

THIS SPEC IS OBSOLETE

Spec No: 001-94996

Spec Title: WEARABLES SOLUTIONS CATALOG

Replaced by: NONE



WEARABLES SOLUTIONS CATALOG



Related Information on Wearable Solutions

Touch-Sensing Products

TrueTouch® Touchscreen Controllers
www.cypress.com/touch

CapSense® Controllers
www.cypress.com/capsense

PSOC® Solutions

PSOC 3
www.cypress.com/psoc3

PSOC 5LP
www.cypress.com/psoc5lp

PSOC 4
www.cypress.com/psoc4

PSOC 4 BLE
www.cypress.com/psoc4ble

Memory Solutions

www.cypress.com/mpwrsram

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Cypress wafer and die sales, and wafer-level packaging, help you to shrink your design.

WELCOME TO THE FUTURE

Wearables are everywhere: designer smartwatches with interactive displays that send and receive notifications such as emails, messages and reminders via Facebook, Twitter and other applications. Activity monitors that record workouts and track vital signs. Smart glasses that allow users to capture and share life moments on-the-fly.

The \$1.5 billion wearables market will grow to \$19 billion by 2018. You're gearing up to grab your share of this market. The relentless pressure to improve sensing methods, simplify the user interface, extends battery life and shrink form factors to make wearable products more *wearable* has you searching for the right technology partner. **With a complete portfolio of solutions, Cypress is your wearables technology partner.**



CYPRESS SOLUTIONS FOR WEARABLE PRODUCTS

TrueTouch® and CapSense® solutions provide the industry's lowest-power, smallest touchscreen solutions with the highest signal-to-noise ratio (SNR) and best waterproofing for natural user interfaces that simplify the sending, receiving and control of notifications.

PSoC® solutions reduce time-to-market, enabling the rapid design of sensor-based systems such as programmable analog front ends (AFEs) into each new product generation.

MicroPower™ SRAM and nonvolatile F-RAM™ memories feature the world's lowest energy needed to buffer and store data in the smallest footprint.

Bluetooth Low Energy (BLE) solutions offer an ARM® Cortex®-M0-based single-chip solution that easily integrates AFEs, digital peripherals, CapSense and a BLE radio in a tiny, single-chip solution.

The world's smallest wafer-level chip-scale packages (WLCSPs), manufactured by Cypress's subsidiary, Deca Technologies, meet your need for smaller form factors—both now and into the future.

Partner with Cypress today to unlock the potential of your next-generation wearable products.

WEARABLES DESIGN 101

USABILITY

Wearable touchscreens are the smallest of the small. They must be intuitive and easy to use. Cypress's **CapSense** and **TrueTouch** solutions, based on **PSoC**, enable you to implement a natural user interface easily with capacitive buttons, sliders, proximity sensors and touchscreens. **TrueTouch Gen5** (CYTMA525) touchscreen solutions enable wake-up gestures and hover functionality for common user interface features, such as mouse-over and magnify. The **Automatic Mode Switching** (AMS) capability of Gen5 automatically adjusts touchscreen sensitivity for superior responsiveness under all conditions, and reliably tracks all types of touch.



Waterproof Touchscreen

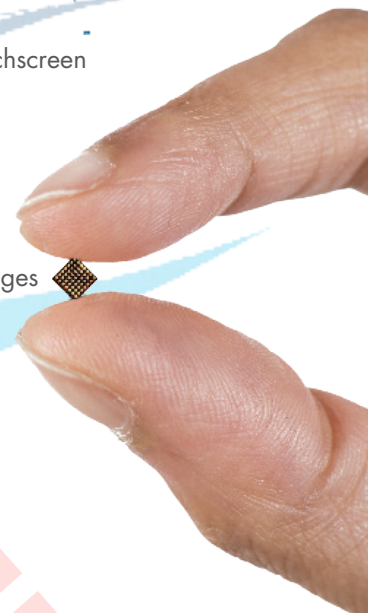


60- μ A Wake-on-Touch



Low Standby Current

Tiny WLCSP Packages



LOW POWER

Wearables burn battery power even when they are not being actively used. For that reason, power consumption in standby mode is key. Cypress's low-power touchscreen products feature the industry's lowest standby power: **60 μ A** to ensure fast response to touch gestures to wake the wearable device. The Cypress BLE solution consumes just **5.7 μ A** average current during a 4-sec connection. Cypress SRAMs have the industry's lowest standby current: **1.5 μ A** at 16 Mbit, making them the ideal technology for system memory expansion and buffering data. Our nonvolatile F-RAMs consume 130 μ A (2 Mbit, 1 MHz) while writing critical data. The energy consumed for this is **>200x better than EEPROM** and **>3,000x better than NOR flash**.

SMALL FOOTPRINT

Wearables device enclosures must be small and thin for products to be worn comfortably. All Cypress products are WLCSP-ready. For example, Cypress's Gen5 touchscreen solution is just 3.1 x 3.3 x 0.6 mm. Our BLE solution is just 3.5 x 3.9 x 0.6 mm. Cypress's PSoC 4 and PSoC 5LP products reduce board size by integrating analog, digital and CapSense circuitry.

RELIABILITY

Wearables need to function under harsh conditions such as rain or snow. Cypress's TrueTouch and CapSense solutions feature the industry's best waterproofing and glove-detection technologies to ensure that wearable products work in all conditions. Cypress's nonvolatile F-RAM memories feature nearly infinite data retention and provide the best protection for your critical data through 10^{14} read/writes vs. 10^6 of flash and 10^5 of EEPROM.

