Sheet Listing
1. Title page and contents
2. Processor and Memory
3. Encoder
4. VC, Offload & Snubber Hall Sensors
5. Comm and Power I/O
6. Fixed Power Supplies
7. Variable Power Supplies
8. Voice Coil Driver
9. Offload Motor Driver
10. Snubber Motor Driver
Digital Encoder Power Jumper 1-2 for 5.0V
Jumper 2-3 for 3.3V
Remove jumper to disable

Digital Encoder Select
For Optira
Jumper 1-3, 5-7, 6-8
For MII 1900S
Jumper 3-5, 4-6

Optional, remove RS422 terminating resistors: R16, R17, R18, R19, R22 on digital encoder, RY on analog encoder. Do not remove analog terminations R72, R73.

Place the analog encoder ADC driver parts near J1, with short output traces.
Add 15pF 25V NP0 0603 caps to Deflina Control Card in the C38, C39, C40, C41 positions. These, plus components on this page, give two real poles, at 10kHz, 3kHz.

1.5V pp differential input maps to 6.0V pp differential output, which maps to 0 to 65535 counts.

Encoders
**VC, OFFLOAD & SNUBBER HALL SENSORS**

Each connector supports two hall sensors. One sensor pair is enabled at a time.

<table>
<thead>
<tr>
<th>Pin Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>00</td>
<td>All Hall sensors powered down</td>
</tr>
<tr>
<td>01</td>
<td>Voice Coil sensor pair active</td>
</tr>
<tr>
<td>10</td>
<td>Offload sensor pair active</td>
</tr>
<tr>
<td>11</td>
<td>Snubber sensor pair active</td>
</tr>
</tbody>
</table>

**INPUT CODES FOR HALL SENSORS**

One sensor pair is enabled at a time, or all are powered down.

**Input Code**  **Result**

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**PINOUT FOR HALL SENSORS**

1  Vref, Vcc
2  GND
3  OUT1
4  OUT2
5  /SLEEP1
6  /SLEEP2
JUMPER OPTIONS FOR ROUTING POWER

Standalone - Connect 1-2
(Powered from external supply)

Emulate Actuator Board - Connect 2-3
(Actuator connector receives power, USB, and hard clock)

POWER CONNECTOR
Mark silk screen with these labels:
+24 VDC
GND
GND
V_MOTOR

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Comm and Power I/O
ADC Driver for 16-Bit VC Current Monitoring
Place these ICs and their parts near J1.
Route VC_16BIT_P AND VC_16BIT_N as a differential pair.

Jumper 1-2 for DAC-controlled supply
Jumper 2-3 for external motor supply