Buck/Boost Converter PICtail Plus Daughter Board

Part Number: AC164133

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Buck/Boost Converter PICtail™ Plus Daughter Board provides an easy and economical development platform for dsPIC® SMPS and Digital Power Conversion GS family Digital Signal Controllers which are designed to provide low-cost and efficient control for wide range of power supply topologies and power conversion applications.
Buck/Boost Converter PICtail™ Plus Board consists of two independent DC/DC synchronous buck converters and one independent DC/DC boost converter. Board operates from input supply of +9V to +15V DC. This board can be controlled either by interfacing to 28 - pin Starter Development board or to Explorer 16 Development Board. The control boards provide closed-loop Proportional-Integral-Derivative (PID) control in the software to maintain the desired output voltage level. The dsPIC® SMPS and Power Conversion family devices provide necessary memory and power supply peripherals which enables to build the control loops in software without the need for external circuit. Performance measures that can be evaluated are:

- Digital control loop performance of power conversion
- Dynamic load performance
- Multiphase buck and synchronous buck converter
- Parallel operation of two buck converters
- Multiple output control with single dsPIC33F GS SMPS device

Features | Package Contents

- Operates at input voltage range +9V to +15V DC
- Two synchronous buck converter power stages
- One boost converter power stage
- Full Load operation on 3.3V, 5V Buck outputs & 20V Boost output when loaded individually and or simultaneously.

  -5V output1 @ 3A
  -3.3V output2 @ 3A
  -20V output3 @ 0.75A

- PMBus communication interface Connector
- 5Ω/5W Switchable Resistive Load - Expandable
- Supported by Mindi™ Power Design and Simulator Tool
- Parallel operation of two buck converters
- Various fault indication & Protection
- Excellent Dynamic load performance & Output sequencing

- Can be connected to Explorer 16 Development Board or 16-bit 28 - pin Starter Development Board
- With Explorer 16 use MA330020 (dsPIC33FJ16GS504) or MA330024 (dsPIC33FJ64GS610) Plug-In Modules (PIM)
- With 16-bit 28 – pin Starter Development board use dsPIC33F16GS502-I/SP device

Documentation & Software

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AppNotes	Last Updated	Size	
TB062 - Frequently Asked Questions (FAQs) About dsPIC® DSC SMPS Devices	11/10/2009 8:46:02 PM	330KB	
Documents	**Last Updated**	**Size**	
Buck/Boost Converter PICtail? Plus Daughter Board User's Guide	11/19/2014 12:44:35 PM	1MB	
Buck/Boost PICtail Plus Source Code for dsPIC33FJ64GS610	2/25/2010 4:01:54 PM	39KB	
dsPIC33FJ64GS610 PIM Information Sheet	2/25/2010 3:31:07 PM	199KB	
Buck/Boost Converter PICtail Plus Daughter Board Source Code	3/11/2009 1:46:24 AM	67KB	
Buck/Boost Converter PICtail Plus Daughter Board Readme First	3/11/2009 1:44:12 AM	20KB	
dsPIC33FJ16GS504 PIM Information Sheet	3/6/2009 8:41:14 AM	178KB	