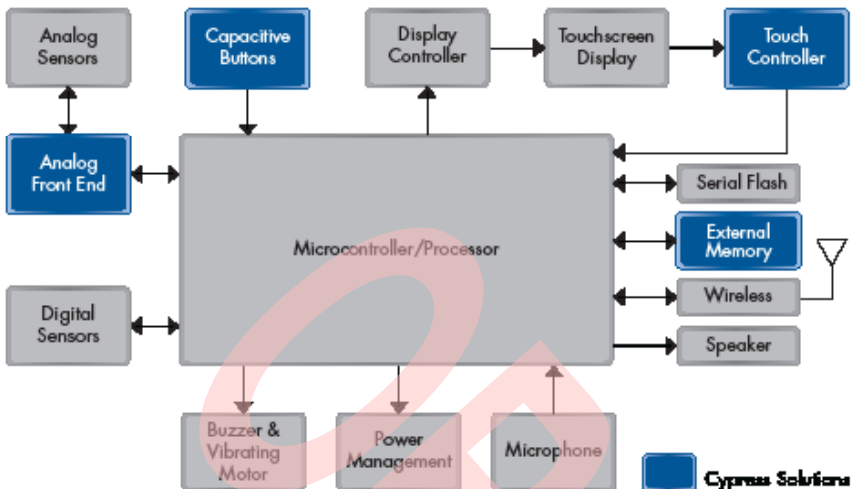


SMARTWATCHES

Smartwatches provide an interactive display for viewing notifications and sensor information. They also control certain mobile device functions in conjunction with regular time-keeping. Notifications include emails, messages, reminders, to-do lists, navigation directions and phone calls. Sensor information includes heart rate, temperature, barometric pressure, direction, distance traveled and location. Control functions include toggling settings on any connected device (e.g., media playback, airplane mode, remote camera).

The typical components of a smartwatch are a 1" to 2" interactive display, a touchscreen controller, a microcontroller/processor to run the OS, sensors to record data, an analog front end to measure biometric signals, memory to buffer, store and protect sensor and configuration data, and a Bluetooth® or WiFi radio.

SMARTWATCH - SYSTEM BLOCK DIAGRAM



HOW CYPRESS SIMPLIFIES YOUR DESIGN:

Smartwatches need reliable touchscreens

TrueTouch Gen5 touchscreen: Makes displays interactive by tracking four touch points on screens up to 3"

TrueTouch Gen5 wake-up gestures: Executes on-chip wake-up gestures (swipe, single/double tap, or any customizable gesture) to wake up the watch and execute pre-defined commands

TrueTouch Gen5 hover sensing: Provides hover sensing for user interface modes such as mouse-over and magnify

TrueTouch Gen5 glove touch: Enables interaction with the touchscreen while wearing gloves

TrueTouch Gen5 waterproofing: Enables interaction with touchscreen in wet conditions such as rain

Smartwatches need to be able to implement differentiated features

PSoC AFE integration: Enables customizable biometric sensing (heart rate, skin temperature and perspiration level)

CapSense presence detection: Saves power when the device is not being worn

Smartwatches need to store increasing amount of critical data

Ultra-low-power SRAM memory: Extends battery life by buffering packets of data in ultra-low-power SRAM to reduce radio usage

Nonvolatile memory: Continuously stores the most vital sensor and configuration data at the lowest energy with lifetime data retention.

RECOMMENDED SOLUTIONS

TOUCH CONTROLLER

TrueTouch Gen5 (CYTMA525)

3" touchscreen, 25 sense I/Os, 4-finger touch

Wake-up gestures

Hover sensing up to 10 mm

Glove touch with up to 5 mm thick gloves

Water rejection and wet-finger tracking

60-µA standby current

Flexible choice of touchscreen sensors and stackups

49-ball, 3.1 x 3.3 x 0.6 mm WLCSP

ANALOG FRONT END

PSoC 4 (CY8C42XX)

48-MHz ARM Cortex-M0 processor

Two opamps, two IDACs, 12-bit SAR ADC

Two comparators, analog multiplexer

CapSense presence detection, buttons and sliders

Four universal digital blocks (UDBs)

Two serial communication blocks (SCBs) (SPI/I²C/UART)

1.3-µA standby current

40-pin QFN 6.0 x 6.0 x 0.6 mm, WLCSP on request

EXTERNAL MEMORY

Micropower SRAM

16-Mbit MicroPower SRAM (CY62167EV18)

High-speed access time of 55 ns

Low standby current of 1.5 µA

Low active current of 2.2 mA at 1 MHz

48-ball, 6.0 x 8.0 x 1.0 mm VFBGA, WLCSP on request

Nonvolatile Serial F-RAM

2-Mbit Serial (SPI) F-RAM (FM25V20A)

Low standby current of 100 µA

Low active current of 130 µA at 1 MHz

Fast writes, zero wait states

High endurance - 10¹⁴ read/writes

Direct replacement for serial flash, EEPROM

8-pin, 5.0 x 6.0 x 0.8 mm DFN, WLCSP on request



GETTING STARTED

TRUETOUCH GEN5

Visit: www.cypress.com/touch

Datasheet: [CYTMA525](#)

Standard Development Kit:
[CY3290-TMA500](#)

