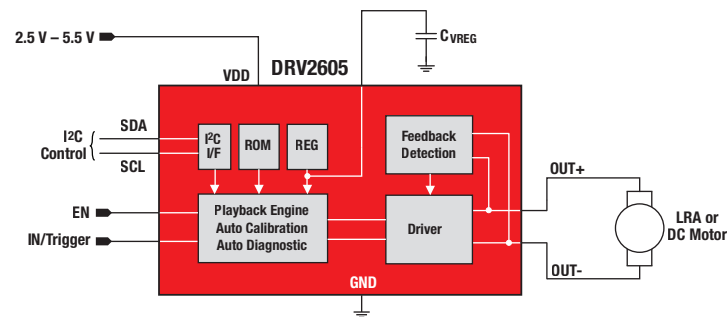


## Evaluation Kit Contents

- DRV2605 LRA / ERM haptics driver with automatic overdrive and braking for ERM and LRAs
- Eccentric rotating mass motor (ERM)
- Linear resonant actuator (LRA)
- Programmable MSP430 with haptic effects
- Capacitive touch buttons
- Mini-USB cable



## Design Resources and References



TI E2E™  
Community

E2E Touch Forum

[ti.com/touchforum](http://ti.com/touchforum)

Available on [ti.com/drv2605](http://ti.com/drv2605)

- DRV2605 datasheet
- Complete DRV2605EVM-CT User's Guide
- Schematics and layout
- EVM source code and binaries

Get more information on TI's solutions for touch-enabled applications at

[ti.com/touch](http://ti.com/touch)

- Watch videos
- Compare products
- Find companion products
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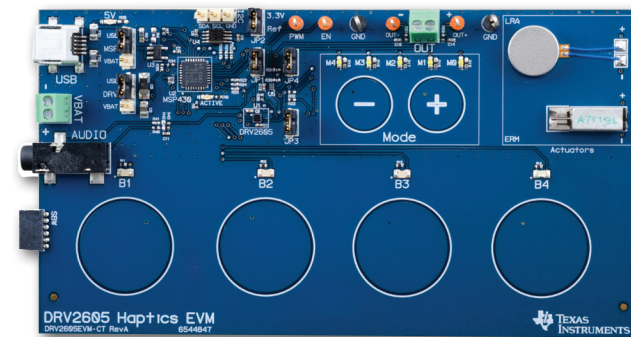


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# DRV2605EVM-CT

## Quick-Start Guide

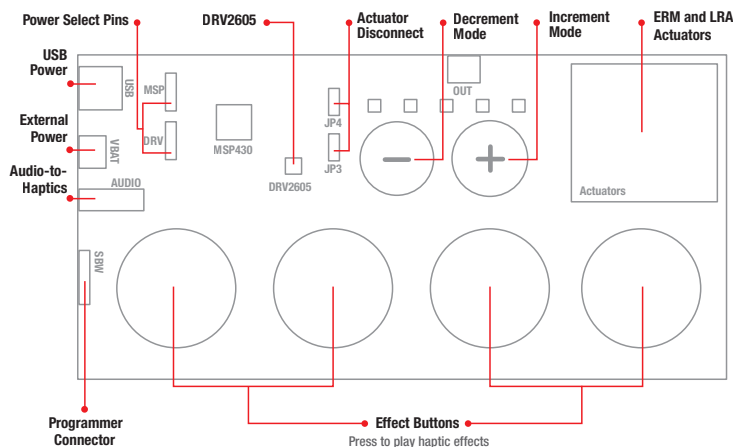
➔ Start Here



 TEXAS INSTRUMENTS

## Getting Started

1. Verify jumpers MSP and DRV, next to the USB connector, are connected to the USB pin.
2. Plug the board into an available USB power source (computer or wall charger) using the included USB cable.
3. Board will enter a power up sequence and the 5 V indicator will light up.
4. Use the large buttons to play effects and the “+” and “-” buttons to switch between modes. Each mode has a different set of effects.



## Mode and Effects

Mode	Button	Description	Actuator	Waveform Location	Interface
Mode Off LEDs Off	B1	Click + Ramp Down	ERM	ROM	Internal Trigger (fC)
	B2	Ramp Up + Pulsing			
	B3	Click + Ramp Down	LRA		
	B4	Ramp Up + Pulsing			
Mode 4 LED M4 On	B1	SharpClick_100	ERM	ROM	Internal Trigger
	B2	StrongClick_60 + Release			Ext. Edge Trig.
	B3	SoftBump_100			Internal Trigger
	B4	DoubleClick_100			Ext. Level Trig.
Mode 3 LED M3 On	B1	SharpTick2_80	LRA	ROM	Internal Trigger
	B2	StrongClick_100 + Release			Ext. Edge Trig.
	B3	SoftBump_100			Internal Trigger
	B4	DoubleClick_100			Ext. Level Trig.
Mode 2 LED M2 On	B1	LRA Auto-Resonance ON	LRA	µController	RTP
	B2	LRA Auto-Resonance OFF			PWM
	B3	ERM Buzz Alert (Closed Loop)	ERM	ROM	RTP
	B4	ERM Buzz Alert (Open Loop)			Internal Trigger
Mode 1 LED M1 On	B1	Concentration Game - The board will display a pattern using the effect buttons. See how many times you can repeat the pattern as it increases by one effect each time.	ERM & LRA	ROM	Internal Trigger (fC)
	B2				
	B3				
	B4				
Mode 0 LED M0 On	B1	Audio-to-Haptics Enable	ERM	External Analog	Audio-to-Haptics
	B2		LRA		
	B3	Exit A2H, Click, Return to A2H	ERM/ LRA	ROM	Internal Trigger (fC)
	B4	Exit A2H, Buzz, Return to A2H			

## Features and Benefits

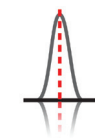


**Waveform Library**  
123 haptic effects embedded, royalty free



**Audio-to-Haptics**  
Convert audio signals to haptic effects; automatic haptics for music, games, and movies

### Smart Loop Architecture



**Auto-Resonance Detection**  
Automatically track the resonant frequency of an LRA; maximize vibration strength and improve consistency across devices

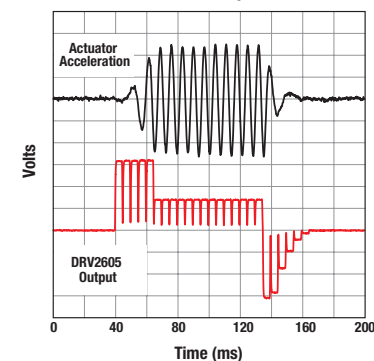


**Automatic Diagnostics**  
Automatically detect the status of the actuator



**Automatic Calibration**  
Automatically detect and configure the closed-loop feedback coefficients for every actuator

ERM Closed Loop Buzz



**Closed Loop Feedback**  
Improve the response time of ERM and LRA actuators with automatic overdrive and braking

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