

# Part Pin-outs

## Lab 6: Digital-to-Analog Conversion

ECE 327: *Electronic Devices and Circuits Laboratory I*

<p>CD4066 solid-state switch</p>	<p>CA3130 or CA3160 op. amp.</p> <p>To use CA3130 as buffer, use <i>small</i> 45–100 pF from pin 1 to pin 8 (for feedback stability compensation).</p>
<p>CD4049 inverter</p>	<p>CD4027 JK-type flip-flop</p>
<p>“<b>CCD</b>” — “Cathode Current Departs”          “<b>ACE</b>” — “Anode Current Enters”</p> <p>QEE113 infrared LED</p> <p>1.25–1.3 V @ 40 mA</p>	<p>Device uses Schmitt trigger with “totem-pole” (i.e., NOT “open-collector”) <i>inverting</i> TTL output.</p> <p>Pull-up resistor IS <i>NOT</i> NEEDED on output.</p> <p>QSE157 infrared TTL photosensor</p>
<p>2N3904 NPN/2N3906 PNP Bipolar Junction Transistor (BJT)</p> <p>“Not Pointing iN”</p> <p>“Points iN Proudly”</p> <p><math>V_{BE} \approx 0.65 \text{ V}</math>  <math>V_{CE, \text{saturation}} \approx 0.2 \text{ V}</math>  <math>\beta \approx 100</math></p>	