Availability: Now

For a wearable touchscreen demo,
contact: truetouch@cypress.com

PSoC 4200

Visit: www.cypress.com/psoc4200

Datasheet: [CY8C424X](#)

Standard Development Kit: [CY8CKIT-042](#)

App Note: [Getting Started with PSoC 4](#)

Availability: Now

For a heart rate monitor solution demo,
contact: psoc@cypress.com

MICROPOWER SRAM

Visit: www.cypress.com/mpwrsram

Datasheet: [CY62167EV18](#)

Availability: Now

For more information, contact:
sales@cypress.com

NONVOLATILE SERIAL F-RAM

Visit: www.cypress.com/nonvolatile

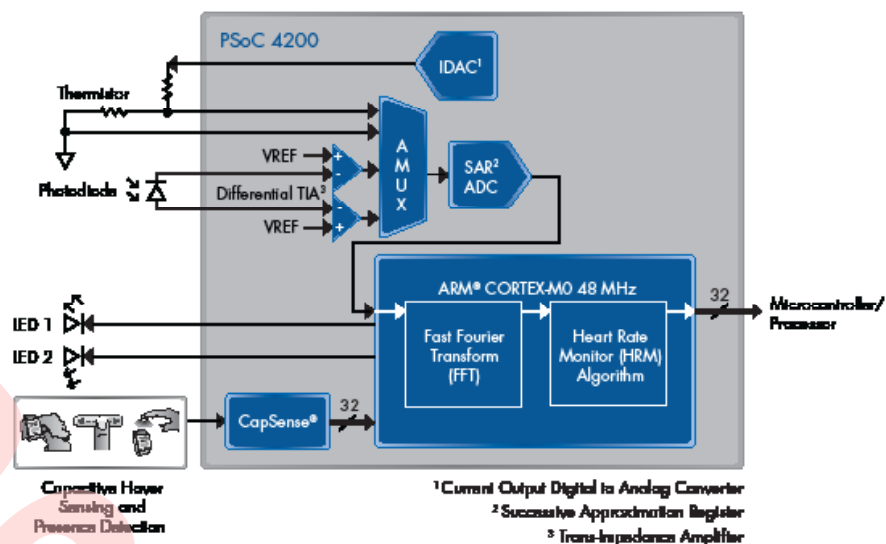
Datasheet: [FM25V20A](#)

Availability: Now

For more information, contact:
sales@cypress.com

SMARTWATCH - SUBSYSTEM BLOCK DIAGRAMS

PSoC 4200 Smartwatch Heart-Rate Monitor



OTHER CYPRESS SOLUTIONS

SOLUTION	RECOMMENDED PRODUCT	REASONS TO BUY
TOUCH CONTROLLER	CY8CTMG240 (Gen2)	Low-cost, smaller footprint option 30-ball 2.2 x 2.3 x 0.4 mm WLCSP, up to 3.6" touchscreen, 32 sense I/Os, 2-finger touch
ANALOG FRONT END	CY8C38 (PSoC 3)	Reduced BOM with greater analog and digital integration 4 opamps, 4 DACs, 20-bit Delta-Sigma ADC, 4 comparators, analog multiplexer, CapSense, 16-24 UDBs for I ² C/SPI/UART
EXTERNAL MEMORY	CY62147EV18 (MicroPower SRAM)	Low-power, lower density option for buffering data 4-Mbit, 1-μA standby current, 2 mA at 1 MHz active current
	FM22LD16 (parallel F-RAM)	Low-power, higher density option for buffering nonvolatile data 4-Mbit parallel F-RAM, 10 ¹⁴ read/writes, 90-μA standby current, 8-mA active current

RELATED APPLICATIONS

Sports, running and GPS watches

6.634

ACTIVITY MONITORS

Activity monitors measure vital signs and record daily activities and workouts to monitor fitness and wellness. Measurements include distance walked or run, calorie count and sleep patterns. Vital signs measured include heart rate, skin temperature and perspiration level. Recorded information can be transferred wirelessly to a mobile device, and later to the cloud for further analysis.

Most activity monitors use segment LCDs for information display. They do not have not full displays like a smartwatch. Additional components include a microcontroller to manage the device, a touch-sensing controller to implement gestures, sensors to record data, an AFE to measure biometric signals, memory to buffer, store and protect sensor and configuration data, and a Bluetooth or WiFi radio.

RECOMMENDED SOLUTIONS

SYSTEM-ON-CHIP (SoC)

PSoC 4 BLE (PSoC 4XX7_BLE)

One-chip solution with integrated 48-MHz ARM Cortex-M0 processor, AFE, CapSense, 2.4-GHz BLE radio with integrated balun

Four opamps, two IDACs, 12-bit SAR ADC

Two comparators, analog multiplexer

CapSense presence detection, buttons and sliders

Four UDBs

Two SCBs (SPI/I²C/UART)

Segment LCD Drive

5.7-μA average current for 4-sec connection

68-ball 3.5 x 3.9 x 0.6 mm WLCSP

CAPACITIVE SENSING CONTROLLER

CapSense Plus (CY8C20XX7/S)

24-MHz M8C processor

24 sense inputs

CapSense presence detection, buttons and sliders

Low standby current of 1.1 μA

WLCSP on request

EXTERNAL MEMORY

Micropower SRAM

16-Mbit async MicroPower SRAM (CY62167EV18)

