



Part Number: AC164133

Buck/Boost Converter PICtail Plus



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

- 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 44 Pin to 100 Pin Plug-In Module
- With 16-bit 28 – pin Starter Development board use dsPIC33F16GS502-I/PT device