -100.007912 | -100.007996 | 100.006386 | 0.145832 |

| | dacSP | dcct1 | dcct2 | dacRB |
|-------------------------|----------|-----------|-----------|-----------|
| Final measured offsets: | 0.000085 | -0.000402 | -0.000399 | -0.001270 |
| Final measured gains: | 0.999989 | 0.999986 | 0.999987 | 0.999999 |

| | dacSP | dcct1 | dcct2 | dacRB |
|-------------------------------|----------|-----------|-----------|-----------|
| Final measured offsets mean: | 0.000135 | -0.000199 | -0.000083 | -0.001188 |
| Final measured offsets stdev: | 0.000210 | 0.000111 | 0.000211 | 0.000328 |
| Final measured gains mean: | 0.999983 | 0.999982 | 0.999984 | 1.000003 |
| Final measured gains stdev: | 0.000006 | 0.000004 | 0.000003 | 0.000010 |

Saving channel 2 calibration constants to qspi

Test data reviewed by _____ Date_____