Low standby current of 1.5 μA

Low active current of 2.2 mA at 1 MHz

High-speed access time of 55 ns

48-ball VFBGA 6.0 x 8.0 x 1.0 mm, WLCSP on request

Nonvolatile Serial F-RAM

2-Mbit Serial SPI F-RAM (FM25V20A)

Low standby current of 100 μA

Low active current of 130 μA at 1 MHz

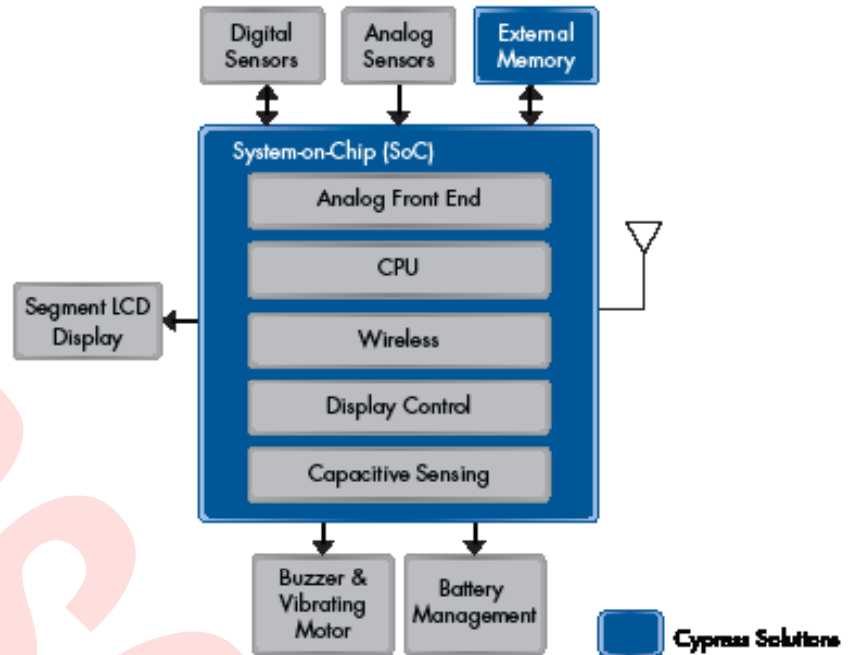
Fast writes; zero wait states

High endurance: 10¹⁴ read/writes

Direct replacement for serial flash, EEPROM

8-pin DFN 5.0 x 6.0 x 0.8 mm, WLCSP on request

ACTIVITY MONITOR - SYSTEM BLOCK DIAGRAM



HOW CYPRESS SIMPLIFIES YOUR DESIGN:

Activity monitors need to be light and small

PSoC 4 BLE one-chip integrated SoC for AFE, wireless and touch sensing:

Reduces your time-to-market and bill of materials (BOM) by integrating an MCU, AFE, BLE and CapSense on a single chip to create low-cost sensor-based systems

Activity monitors need to be able to implement differentiated features

PSoC AFE integration: Enables customizable biometric sensing (heart rate, skin temperature and perspiration level)

CapSense gestures: Enables smart gestures (swipe, single tap and double tap) for simple, low-power interaction with the activity monitor

CapSense presence detection: Saves power when the device is not being worn

LCD matrix drive: Drives segment LCDs to simplify your design and reduce your BOM cost

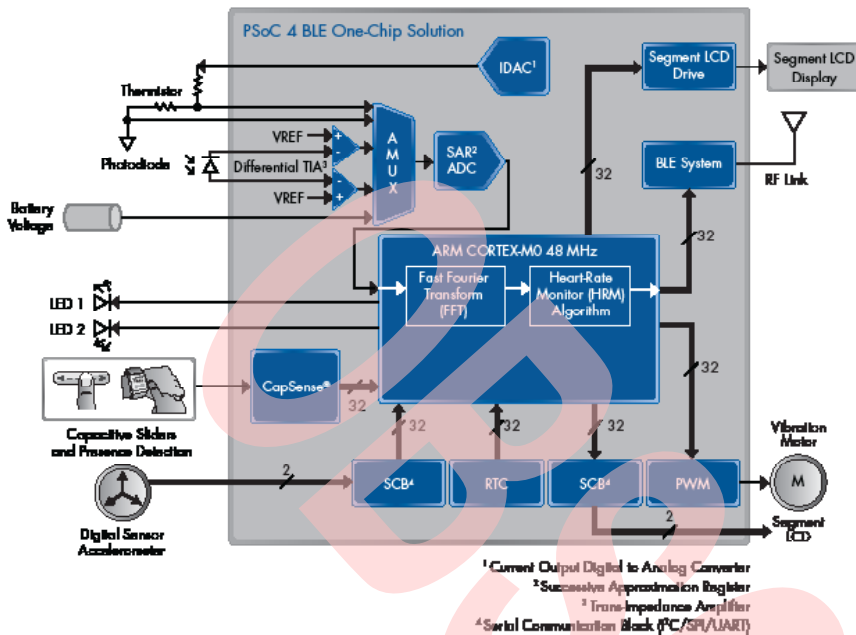
Activity monitors need to store increasing amount of critical data

Ultra-low-power SRAM memory: Extends battery life by buffering packets of data in ultra-low-power SRAM to reduce radio usage

