

## MAX30003WING2# Evaluation Kit

Evaluates: MAX32660

### General Description

The MAX30003WING2 evaluation kit demonstrates the use of the MAX32660 Arm® Cortex®-M4 processor with FPU as an ECG sensor hub. The MAX32660 runs advanced ECG algorithms provided by B-Secur that transform raw ECG data collected from the MAX30003 into simple, high-level information, which is then communicated to the MAX32620FTHR host processor through I<sup>2</sup>C.

The kit includes the following items:

- 1 MAX30003WING2# circuit board
- 2 MAX326325PICO JTAG debugger/programmer
- 1 MAX32620FTHR hosting feather board

### Features

- B-Secur ECG Firmware
- Ultra-Low Power MAX32660 Arm Cortex-M4 Processor with FPU
- Adafruit® Feather-Compatible Host Processor Socket
- PCB-Integrated ECG Electrodes
- Connector for External ECG Electrodes

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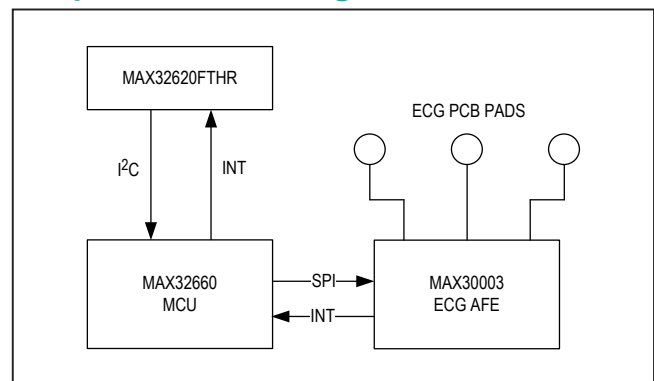
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### Detailed Description

The kit demonstrates the B-Secur ECG algorithms that execute on the MAX32660. Integrated PCB pads on the left and right sides of the board provide the ECG signal interface to the user. Additionally, a connector for external ECG electrodes is provided.

The kit comes with example host software that runs on the MAX32620FTHR. This software interfaces with the MAX32660 through an I<sup>2</sup>C bus and communicates high-level data to the user through the MAX32625PICO debug interface.

### Simplified Block Diagram



[Ordering Information](#) appears at end of data sheet.

