Booster VME-DDS Module Assembly Modifications

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1. Replaced all AD8066 op amps with AD8034. The AD8034 have lower, but sufficient bandwidth and run cooler, less power.
2. Replace the IO\_UPD series termination, at the AD9910 DDS chips, with shorts.
3. Do not install ADC Differential Amp capacitors;

(C450, C474), (C531, C563), (C512, C528), (C479, C502)

1. Change DPOT resistors to 162 ohms; R326, R341, R356, R371
2. Change ADC input capacitors to 120 pF; (C457, C464), (C543, C550), (C511, C519), (C486, C494)
3. Do not install DAC filter capacitors; C568, C583, C611, C629
4. Change voltage regulator enable pull-down resistors to 1960 ohms;

R68, R85, R102, R119, R366, R351, R336, R315

1. Change DAC Gain resistors to 422 ohms; R131, R152, R171, R191



Figure 1 U121 modification diagram

Refer to Figure 1 above for the following modifications.

1. Lift pin U121-1 and isolate it from the pad with a small piece of Kapton tape. Connect to +3.3V at the via shown in Figure 2.



Figure 2 U121 pin 1 modification.

1. Add the jumpers shown in Figure 3.



Figure 3 Jumper for transceiver signals

1. Add the jumpers shown in Figure 4.



Figure 4 Photo of jumpers, pins 41 to 44 and 40 to 43

1. The four low pass filters in the DDS RF Output Section have been changed to part # Minicircuits SCLF-135+.
2. The 0 Ohm series resistors for the RF-TEST connection are not installed. R9, R18, R37, R44.
3. The 49.9 Ohm resistors between the RF low pass filters and the RF amplifiers are not installed. R43, R31, R15, R3.
4. The inductor pullups on the output of the RF amplifiers are not installed and jumped across. L1, L2, L3, L4.
5. The RF amplifiers have been changed to Minicircuits RAM-4+. U5, U21, U34, U51.
6. RF amplifier output pullup resistors have changed to 133 Ohm ¾ Watt. R41, R25, R12, R1.
7. The RF power splitters are not installed and the top row of pads, on each, are shorted together. PS1, PS2, PS3, PS4.
8. The following right-angle SMA RF output connectors are not installed: J4, J11, J16, J26.



Figure 5 RF output modifications (Schematic)



Figure 6 RF output modifications (PCB)