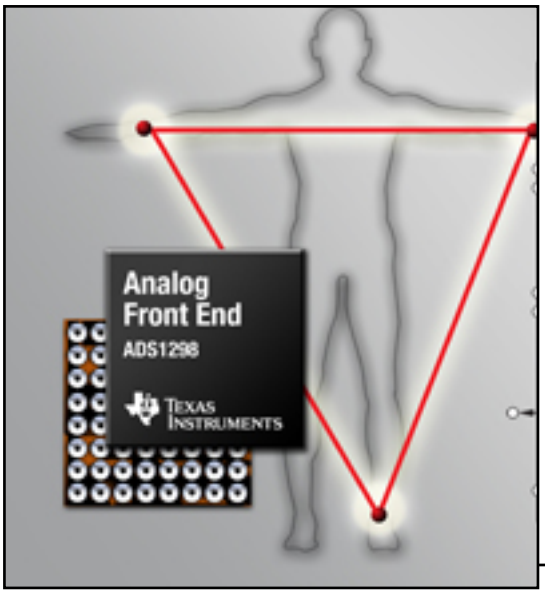
Fully Integrated Analog Front End Performs In ECG, EEG Apps



Texas Instruments introduced the first in a family of fully integrated analog front ends (AFEs) for portable and high-end electrocardiogram (ECG) and electroencephalogram (EEG) equipment, as well as patient monitoring and consumer medical applications. The eight-channel, 24-bit ADS1298 reduces component count and power consumption by up to 95 percent as compared to discrete implementations, according to the company, with a power efficiency of 1 mW/channel, while allowing users to achieve high levels of diagnostic accuracy. This AFE integrates the common features required for ECG and EEG front ends, including eight low-noise programmable gain amplifiers (PGAs), eight high-resolution, simultaneous sampling analog-to-digital converters (ADCs), integrated amplifier for right-leg drive, integrated amplifiers for Wilson Center Terminal (WCT) and Goldberger Terminals (GCT), digital pace detection capability, continuous lead-off detection and onboard oscillator and reference for smaller footprint and low-power applications. The ADS1298’s 4-uVpp (typical) input-referred noise performance transcends the limits set in IEC60601-2-27/51, for accurate measurements in portable equipment and high channel-density, high-end ECG and EEG equipment.

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Links:
[1] http://www.ti.com