

April 20, 2010

## ExtIO DLL for Winrad

The DLL supports the following sampling rates in Winrad:

- 2.500000 MSPS, bandwidth = 2.00 MHz
- 1.953125 MSPS, bandwidth = 1.56 MHz
- 1.562500 MSPS, bandwidth = 1.25 MHz
- 625.000 kSPS, bandwidth = 500 kHz
- 312.500 kSPS, bandwidth = 250 kHz
- 250.000 kSPS, bandwidth = 200 kHz
- 156.250 kSPS, bandwidth = 125 kHz
- 125.000 kSPS, bandwidth = 100 kHz
- 62.500 kSPS, bandwidth = 50 kHz
- 50.000 kSPS, bandwidth = 40 kHz
- 25.000 kSPS, bandwidth = 20 kHz
- 12.500 kSPS, bandwidth = 10kHz

The ExtIO\_qs1r.zip file contains the following files that should be unzipped in your Winrad folder:

- ExtIO\_qs1r.dll
- qs1r\_fpga\_wr.rbf
- qs1r\_revd\_firmware.hex
- qsiolib.dll
- wr\_qs1r.ini
- ExtIO\_qs1r.pdf (this document)

## NOTES:

1. This dll has been tested with Winrad versions 1.32, 1.6.1, and WinradHD v0.15x
2. You must have the qs1r WinUSB driver loaded.
3. You do not and should not have the QS1RServer running when using Winrad with the QS1R. Winrad support is independent of the QS1RServer.
4. All sample rates are supported in only one FPGA configuration file.
5. Winrad outputs audio to the computer's sound card. It will not output audio to the QS1R DAC output.

This DLL has been tested on an Intel Core 2 Quad system running Windows 7 64 bit operating system. The fastest sampling rate of 2.5 MSPS which gives a effective bandwidth of 2.0 MHz works well on this system including recording and playback of Wav files. The maximum

sampling rate you can successfully use on your system with depend on which CPU you have as well as hard drive speed (for recording and playback).

[04.20.2010]

Update: New firmware file specifically for Winrad.

Update: If firmware is already loaded or FPGA file is already loaded, the DLL does not try to reload the files saving startup time.

Update: Better message reporting.

[03.29.2010]

Fix: Sampling rates below 50 kHz now work on all versions of Winrad.

Info: 12.5 kHz sampling rate was added.

