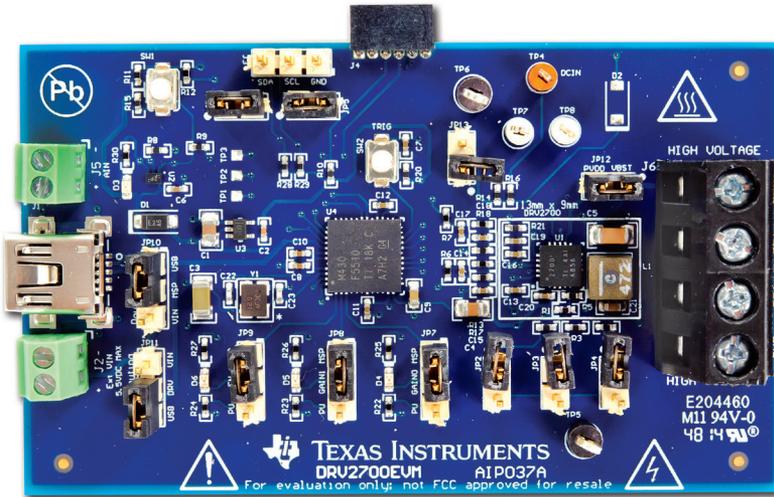


# DRV2700EVM

## Quick-Start Guide

➔ Start Here



# Getting Started

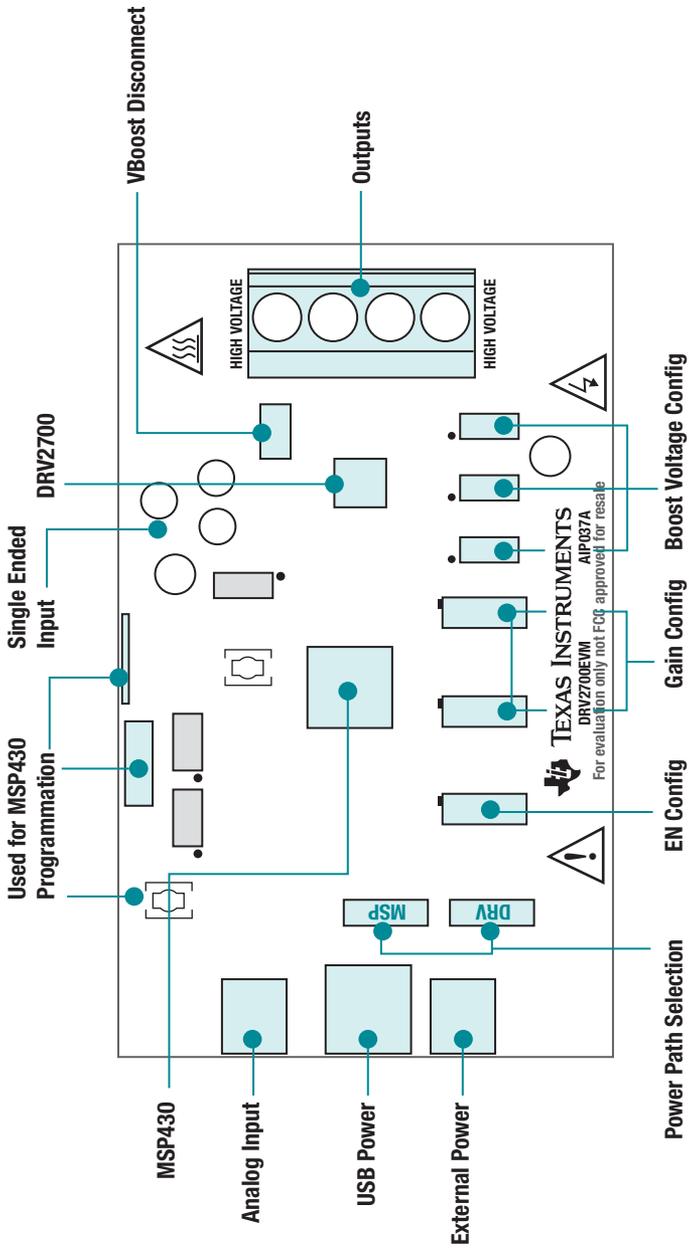
The DRV2700EVM comes with preprogrammed firmware to provide a 0- to 200-V<sub>pp</sub> signal between OUT+ and OUT–.

