

Capacitive touch mutual capacitance sensor demonstration board with haptic feedback

CAPTIVATE-PHONE (ACTIVE)

Description & Features

Technical Documents

Support & Training

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Key Document

-  [MSP-CAPT-FR2633 MSP CapTivate™ MCU development kit user's guide](#)
- [CapTivate™ Technology Guide](#)
- [» View All Technical Documents \(5\)](#)

Description

This MSP430™ CapTivate™ demonstration board (CAPTIVATE-PHONE) is a simple evaluation platform for mutual capacitance capacitive touch sensors using a variety of configurations in a real-world application. The sensor panel demonstrates how to matrix mutual capacitance touch sensors for high density and low pin count, and showcases the recommended layout for mutual capacitance slider and wheel sensors. The panel also demonstrates how to implement guard channel to prevent false touch detections due to a palm or cleaning cloth. A haptic driver and actuator are included to provide vibrational feedback to the user when touches are detected.

Features

- Interfaces to CapTivate ecosystem MCU boards
- Implements 29 capacitive touch elements using just 12 CapTivate IOs
- Contains 17 buttons, two 4-element sliders, one 3-element wheel, and one guard channel
- Implements a guard channel for palm rejection
- Provides haptic feedback using the TI DRV2605L haptic driver with integrated effects libraries



CAPTIVATE-PHONE Capacitive touch mutual capacitance sensor demonstration board with haptic feedback board image

What's Included

- CAPTIVATE-PHONE sensor board
- CAPTIVATE-PGMR not included; CAPTIVATE-PGMR is required for tuning and programming
- CapTivate MCU Board (i.e. CAPTIVATE-FR2633 or CAPTIVATE-FR2676) not included

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Part Number	Buy from Texas Instruments or Third Party	Status	
CAPT-PHONE-FR2633: CAPTIVATE-PHONE + CAPTIVATE-PGMR + CAPTIVATE-FR2633 bundle	Order Online	Not Available	ACTIVE
CAPT-PHONE-FR2676: CAPTIVATE-PHONE + CAPTIVATE-PGMR + CAPTIVATE-FR2676 bundle	Order Online	Not Available	ACTIVE
CAPTIVATE-PHONE: Capacitive touch mutual capacitance sensor demonstration board with haptic feedback	(USD) Add to cart	Pricing may vary. Buy from distributor	ACTIVE
Contact a Distributor - Select a location - Go			

 TI's [Standard Terms and Conditions for Evaluation Items](#) apply.

Technical Documents

User guides (2)

Title	Date	Type
CapTivate™ Technology Guide	17 Jan 2018	
MSP-CAPT-FR2633 MSP CapTivate™ MCU development kit user's guide	23 Jan 2019	

Datasheet (1)

Title	Type	Size (KB)	Date
 MSP430FR263x, MSP430FR253x Capacitive Touch Sensing Mixed-Signal Microcontrollers datasheet (Rev. C)	PDF	4792	28 Aug 2018

Design files (1)

Title	Type	Size (KB)	Date
CAPTIVATE-PHONE Hardware Design Files	ZIP	1956	18 Apr 2019

More literature (1)

Title	Type	Size (KB)	Date
 CAPTIVATE-PHONE EC Declaration of Conformity (DoC) (Rev. A)	PDF	64	02 Jan 2019

Related Products

Software (1)

Name	Part Number	Software Type
CapTivate™ Design Center GUI for MSP430™ Capacitive Sensing MCUs	MSPCAPTDSNCTR	Software Libraries

Design Kits & Evaluation Modules (4)

Name	Part Number	Tool Type
Capacitive touch communications isolation board	CAPTIVATE-ISO	Evaluation Modules & Boards
Capacitive touch MSP430FR2633 MCU board	CAPTIVATE-FR2633	Evaluation Modules & Boards
MSP CapTivate MCU Development Kit	MSP-CAPT-FR2633	Evaluation Modules & Boards
MSP430 CapTivate MCU Programmer	CAPTIVATE-PGMR	Evaluation Modules & Boards

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TI Devices (7)

Part Number	Name	Product Family
DRV2605L	Haptic Driver for ERM and LRA with Built-In Library and Smart Loop Architecture	Actuator drivers
MSP430FR2532	16 MHz Ultra-Low-Power Microcontroller With 8 KB FRAM, CapTivate Touch Technology	MSP430 ultra-low-power MCUs
MSP430FR2533	16 MHz Ultra-Low-Power Microcontroller with 16 KB FRAM, CapTivate touch technology	MSP430 ultra-low-power MCUs
MSP430FR2632	16 MHz Ultra-Low-Power Microcontroller With 8 KB FRAM, CapTivate touch technology	MSP430 ultra-low-power MCUs
MSP430FR2633	MSP430 MCU with CapTivate technology - the lowest power, most noise-immune capacitive touch	MSP430 ultra-low-power MCUs

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Videos