Our newest high speed ADC family achieves one-third the power consumption of alternate solutions without compromising AC performance. Operating from a low 1.8V supply, the 14-bit, 125Msps LTC®2175 dissipates only 140mW/channel while maintaining 73.1dB SNR and 88dB SFDR at baseband. Digital outputs can be configured as single lane (<65Msps) or dual lane serial LVDS.

Features
- Quad/Dual-Channel Simultaneous Sampling ADCs (LTC2175/LTC2268)
- 73.1dB SNR (14-Bit Resolution)
- 88dB SFDR
- Low Power: 140mW/Channel at 125Msps
- Single 1.8V Analog & Digital Supplies
- Serial LVDS Outputs
- Selectable Input Ranges: 1V<sub>p-p</sub> to 2V<sub>p-p</sub>
- 800MHz Full-Power Bandwidth S/H
- Optional Data Output Randomizer
- Optional Clock Duty Cycle Stabilizer
- Shutdown and Nap Modes
- Serial SPI Port for Configuration
- Pin-Compatible 14-Bit and 12-Bit Versions
- Easy Multichannel Evaluation Using PScope™ Tool

One-Third the Power of Comparable High Speed ADCs
Our newest high speed ADC family achieves one-third the power consumption of alternate solutions without compromising AC performance. Operating from a low 1.8V supply, the 14-bit, 125Msps LTC®2175 dissipates only 140mW/channel while maintaining 73.1dB SNR and 88dB SFDR at baseband. Digital outputs can be configured as single lane (<65Msps) or dual lane serial LVDS.

<table>
<thead>
<tr>
<th>14-Bit</th>
<th>25Msps</th>
<th>40Msps</th>
<th>65Msps</th>
<th>80Msps</th>
<th>105Msps</th>
<th>125Msps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quad ADC Outputs</td>
<td>2178-14</td>
<td>2171-14</td>
<td>2172-14</td>
<td>2173-14</td>
<td>2174-14</td>
<td>2175-14</td>
</tr>
<tr>
<td>50mW/ch</td>
<td>2263-14</td>
<td>2254-14</td>
<td>2256-14</td>
<td>2256-14</td>
<td>2257-14</td>
<td>2258-14</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>12-Bit</th>
<th>25Msps</th>
<th>40Msps</th>
<th>65Msps</th>
<th>80Msps</th>
<th>105Msps</th>
<th>125Msps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quad ADC Outputs</td>
<td>2178-12</td>
<td>2171-12</td>
<td>2172-12</td>
<td>2173-12</td>
<td>2174-12</td>
<td>2175-12</td>
</tr>
<tr>
<td>50mW/ch</td>
<td>2263-12</td>
<td>2254-12</td>
<td>2256-12</td>
<td>2256-12</td>
<td>2257-12</td>
<td>2258-12</td>
</tr>
</tbody>
</table>

Power Consumption
- 40mW/ch
- 50mW/ch
- 80mW/ch
- 95mW/ch
- 110mW/ch
- 140mW/ch

Quad ADC Serial LVDS Outputs
6x6 ODN Dual ADC Serial LVDS Outputs

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# High Speed ADC Portfolio

<table>
<thead>
<tr>
<th>10 Msps</th>
<th>20 Msps</th>
<th>25 Msps</th>
<th>40 Msps</th>
<th>65 Msps</th>
<th>80 Msps</th>
<th>105 Msps</th>
<th>125 Msps to 150 Msps</th>
<th>170 Msps</th>
<th>210 Msps</th>
<th>250 Msps</th>
<th>310 Msps</th>
</tr>
</thead>
<tbody>
<tr>
<td>2202</td>
<td>2203</td>
<td>2204</td>
<td>2205</td>
<td>2206</td>
<td>2207</td>
<td>2208</td>
<td>2209</td>
<td>2187</td>
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<tr>
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<td>2203</td>
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<tr>
<td>2245</td>
<td>2246</td>
<td>2247</td>
<td>2248</td>
<td>2249</td>
<td>2254</td>
<td>2255</td>
<td>2155-14</td>
<td>2156-14</td>
<td>2157-14</td>
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<td>2225</td>
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<td>2156-14</td>
<td>2157-14</td>
<td>2158-14</td>
<td></td>
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<tr>
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<td>2236</td>
<td>2237</td>
<td>2238</td>
<td>2239</td>
<td>2250</td>
<td>2251</td>
<td>2230</td>
<td>2241-10</td>
<td>2242-10</td>
<td></td>
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</tr>
</tbody>
</table>

## 16-Bit

- **Single**: 2269, 2160, 2161, 2162, 2163, 2164, 2165
- **Dual**: 2270, 2180, 2181, 2182, 2183, 2184, 2185

## 14-Bit

- **Dual**: 2246-14, 2257-14, 2258-14, 2259-14, 2260-14, 2261-14, 2262-14

## 12-Bit

- **Dual**: 2146-12, 2157-12, 2158-12, 2159-12, 2160-12, 2161-12, 2162-12

## 10-Bit

- **Single**: 2225, 2226, 2227, 2228, 2229, 2252, 2253, 2220
- **Dual**: 2235, 2236, 2237, 2238, 2239, 2250, 2251, 2230

### Parallel

- 6x6: 1.8V Lowest Power, Single & Dual ADCs, CMOS/DDR CMOS/Dual ADCs, DDR LVDS
- 7x7: 3.3V High SNR/SFDR ADCs, CMOS/LVDS
- 9x9: 2.5V High SNR/SFDR ADC, DDR LVDS

### Serial

- 6x6: 3.3V Single ADCs, JESD204
- 7x7: 1.8V/2.5V ADCs, CMOS/LVDS
- 9x9: 1.8V High IF Undersampling Single & Dual ADCs, DDR LVDS
- 11x9: 3V Dual ADCs, CMOS

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