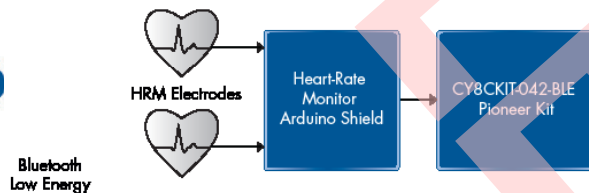
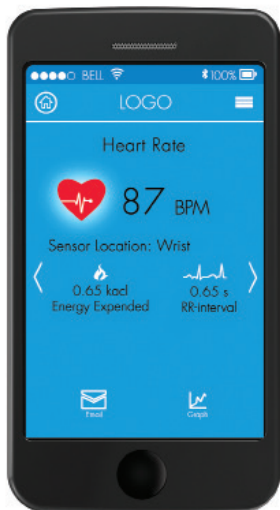
Nonvolatile memory: Continuously stores the most vital sensor and configuration data at the lowest energy with lifetime data retention

ACTIVITY MONITOR - SUBSYSTEM BLOCK DIAGRAMS

PSoC 4 BLE Activity Monitor - Block Diagram



PSoC 4 BLE Heart Rate Monitor - Solution Demo



OTHER CYPRESS SOLUTIONS

SOLUTION	RECOMMENDED PRODUCT	REASONS TO BUY
CAPACITIVE SENSING CONTROLLER	CY8CMBR3XXX (CapSense)	Small footprint solution for simple capacitive buttons 24-pin QFN 4.0 x 4.0 x 0.6 mm package with 16 sense inputs and CapSense presence detection
	PSoC 4000 (PSoC 4)	Low-power, small footprint solution for capacitive buttons and sliders 16-pin QFN 3.0 x 3.0 x 0.6 mm package with 16-MHz ARM Cortex-M0 processor and CapSense presence detection, 2.5-μA standby current
WIRELESS	CYBL10X6X (PSoC TM BLE)	Small footprint wireless SoC for non-biometric designs 3.5 x 3.9 x 0.6 mm WLCSP package with 48-MHz ARM Cortex-M0 processor, 2.4-GHz BLE radio with integrated balun

RELATED APPLICATIONS

Fitness band, fitness monitor, fitness tracker, activity bracelets, smart jewelry

GETTING STARTED

PSoC 4 BLE

Visit: www.cypress.com/psoc4ble

Datasheet: [PSoC4XX7_BLE](#)

Standard Development Kit:
[CY8CKIT-042-BLE](#)

App Notes: [Getting Started with PSoC 4 BLE](#)

Design Guide: [PSoC 4 BLE Antenna Guide](#)

Availability: Q414

For a BLE solution demo, contact:
ble@cypress.com

CAPSENSE PLUS

Visit: www.cypress.com/capsenseplus

Datasheet: [CY8C20XX7/S](#)

Availability: Now

For more information, contact:
sales@cypress.com

MICROPOWER SRAM

Visit: www.cypress.com/mpwrsram

Datasheet: [CY62167EV18](#)

Availability: Now

For more information, contact:
sales@cypress.com

NONVOLATILE SERIAL F-RAM

Visit: www.cypress.com/nonvolatile

Datasheet: [FM25V20A](#)

Availability: Now

For more information, contact:
sales@cypress.com

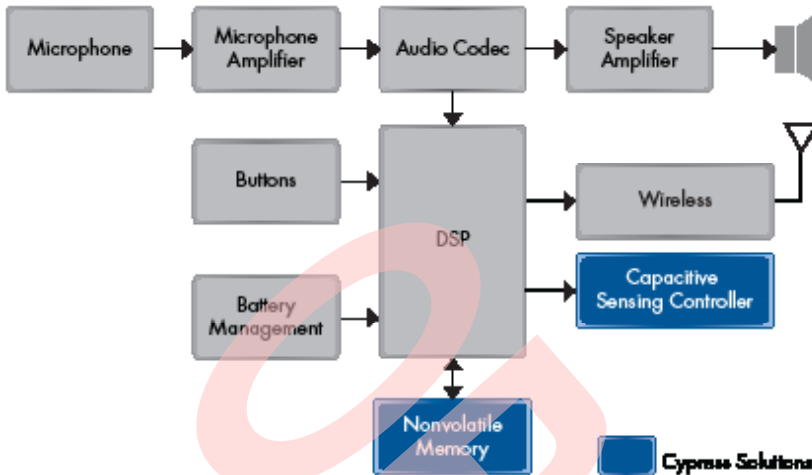


HEARING AIDS

Hearing aids are electro-acoustic devices used by consumers to correct impaired hearing, as measured by audiometry.

Components of the hearing aid include a reliable digital signal processor (DSP) to convert sound into digital signals, nonvolatile memory to store recipient hearing logs and configuration parameters, an amplifier to condition the microphone output, audio codecs to improve sound quality, a battery-management IC, and a Bluetooth or proprietary 2.4-GHz wireless radio.