1. Out of the box, the jumpers are set to begin demo mode using USB power. The default jumper settings are found in the table below.
2. Connect a mini-USB cable to the USB connector on the DRV2700EVM board.
3. Connect the other end of the USB cable to an available USB port on a computer, USB charger, or USB battery pack.
4. If the board is powered correctly, the 5-V LED is on.
5. Enable the output using the GUI or programmatically through the computer, see GUI Interface for additional assistance. If using an external input signal, EN the output by changing the jumper (JP9) or equivalent control signal.
6. Once the output is EN, the device allows for the high-voltage output.

Parameter	Jumper Setting	Default	Specification
<b>JP10 MSP</b>	Open		MSP not connected to either power supply
	USB (top) <sup>(1)</sup>	✓	MSP connected to USB power supply
	VIN (bottom) <sup>(1)</sup>		MSP connected to VIN power supply
<b>JP11 DRV</b>	Open		DRV2700 not connected to either power supply
	USB (top) <sup>(1)</sup>		DRV2700 connected to USB power supply
	VIN (bottom) <sup>(1)</sup>	✓	DRV2700 connected to VIN power supply
<b>JP5 and JP6</b>	Open		Disconnected PWM± and I/O of MSP430
	Connected	✓	Connected PWM± and I/O of MSP430
<b>JP9-EN JP8-G1 JP7-G0</b>	Open		EN/G1/G0 pulled internally to GND
	MSP (top) <sup>(1)</sup>	✓	EN/G1/G0 tied to I/O of MSP430
	PU (bottom) <sup>(1)</sup>		EN/G1/G0 pulled up to MSP power supply
<b>JP13-DCIN</b>	Open	✓	DC input not connected (PWM and AC input mode)
	Connected		DC input connected (single ended input mode)
<b>JP12-VBST</b>	Open		PVDD disconnected to VBST (boost only mode)
	Connected	✓	PVDD connected to VBST (normal operation)
<b>I2C</b>	Open		Always leave open. Never jumper together.
<b>J2, J3, J4</b>	Open		Disconnects particular FB resistor (lowers VBST)
	Connected	✓	Connects particular FB resistor (raises VBST)

<sup>(1)</sup> In the table, (top) or (bottom) means the (top) or (bottom) is connected to the middle of the 3-terminal header.

# Quick Reference Board Diagram



# Design Resources and References



**TI E2E™  
Community**

## **E2E Haptic Forum**

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

Available on [ti.com/drv2700](http://ti.com/drv2700)

- DRV2700 datasheet
- Complete DRV2700EVM User's Guide
- Schematics and layout
- EVM source code and binaries

Get more information on TI's solutions for touch feedback-enabled applications at [ti.com/haptics](http://ti.com/haptics)

- Watch videos
- Compare products
- Find companion products
- Download software
- Order samples and EVMs

**Important Notice:** The products and services of Texas Instruments Incorporated and its subsidiaries described herein are sold subject to TI's standard terms and conditions of sale. Customers are advised to obtain the most current and complete information about TI products and services before placing orders. TI assumes no liability for applications assistance, customer's applications or product designs, software performance, or infringement of patents. The publication of information regarding any other company's products or services does not constitute TI's approval, warranty, or endorsement thereof.

The platform bar, E2E, MSP430 and WEBENCH are trademarks of Texas Instruments.  
All other trademarks are the property of their respective owners.

## IMPORTANT NOTICE

Texas Instruments Incorporated and its subsidiaries (TI) reserve the right to make corrections, enhancements, improvements and other changes to its semiconductor products and services per JESD46, latest issue, and to discontinue any product or service per JESD48, latest issue. Buyers should obtain the latest relevant information before placing orders and should verify that such information is current and complete. All semiconductor products (also referred to herein as "components") are sold subject to TI's terms and conditions of sale supplied at the time of order acknowledgment.

TI warrants performance of its components to the specifications applicable at the time of sale, in accordance with the warranty in TI's terms and conditions of sale of semiconductor products. Testing and other quality control techniques are used to the extent TI deems necessary to support this warranty. Except where mandated by applicable law, testing of all parameters of each component is not necessarily performed.

TI assumes no liability for applications assistance or the design of Buyers' products. Buyers are responsible for their products and applications using TI components. To minimize the risks associated with Buyers' products and applications, Buyers should provide adequate design and operating safeguards.

