Evaluation Board User Guide

MAX86184 Evaluation Kit

Evaluates MAX86184

General Description

The MAX86184A evaluation kit (EV kit) provides a quick and convenient platform for evaluating the MAX86184A optical analog front-end (AFE) data acquisition system. The MAX86184A is a high signal-to-noise ratio (SNR), ultra-low power, dual-channel AFE designed for multiwavelength optical spectroscopy applications. It integrates two high-resolution optical readout signal-processing channels capable of simultaneously sampling any two combinations of four photodiode inputs. The MAX86184A features robust ambient light cancellation and includes a high-current LED driver. The MAX86184A supports up to 14 LEDs and All Day Mode (ADM), a low-power configuration that enables a current buffer for photodiode signal amplification, optimized for ~70dB SNR in continuous-use applications.

The MAX86184A EV kit supports the serial-peripheral interface in a fully autonomous way. The MAX86184A has a 256-word built-in FIFO. The EV kit supports file logging, which allows the user to disconnect from the computer for more convenient data capturing sessions.

The MAX86184A EV kit comprises two boards. The MAXSENSORBLE_CH_EVKIT_D is the data acquisition board while the MAX86184A/B_EVKIT_A is the MAX86184A sensor board. The EV kit is powered by a Li-Po battery, which is recharged through a USB-C cable. The EV kit streams data using Bluetooth® through Windows® Bluetooth Low Energy. The EV kit contains the latest firmware but comes with the programming circuit board MAXDAP-TYPE-C in case a firmware upgrade is needed.

Note: This EV kit is not a medical device.

Analog Devices is in the process of updating documentation to provide culturally appropriate terminology and language. This is a process with a wide scope and will be phased in as quickly as possible. Thank you for your patience.

Features

- Quick Evaluation of the MAX86184A
- Supports Optimization of Configurations
- Facilitates Understanding MAX86184A Architecture and Solution Strategy
- Real-Time Monitoring and Plotting
- Data Logging Capabilities
- Bluetooth Low Energy/BLE
- Windows® 10-Compatible GUI Software

EV Kit Contents

- MAXSENSORBLE_CH_EVKIT_D board
- MAX86184A/B_EVKIT_A board
- 105mAh Li-Po battery LP-401230
- USB-C to USB-A cable
- MAXDAP-TYPE-C programmer board
- Micro USB-B to USB-A cable

MAX86184A EV Kit Files

FILE	DESCRIPTION
MAX86184GUISetupVxxx.zip	Setup file to install the PC GUI program

Notes: The GUI setup files can be obtained by following the procedure given in the *Quick Start* section.

The MAXSENSORBLE_CH_EVKIT_D and EV Kit design files are attached at the end of this document.

***Ordering Information* appears at the end of the data sheet.**

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EV Kit Photo

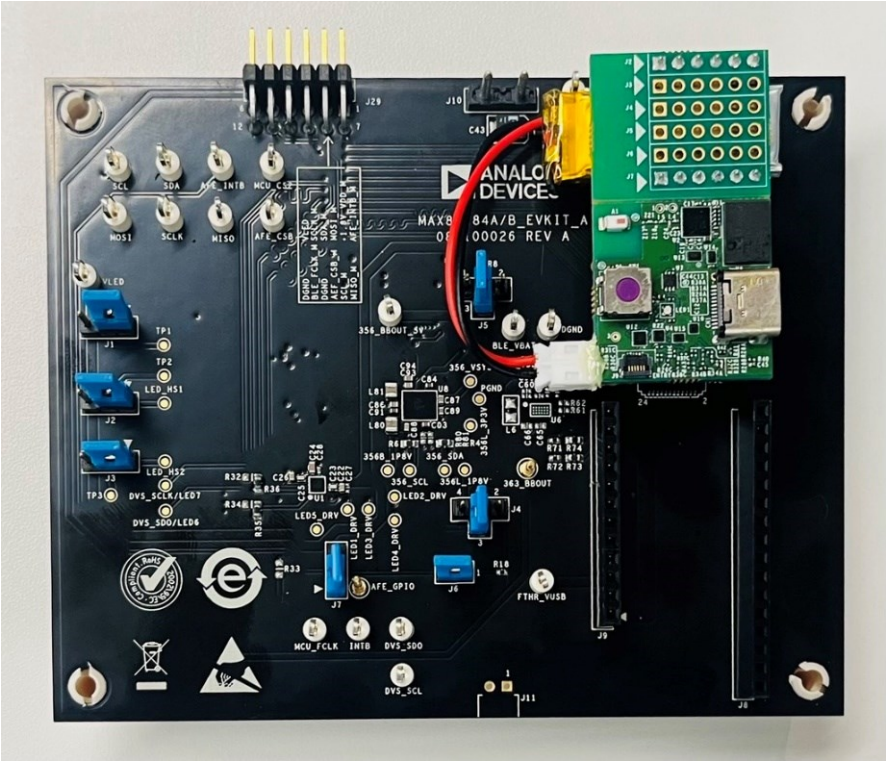


Figure 1. MAX86184A EV Kit Photo

Notes

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