## MAX30003WING2 EV Kit Bill of Materials

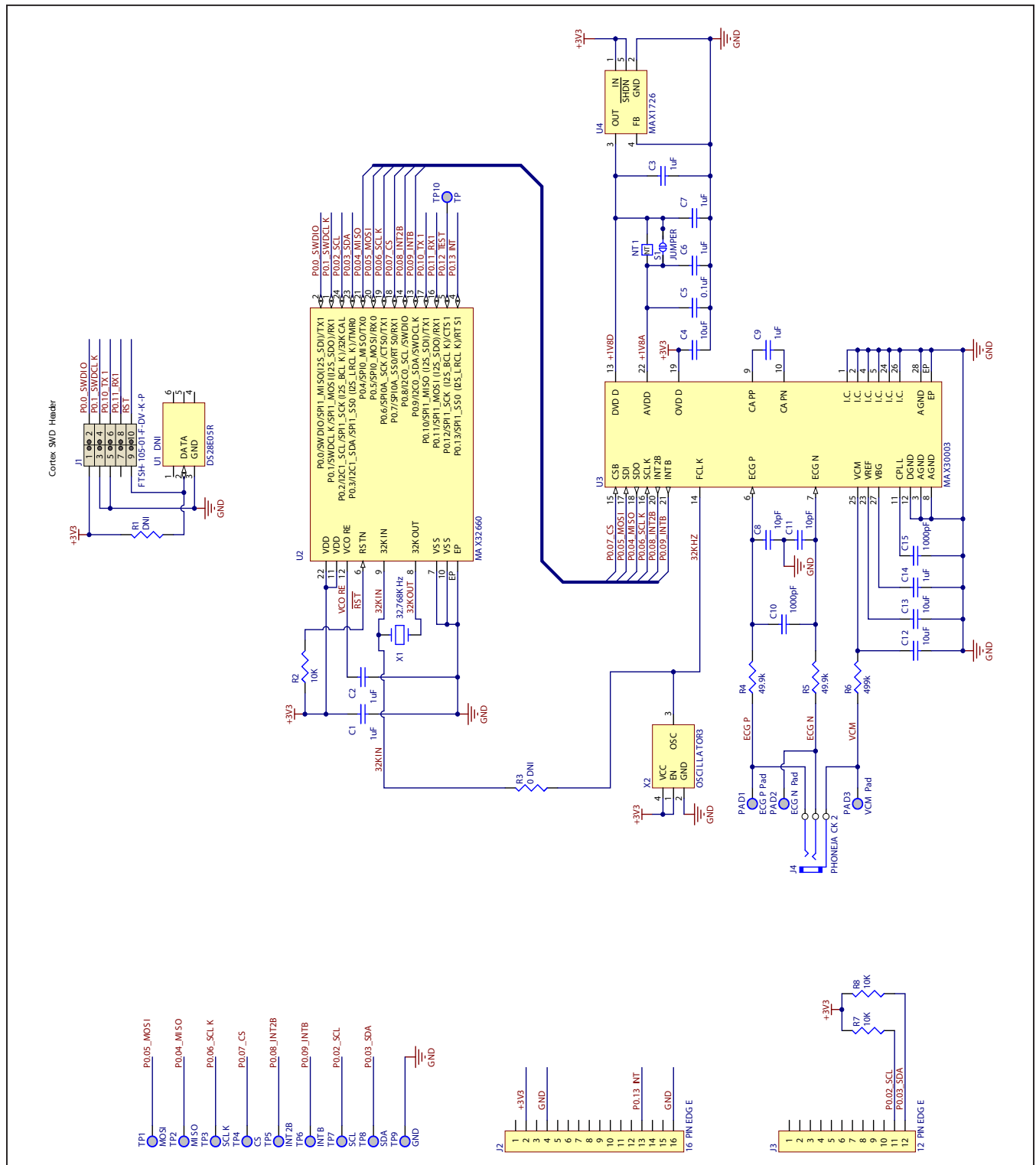
REFDES	MANUFACTURER	PART NUMBER	DESCRIPTION
C1, C2, C3, C6, C7, C9, C14	Samsung Electro-Mechanics	CL10B105KP8NNNC	Cap 1 $\mu$ F $\pm$ 10% 10V X7R 0603
C4, C12, C13	Samsung Electro-Mechanics	CL10A106MQ8NNNC	CAP CER 10UF 6.3V X5R 0603
C5	Samsung Electro-Mechanics	CL10B104KO8NNNC	CAP CER 0.1UF 16V X7R 0603
C8, C11	KEMET	C0603C100D5GACTU	CAP CER 10PF 50V C0G/NP0 0603, CAP CER 10PF 50V NP0 0201
C10	KEMET	C0402C102K5RACTU	CAP CER 1000PF 50V X7R 0402
C15	Samsung Electro-Mechanics	CL10C102JB8NNNC	CAP CER 1000PF 50V C0G/NP0 0603
J1	Samtec Inc	FTSH-105-01-F-DV-K-P	CONN HEADER 10POS DUAL .05" SMD
J2	Sullins Connector Solutions	PPPC161LFBN-RC	CONN HEADER FEMALE 16POS .1" GOLD
J3	Sullins Connector Solutions	PPPC121LFBN-RC	CONN HEADER FEMALE 12POS .1" GOLD
J4	CUI Inc.	SJ-3523-SMT-TR	CONN JACK STEREO 3.5MM SMD R/A
R2, R7, R8	Stackpole Electronics Inc	RMCF0603FT10K0	RES 10K OHM 1% 1/10W 0603
R4, R5	Panasonic Electronic Components	ERJ-3EKF4992V	RES SMD 49.9K OHM 1% 1/10W 0603
R6	Yageo	RT0603DRD07499KL	RES SMD 499K OHM 0.5% 1/10W 0603
U1	Maxim Integrated	DS28EL15Q+U	1-WIRE SHA-256 SECURE AUTHENTICATOR WITH 512BIT EEPROM
U2	Maxim Integrated	MAX32660GTG+	Ultra-Low Power Arm Cortex-M4 with FPU-Based Microcontroller for Wearable and IoT Sensors
U3	Maxim Integrated	MAX30003CTI+	Ultra-Low Power, Single-Channel Integrated Biopotential (ECG, R-to-R Detection) AFE
U4	Maxim Integrated	MAX1726EUK18+	Low-Dropout Linear Regulators 12V
X1	ECS Inc.	ECS-.327-6-12-TR	CRYSTAL 32.7680KHZ 6PF SMD
X2	Diodes Incorporated	KX3211A0032.768000	XTAL OSC XO 32.7680KHZ CMOS SMD