TI does not warrant or represent that any license, either express or implied, is granted under any patent right, copyright, mask work right, or other intellectual property right relating to any combination, machine, or process in which TI components or services are used. Information published by TI regarding third-party products or services does not constitute a license to use such products or services or a warranty or endorsement thereof. Use of such information may require a license from a third party under the patents or other intellectual property of the third party, or a license from TI under the patents or other intellectual property of TI.

Reproduction of significant portions of TI information in TI data books or data sheets is permissible only if reproduction is without alteration and is accompanied by all associated warranties, conditions, limitations, and notices. TI is not responsible or liable for such altered documentation. Information of third parties may be subject to additional restrictions.

Resale of TI components or services with statements different from or beyond the parameters stated by TI for that component or service voids all express and any implied warranties for the associated TI component or service and is an unfair and deceptive business practice. TI is not responsible or liable for any such statements.

Buyer acknowledges and agrees that it is solely responsible for compliance with all legal, regulatory and safety-related requirements concerning its products, and any use of TI components in its applications, notwithstanding any applications-related information or support that may be provided by TI. Buyer represents and agrees that it has all the necessary expertise to create and implement safeguards which anticipate dangerous consequences of failures, monitor failures and their consequences, lessen the likelihood of failures that might cause harm and take appropriate remedial actions. Buyer will fully indemnify TI and its representatives against any damages arising out of the use of any TI components in safety-critical applications.

In some cases, TI components may be promoted specifically to facilitate safety-related applications. With such components, TI's goal is to help enable customers to design and create their own end-product solutions that meet applicable functional safety standards and requirements. Nonetheless, such components are subject to these terms.

No TI components are authorized for use in FDA Class III (or similar life-critical medical equipment) unless authorized officers of the parties have executed a special agreement specifically governing such use.

Only those TI components which TI has specifically designated as military grade or "enhanced plastic" are designed and intended for use in military/aerospace applications or environments. Buyer acknowledges and agrees that any military or aerospace use of TI components which have **not** been so designated is solely at the Buyer's risk, and that Buyer is solely responsible for compliance with all legal and regulatory requirements in connection with such use.

TI has specifically designated certain components as meeting ISO/TS16949 requirements, mainly for automotive use. In any case of use of non-designated products, TI will not be responsible for any failure to meet ISO/TS16949.

### Products

Audio	<a href="http://www.ti.com/audio">www.ti.com/audio</a>
Amplifiers	<a href="http://amplifier.ti.com">amplifier.ti.com</a>
Data Converters	<a href="http://dataconverter.ti.com">dataconverter.ti.com</a>
DLP® Products	<a href="http://www.dlp.com">www.dlp.com</a>
DSP	<a href="http://dsp.ti.com">dsp.ti.com</a>
Clocks and Timers	<a href="http://www.ti.com/clocks">www.ti.com/clocks</a>
Interface	<a href="http://interface.ti.com">interface.ti.com</a>
Logic	<a href="http://logic.ti.com">logic.ti.com</a>
Power Mgmt	<a href="http://power.ti.com">power.ti.com</a>
Microcontrollers	<a href="http://microcontroller.ti.com">microcontroller.ti.com</a>
RFID	<a href="http://www.ti-rfid.com">www.ti-rfid.com</a>
OMAP Applications Processors	<a href="http://www.ti.com/omap">www.ti.com/omap</a>
Wireless Connectivity	<a href="http://www.ti.com/wirelessconnectivity">www.ti.com/wirelessconnectivity</a>

### Applications

Automotive and Transportation	<a href="http://www.ti.com/automotive">www.ti.com/automotive</a>
Communications and Telecom	<a href="http://www.ti.com/communications">www.ti.com/communications</a>
Computers and Peripherals	<a href="http://www.ti.com/computers">www.ti.com/computers</a>
Consumer Electronics	<a href="http://www.ti.com/consumer-apps">www.ti.com/consumer-apps</a>
Energy and Lighting	<a href="http://www.ti.com/energy">www.ti.com/energy</a>
Industrial	<a href="http://www.ti.com/industrial">www.ti.com/industrial</a>
Medical	<a href="http://www.ti.com/medical">www.ti.com/medical</a>
Security	<a href="http://www.ti.com/security">www.ti.com/security</a>
Space, Avionics and Defense	<a href="http://www.ti.com/space-avionics-defense">www.ti.com/space-avionics-defense</a>
Video and Imaging	<a href="http://www.ti.com/video">www.ti.com/video</a>

### TI E2E Community

[e2e.ti.com](http://e2e.ti.com)