ADAS1000BSTZ

Data Sheet

Five Electrode Electrocardiogram Analog Front End, 3.15 V to 5.5 V, LQFP-64

Manufacturers	Analog Devices, Inc
Package/Case	64-LQFP
Product Type	Data Conversion ICs
RoHS	Rohs
Lifecycle	

Images are for reference only

Please submit RFQ for ADAS1000BSTZ or Email to us: sales@ovaga.com We will contact you in 12 hours. RFQ

General Description

The ADAS1000-1is a 5 electrode ECG analog front end designed to measure electro cardiac (ECG) signals and lead-on/off status and output this information in the form of a data frame supplying either lead/vector or electrode data at programmable data rates. Its low power and small size make it suitable for portable, battery-powered applications. The high performance also makes it suitable for higher end diagnostic machines.

The ADAS1000-1 is one of the family of ADAS1000 generics tailored for ECG applications, the ADAS1000-1 has a subset of features of the family. The ADAS1000 family are designed to simplify the task of acquiring and ensuring quality ECG signals. They provide a low power, small data acquisition system for biopotential applications. Auxiliary features that aid in better quality ECG signal acquisition include: multichannel averaged driven lead, selectable reference drive, fast overload recovery, flexible respiration circuitry returning magnitude and phase information, internal pace detection algorithm operating on three leads, and the option of ac or dc lead-off detection. Several digital output options ensure flexibility when monitoring and analyzing signals. Value-added cardiac post processing is executed externally on a DSP, microprocessor, or FPGA.

Because ECG systems span different applications, these products feature a power/ noise scaling architecture where the noise can be reduced at the expense of increasing power consumption. Signal acquisition channels may be shut down to save power. Data rates can be reduced to save power.

To ease manufacturing tests and development as well as offer holistic power-up testing, the ADAS1000-1 offers a suite of features, such as dc and ac test excitation via the calibration DAC and CRC redundancy testing in addition to readback of all relevant register address space.

The input structure is a differential amplifier input thereby allowing users a variety of configuration options to best suit their application.

The ADAS1000-1 is available in a 56-lead LFCSP package and is specified over −40°C to +85°C temperature range.

Features

Biopotential signals in; digitized signals out

5 acquisition (ECG) channels and one driven lead

Parallel ICs for up to 10+ electrode measurements

Master ADAS1000 or ADAS1000-1 used with slave ADAS1000-2

AC and dc lead-off detection

Internal pace detection algorithm on 3 leads

Support for user's own pace

Thoracic impedance measurement (internal/external path)

Selectable reference lead

Scalable noise vs. power control, power-down modes

Low power operation from

11 mW (1 lead), 15 mW (3 leads), 21 mW (all electrodes)

Lead or electrode data available

Supports AAMI EC11:1991/(R)2001/(R)2007, AAMI EC38

R2007, EC13:2002/(R)2007, IEC60601-1 ed. 3.0 b:2005,

IEC60601-2-25 ed. 2.0 :2011, IEC60601-2-27 ed. 2.0

b:2005, IEC60601-2-51 ed. 1.0 b: 2005

Fast overload recovery

Low or high speed data output rates

Serial interface SPI-/QSPI™-/DSP-compatible

56-lead LFCSP package (9 mm × 9 mm)

64-lead LQFP package (10 mm × 10 mm body size)

Application

ECG: Monitor & Diagnostic

Bedside Patient Monitoring

Portable Telemetry

Holter

AED

Cardiac Defibrillators

Ambulatory Monitors

Pace Maker Programmer

Patient Transport

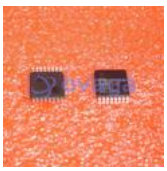
Stress testing

Related Products

ADAS3022BCPZ

Analog Devices, Inc

LFCSP-40



AD7266BSUZ

Analog Devices, Inc

TQPF-32

AD574AJNZ

Analog Devices, Inc

PDIP-28

AD7401YRWZ

Analog Devices, Inc

SOIC-16

AD7938BSUZ

Analog Devices, Inc

TQFP-32

AD7192BRUZ-REEL

Analog Devices, Inc

TSSOP-24

AD7124-8BCPZ-RL7

Analog Devices, Inc

LFCSP-32

AD9680BCPZ-500

Analog Devices, Inc

LFCSP-64