HEARING AID - SYSTEM BLOCK DIAGRAM



HOW CYPRESS SIMPLIFIES YOUR DESIGN:

Hearing aids need to be light and small with longer battery life

One-chip nonvolatile memory for firmware and data: One memory with fast read access for firmware execution and continuously writing hearing log data —in the smallest footprint and lowest energy consumption

Hearing aids require sleek and reliable user interfaces

CapSense presence detection: Saves power when the device is not being worn

CapSense gestures: Adjusts volume and turns power on/off

RECOMMENDED SOLUTIONS

NONVOLATILE MEMORY

2-Mbit Serial (SPI) F-RAM (FM25V20A)

4-Mbit Serial (SPI) F-RAM (CY15B104Q)

Low standby current of 100 μ A

Low active current of 130 μ A at 1 MHz

Fast writes, zero wait states

High endurance: 10^{14} read/writes

Direct replacement for serial flash, EEPROM

FM25V20A: 8-pin DFN 5.0 x 6.0 x 0.8 mm, WLCSP on request

CY15B104Q: bare die, WLCSP on request

CAPACITIVE SENSING CONTROLLER

CapSense MBR3 (CY8CMBR3XXX)

16 sense inputs

CapSense presence detection, buttons and sliders

24-pin QFN 4.0 x 4.0 x 0.6 mm, WLCSP on request

GETTING STARTED

NONVOLATILE SERIAL F-RAM

Visit: www.cypress.com/nonvolatile

Datasheet: [FM25V20A](#), [CY15B104Q](#)

App Note: [F-RAM as One-Chip Solution for Code and Data Memory Applications](#)

Availability:

FM25V20A: Now

CY15B104Q: Samples: Q115

For more information, contact: sales@cypress.com

CAPSENSE MBR3

Visit: www.cypress.com/capsensembr3

Datasheet: [CY8CMBR3XXX](#)

Availability: Now

For more information, contact: sales@cypress.com

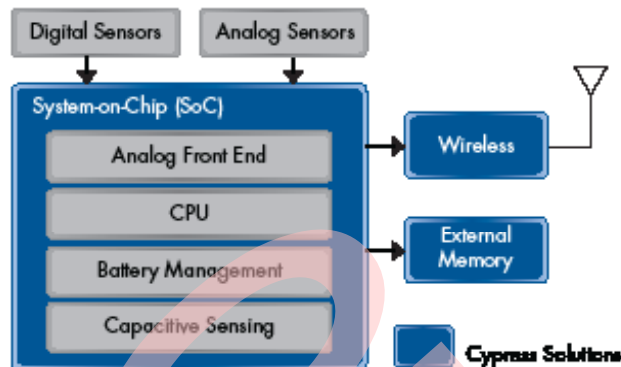
WEARABLE PATCHES



Wearable patches are small devices that continuously measure, process, store and protect the biometric data collected by sensors, including heart rate, respiratory rate and skin temperature. The recorded information can be transferred wirelessly to a mobile device, and subsequently to the cloud for further analysis. These devices are typically FDA-certified and require a high degree of analog precision.

Components include a mixed-signal, low-power SoC with high-precision analog processing capability and embedded memory, analog sensors to measure biometric signals, digital sensors to record activity-based data, and memory to buffer, store and protect the data. A Bluetooth Low Energy (BLE) transceiver interfaces with the system to transmit the recorded data to a mobile device for further analysis.

WEARABLE PATCH - SYSTEM BLOCK DIAGRAM



HOW CYPRESS SIMPLIFIES YOUR DESIGN:

Wearable patches need to be light, small and accurate

PSoC 5LP One-Chip mixed-signal solution for high-precision analog processing:
High-precision, 20-bit analog enables high-performance biosensor system

PSoC AFE integration: Enables customizable biometric sensing (heart rate, skin temperature and perspiration level)

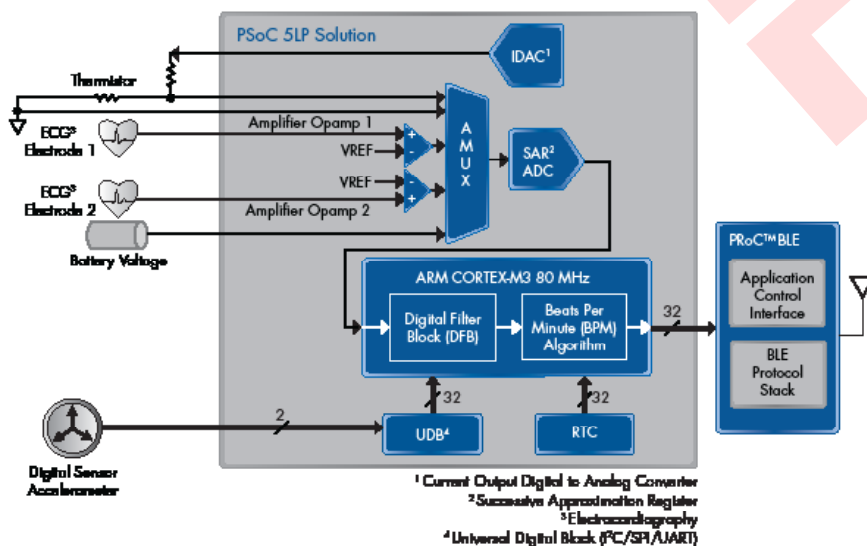
CapSense presence detection: Saves power when the device is not being worn

Wearable patches need to store increasing amount of critical data

Nonvolatile memory: Continuously stores sensor and configuration data at the lowest energy with lifetime data retention

