**Product Overview**

**Analog Front End for 3-Lead and 5-Lead ECG**

**Capabilities Using One or Two AFE4960 Devices**

**More Information on ECG Systems Design**

- TI's patient monitoring video tutorials
- Contact TI for design-in tools
- Evolving Semiconductor Technologies for Modern Telehealth Applications White Paper
- TI Support Forums

**Design Considerations**

Upcoming design deadlines?

AFE4960 is highly integrated, just add patient protection and an MCU for a functioning system.

Need more than a 3-Lead ECG system?

Pair two AFE4960 devices in parallel to realize a 5-Lead ECG (4 ECG, 2 RESP) system.

Need SpO2?

AFE4960P comes with 4 LED, 4 PD PPG signal support for SpO2 measurement.

Need high-fidelity signal?

AFE4960 features 1+ GΩ input impedance, CMRR > 100 dB, and programmable-gain INA.

<table>
<thead>
<tr>
<th>AFE Configuration</th>
<th>1-ECG</th>
<th>2-ECG</th>
<th>ECG and RESP</th>
<th>IDLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Consumption (Typical Conditions)</td>
<td>About 520 μW</td>
<td>About 820 μW</td>
<td>About 1.26 mW</td>
<td>About 27μW</td>
</tr>
</tbody>
</table>

**Related Devices**

<table>
<thead>
<tr>
<th>Feature</th>
<th>AFE4950</th>
<th>AFE49I30</th>
<th>AFE4960</th>
<th>AFE4960P</th>
<th>ADS1294</th>
<th>ADS1294R</th>
<th>ADS1296</th>
<th>ADS1296R</th>
<th>ADS1298</th>
<th>ADS1298R</th>
<th>ADS1299</th>
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</thead>
<tbody>
<tr>
<td>ECG Channels</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>6</td>
<td>6</td>
<td>8</td>
<td>8</td>
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<tr>
<td>Respiration?</td>
<td>–</td>
<td>–</td>
<td>Integrated</td>
<td>Integrated</td>
<td>–</td>
<td>Analog</td>
<td>–</td>
<td>Analog</td>
<td>–</td>
<td>Analog</td>
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<tr>
<td>PPG?</td>
<td>–</td>
<td>Integrated</td>
<td>Integrated</td>
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