# **PMBus Point-of-Load**

## **Quick Reference Guide**

# TEXAS INSTRUMENTS

PMBus (Power Management Bus)Point-of-Load (PoL) DC/DC buck converters and controllers facilitate Active Power Management. PMBus is an I2C-based communication standard for power supply management that enables programming, configuring, sequencing, Adaptive Voltage Scaling (AVS) and margining of the power supply, with the optional capability of Telemetry - monitoring key parameters, such as input/output voltage, input/output current, input/output power, and internal or external temperature. On this quick reference card you will find a wide range of TI's PMBus PoL DC/DC buck converters and controllers for a variety of applications.

)A				TI Designs
)A	TPS53661 + CSD95372BQ5Mx6	Eco-mode™, DCAP+™	PMBus with telemetry	PMP11208
A	TPS40428 + CSD95378x4	VM with FSYNC	PMBus	PMP9131
۹ !	TPS53647 + TPS40428 + CSD95372BQ5Mx6 (4+1+1)	Eco-mode, DCAP+, VM with FSYNC		PMP11184
\k	TPS53647 + CSD95372BQ5Mx4	Eco-mode, D-CAP+		PMP11312
	TPS53647 + CSD95372BQ5Mx3	Eco-mode, D-CAP+	1+	PMP10962
	TPS40422 + CSD87350Q5Dx2	////	VM w/FSYNC	PMP7328
	TPS40428 + CSD95378x2	· · ·	VM w/FSYNC	PMP9475, PMP10000
	TPS544C201	D-CAP2™		PMP9008, PMP10364
\	TPS544C25 <sup>2</sup> (TI Keystone 2 DSP (AM5K2E02) and AM5K2E04)	VM w/FSYNC	PMP1089	96, PMP11328, TIDEP0042
	TPS544B201	D-CAP2		PMP9407
	TPS544B25 <sup>2</sup>	VM w/FSYNC	   	PMP10896
·	TPS53915	Eco-mode, D-CAP3™		PMP9703
TPS5	3819A + CSD87350Q5D		Eco-mode, D-CAP2	PMP10778
TPS4	0400 + CSD86360Q5D		VM w/FSYNC	PMP9408
TPS5	3819A + CSD18537NQ5A		Eco-mode, D-CAP2	PMP11220
۸ ا	TPS40422 + CSD87381P		VM w/FSYNC	PMP9559
TPS4	0400 + CSD85301Q2	· ·	VM w/FSYNC	PMP11140
		i i		
3.0	4.5 Input Voltage	(V)	8 20	28

Note: Eco-mode™ for light-load efficiency.

<sup>1</sup> TPS544C20 and TPS544B20 ar pin compatible.

<sup>2</sup> TPS544C25 and TPS544B25 ar pin compatible

## **Internet**

**TI Semiconductor Product Information Center Home Page** support.ti.com

### TI E2E<sup>™</sup> Community Home Page

e2e.ti.com

## **Product Information Centers**

Americas	Phone	+1(512) 434-1560
Brazil	Phone	0800-891-2616
Mexico	Phone	0800-670-7544
Interne	Fax et/Email	+1(972) 927-6377 support.ti.com/sc/pic/americas.htm

## Europe, Middle East, and Africa

Phone

European Free Call	00800-ASK-TEXAS (00800 275 83927)
International	+49 (0) 8161 80 2121
Russian Support	+7 (4) 95 98 10 701

**Note:** The European Free Call (Toll Free) number is not active in all countries. If you have technical difficulty calling the free call number, please use the international number above.

Fax	+(49) (0) 8161 80 2045
Internet	www.ti.com/asktexas
Direct Email	asktexas@ti.com

#### Japan

Fax	International Domestic	+81-3-3344-5317 0120-81-0036
Internet/Email	International Domestic	support.ti.com/sc/pic/japan.htm www.tij.co.jp/pic

## Asia

Phone	Toll-Free Number		
<b>Note:</b> Toll-free numbers may not support mobile and IP phones.			
Australia		1-800-999-084	
China		800-820-8682	
Hong Kong		800-96-5941	
India		000-800-100-8888	
Indonesia		001-803-8861-1006	
Korea		080-551-2804	
Malaysia		1-800-80-3973	
New Zealand		0800-446-934	
Philippines		1-800-765-7404	
Singapore		800-886-1028	
Taiwan		0800-006800	
Thailand		001-800-886-0010	
International +86-2		1-23073444	
Fax +86-21-2		23073686	
Email	tiasia@ti.com or ti-china@ti.com		
Internet	support.ti.com/sc/pic/asia.htm		

**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, Eco-mode, D-CAP and D-CAP2 are trademarks of Texas Instruments. All other trademarks are the property of their respective owners.

A021014



#### **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		Applications	
Audio	www.ti.com/audio	Automotive and Transportation	www.ti.com/automotive
Amplifiers	amplifier.ti.com	Communications and Telecom	www.ti.com/communications
Data Converters	dataconverter.ti.com	Computers and Peripherals	www.ti.com/computers
DLP® Products	www.dlp.com	Consumer Electronics	www.ti.com/consumer-apps
DSP	dsp.ti.com	Energy and Lighting	www.ti.com/energy
Clocks and Timers	www.ti.com/clocks	Industrial	www.ti.com/industrial
Interface	interface.ti.com	Medical	www.ti.com/medical
Logic	logic.ti.com	Security	www.ti.com/security
Power Mgmt	power.ti.com	Space, Avionics and Defense	www.ti.com/space-avionics-defense
Microcontrollers	microcontroller.ti.com	Video and Imaging	www.ti.com/video
RFID	www.ti-rfid.com		
OMAP Applications Processors	www.ti.com/omap	TI E2E Community	e2e.ti.com
Wireless Connectivity	www.ti.com/wirelessconne	ctivity	

Mailing Address: Texas Instruments, Post Office Box 655303, Dallas, Texas 75265 Copyright © 2015, Texas Instruments Incorporated