BLE connectivity: Enables low-power wireless connection to any mobile device

PSoC 5LP WEARABLE PATCH - SUBSYSTEM BLOCK DIAGRAM



OTHER CYPRESS SOLUTIONS

SOLUTION	RECOMMENDED PRODUCT	REASONS TO BUY
ANALOG FRONT END	CY8C38 (PSoC 3)	Lower-cost small footprint analog signal pre-processor 72-ball 4.3 x 5.0 x 0.6 mm WLCSP solution with 67-MHz 8051 processor, 4 opamps, 4 DACs, 20-bit Del-Sig ADC, 4 comparators, analog multiplexer, CapSense and 16-24 UDBs

RECOMMENDED SOLUTIONS

SYSTEM-ON-CHIP (SoC)

PSoC 5LP (CY8C58LP)
80-MHz ARM Cortex-M3 processor
Four opamps, four DACs, 20-bit Delta-Sigma ADC, two 12-bit SAR ADC
Four comparators, analog multiplexer
CapSense presence detection
20-24 UDBs
SPI/I²C/UART interface through UDBs
1.9-μA standby current
99-ball, 5.2 x 6.0 x 0.6 mm WLCSP

WIRELESS

ProC BLE (CYBL10X6X)
48-MHz ARM Cortex-M0 processor
2.4-GHz BLE radio with integrated balun
5.7-μA average current for 4-sec connection
68-ball 3.5 x 3.9 x 0.6 mm WLCSP

EXTERNAL MEMORY:

Nonvolatile Serial F-RAM
2-Mbit Serial (SPI) F-RAM (FM25V20A)
Low standby current of 100 μA
Low active current of 130 μA at 1 MHz
High endurance: 10¹⁴ read/writes
Direct replacement for serial flash, EEPROM
8-pin DFN 5.0 x 6.0 x 0.8 mm, WLCSP on request

GETTING STARTED

PSoC 5LP (CY8C58LP)

Visit: www.cypress.com/psoc5lp

Datasheet: [CY8C58LP](#)

Standard Development Kit: [CY8CKIT-050](#)

Availability: Now

For more information, contact:
psoc@cypress.com

ProC BLE (CYBL10X6X)

Visit: www.cypress.com/procble

Datasheet: [CYBL10X6X](#)

Standard Development Kit:
[CY8CKIT-042-BLE](#)

Availability: Q414

For a BLE solution demo, contact:
ble@cypress.com

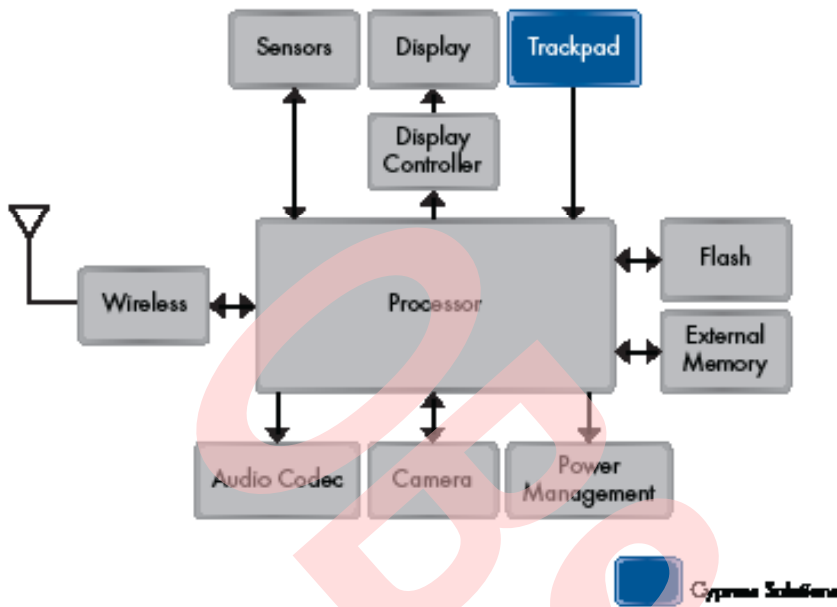


SMART GLASSES

Smart glasses project information such as notifications, navigation data and music playlists onto a transparent heads-up display. A touch interface on the glasses' frame that accepts gestures and other instructions from the user.

Components include a powerful microprocessor; cameras and sensors to track the environment, such as accelerometers, gyroscopes and magnetometers; a trackpad for user input, and Bluetooth, WiFi and baseband processors for wireless connectivity.

SMART GLASSES - SYSTEM BLOCK DIAGRAM



HOW CYPRESS SIMPLIFIES YOUR DESIGN:

Smart glasses need reliable user interfaces

Touch gestures: Enables touch gestures such as swipe, single tap and double tap on smart glasses

Look-for-touch: Keeps the user interface in lowest power until the user takes action

Presence detection: Saves power when the device is not being worn

Smart glasses need to have sleek industrial designs for customer adoption

Custom module design: Allows the technology to fit in tiny, curved industrial designs



RECOMMENDED SOLUTIONS

CYPRESS TRACKPAD MODULE

Multiple distinct scanning areas with a one-chip architecture

Flexible overlay assembly and lamination

Compliant with UL, CSA and TUV standards

Optimal module thickness, <1-mm stackup (sensor to component)

