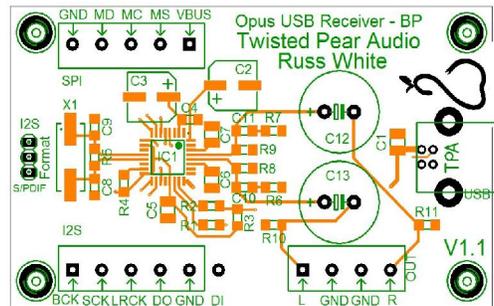


Twisted Pear Audio

Opus PCM2707 Bus Powered USB Receiver/DAC Module

Version 1.0



This Opus Receiver Module is based on the Texas Instruments PCM2707. It is mainly intended as a USB audio receiver in conjunction with an Opus DAC module such as the Opus WM8740 module. The module also has a very good built in DAC of its own and can be used completely independently. The device is USB bus powered and requires no other power supply.

The PCB is very simple. There is a single jumper which must be set before the device is connected to the host computer. That jumper determines the digital output format. It can either be set to SPDIF or I2S output.

If you wish use the built in analog output and/or and external DAC via SPDIF then set the jumper to “SPDIF”. On version “1.0” boards this is the only easy way to get Analog output. In this mode the digital output is just DO and GND.

I you wish to use an external I2S input DAC (like the Opus WM8740 module) then set the jumper to “I2S”. In this mode the digital output will be 24 bit I2S. Be sure to configure the DAC accordingly. When in I2S mode the internal DAC of the PCM2707 does not function unless you tie DO to DI. Provision for this has been made on the version “1.1” PCBs. In I2S mode the digital output terminal block correlates to the digital input of the Opus DAC (such as the WM8740) modules. The digital output terminal block is designed to facilitate easy stacking with the other Opus modules if desired.

The analog output is suitable for driving headphones or a preamp.

There is an SPI connector for those of you who wish to use the SPI interface to program the PCM2707. Its use is not covered in this document. For more information on the SPI usage see the PCM2707 data sheet.

Enjoy!