
Device: MOD-1006

This document Version: v1

Matches module hardware version: v3

Date: 11 February 2013

Description: Charge Pump Module

## Contents

Introduction....3
Features....3
Hackability....3
Construction....3
Connections....3
Technical details....4
Tips and tricks....4
Schematic....4
PCB....5
Versions....5

## Introduction

The MOD-1006 is a Microchip MCP1252 based Charge Pump step-up / step-down voltage converter.

## Features

The MOD-1006 delivers either 3.3V or 5V, regardless of the input voltage, at least as long as it is within the range of 2.2V to 5.5V.

So you could, for example, use a 3.7V LiOn battery that gradually declines in voltage as it gets used, but maintain 3.3V.

## Hackability

There's not much that's changeable about the MOD-1006.

Still, at Embedded Adventures, we believe you have the most fun when you have the most control over your hardware. For the MOD-1006 we provide a datasheet, and complete schematic. After that, it's all up to you. We'd love to hear about the projects you're using it for – send us information and photos to myproject@embeddedadventures.com

## Construction

It's all pre-built! Just add female or male header pins, or solder directly to the board, and away you go.

## Connections

The MOD-1006 has two connection ports.

Input port

| | |
|---|---|
| VI | Positive supply (eg 3V) |
| GND | Ground (Vss) connection. |

Output port

| | |
|---|---|
| PGD | Power Good indicator |
| VO | Voltage out |
| GND | Ground (Vss) connection. |

## Technical details

The MOD-1006 can be powered from 2.2V upwards. It will automatically step up or step down the voltage as necessary. It can supply up to 120mA of current.

It can supply either 3.3V or 5V depending on the setting of the unsurprisingly named voltage selection switch.

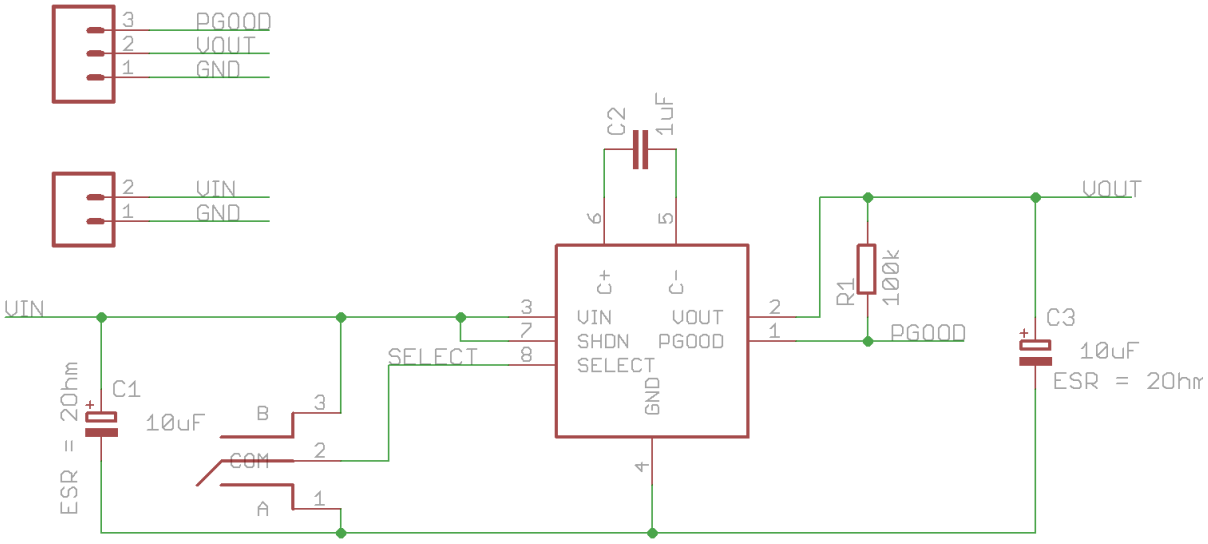
For more technical information about the MOD-1006, you should check out the MCP1252 datasheet.

## Tips and tricks

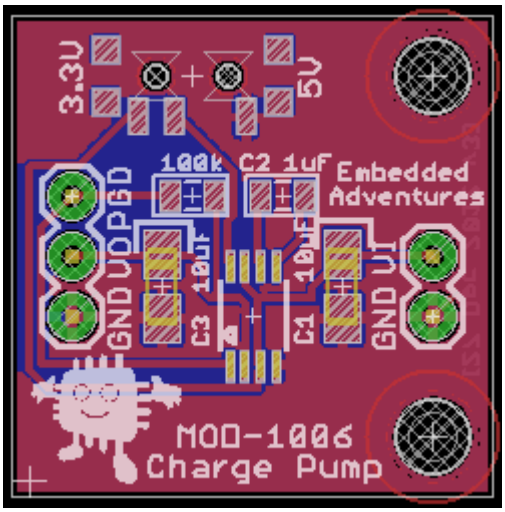
There is not much to these cute little modules. Supply one voltage in, get different voltage out. Enjoy.

## Schematic

The MOD-1006 is a pretty straightforward implementation of the MCP1252 reference design.



## PCB




## Versions

| Doc Version | HW Version | Date | Comments |
|---|---|---|---|
| 1.0 | 3 | 11 Feb 2013 | Initial Version for board v3 |