ADVANCED PROCESSING

32-bit ARM Cortex-M0 processor

Multi-finger detection and communication with embedded gesture detection

Low-power idle and look-for-touch modes

Optional raw data interface for advanced host processing

In-system upgradeable firmware

PRODUCT SUPPORT

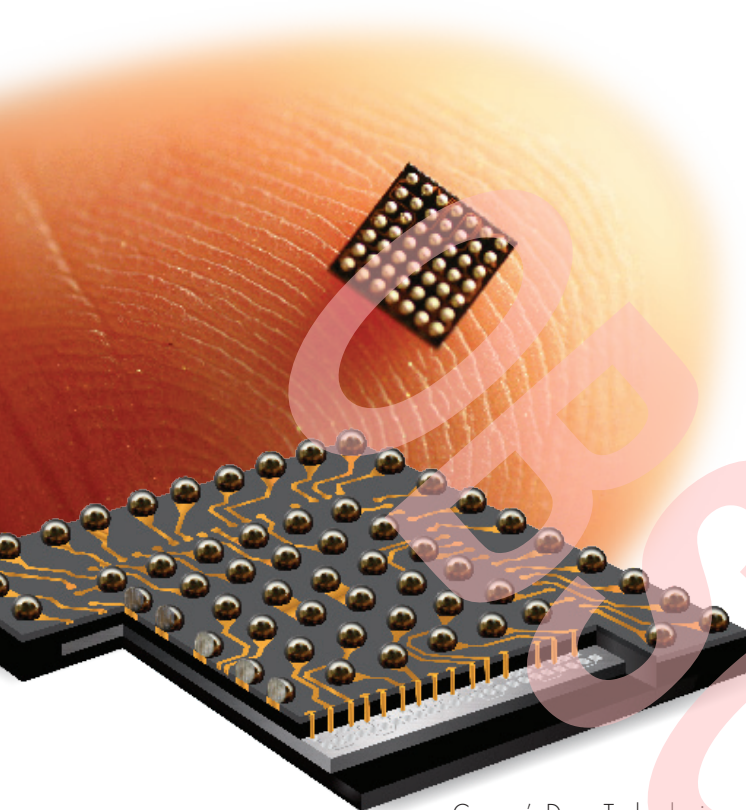
On-site support for customer product introduction available

Incoming and outgoing test equipment available

GETTING STARTED

To view our trackpad demo, or for more information, contact: sales@cypress.com

ADDITIONAL RESOURCES



Cypress's Deca Technologies subsidiary creates the industry's smallest WLCSs

WAFER AND DIE SALES

Cypress's products are sold in both wafer and die form. Cypress classifies them as follows:

Wafers: Wafers are probed at both room temperature and high temperature to guarantee full functionality.

Known good die: KGD are available as both die-in-wafer and background die. Die shipped in wafer form are not background. Background die are sawed and shipped in waffle packs.

Email us at sales@cypress.com to learn more about our wafer and die offerings.

WAFER-LEVEL CHIP-SCALE PACKAGING (WLCS) DECA TECHNOLOGIES

Deca Technologies is a majority-owned, fully independent subsidiary of Cypress Semiconductor, part of Cypress's Emerging Technologies Division. Deca's advanced wafer-level-interconnect foundry creates the industry's smallest, low-cost wafer-level chip-scale packaging which is critical for the wearables market.

Having adapted the solar wafer manufacturing processes and autoline technology of Cypress's former subsidiary, SunPower Corp.—one of the world's largest and most-successful solar companies—Deca significantly reduces cycle times for prototype and production manufacturing.

Deca's technology serves RF, analog, mixed-signal, memory and microcontroller companies, as well as Cypress itself. Please visit www.decatechnologies.com to learn more about Deca's offerings, or email sales@cypress.com to find out more about Cypress's WLCS solutions.



The Cypress Developer Community™ (www.cypress.com/go/community) offers a rich array of resources to help you get the most out of your wearables project. You can:

Post questions, solve design problems and dialog with other designers in one of our technical forums

Watch demos, explore labs and access our video training

Learn new techniques geared to the projects you're working on from Cypress experts through our technical blogs

CYPRESS WEARABLE SOLUTIONS SELECTOR GUIDE

COMPONENT	CYPRESS FAMILY	PRODUCT	SMART-WATCHES	ACTIVITY MONITORS	HEARING AIDS	WEARABLE PATCHES	SMART GLASSES
ANALOG FRONT END	PSoC® 4	CY8C424X	✓				
	PSoC 3	CY8C38	✓			✓	
SYSTEM-ON-CHIP	PSoC 4 BLE	PSoC 4XX7 BLE		✓			
	PSoC 5LP	CY8C58LP				✓	
WIRELESS	PRoC™ BLE	CYBL10X6X		✓		✓	
CAPACITIVE SENSING CONTROLLER	CapSense® Controllers	CY8C20XX7/S		✓			
		CY8CMBR3XXX		✓	✓		
		PSoC 4000		✓			✓
TOUCH CONTROLLER	TrueTouch® Touchscreen Controllers	CYTMA525	✓				
		CY8CTMG240	✓				
EXTERNAL MEMORY	MicroPower SRAM	CY62167EV18	✓	✓			
		CY62147EV18	✓				
	Nonvolatile F-RAM	FM25V20A	✓	✓	✓	✓	
		FM22LD16	✓				
		CY15B104Q¹			✓		
TRACKPAD	Trackpad	Cypress Trackpad Module¹					✓

¹For more information, contact sales@cypress.com

DESIGN WINS: POWERED BY CYPRESS TOUCH-SENSING SOLUTIONS

Powered by TrueTouch® touchscreen controllers

Powered by CapSense® controller



Sony® SmartWatch 2



Qualcomm® Toq™



Samsung® Gear Live



Garmin® Vivosmart™

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