## Ordering Information

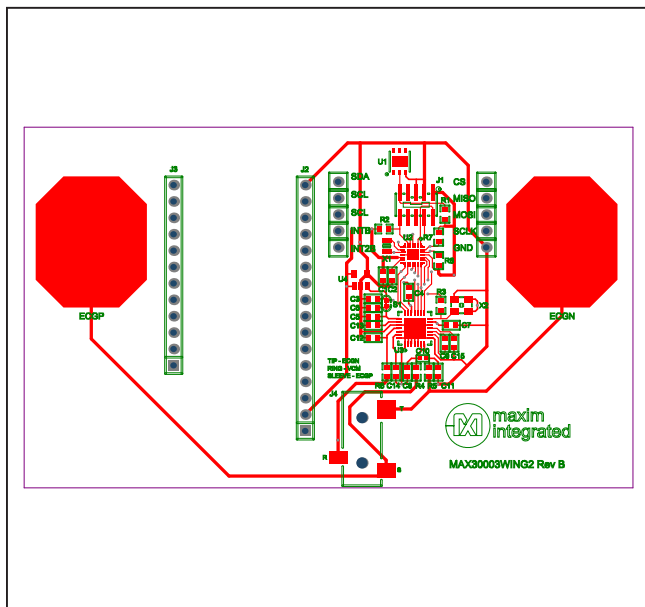
PART	TYPE
MAX30003WING2#	Evaluation Kit

#Denotes RoHS compliance.

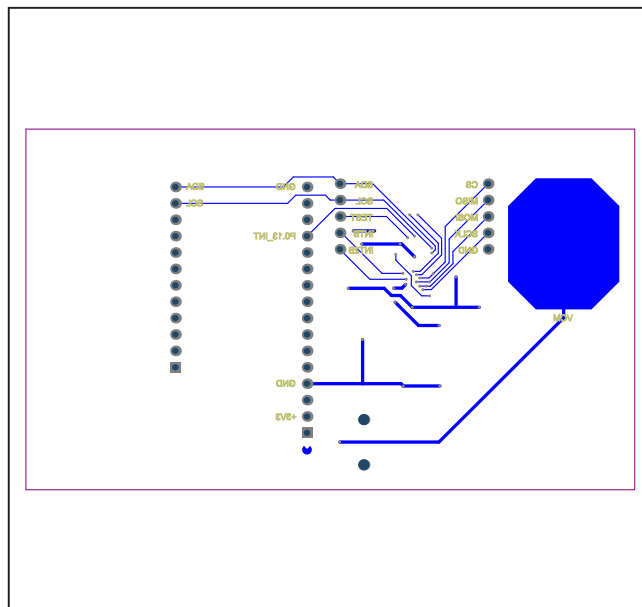
MAX3003WING2 EV Kit Schematic



### MAX30003WING2 EV Kit PCB Layout Diagrams



Top



Bottom

### Revision History

REVISION NUMBER	REVISION DATE	DESCRIPTION	PAGES CHANGED
0	12/19	Initial release	—

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