



## DBG Control Software Quick Start

## Release Information

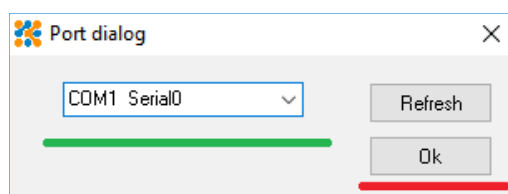
Name	DBG Control Software
Version	2.4.0
Build date	2016.09
Document revision	r1321

## Overview

DBG Control Software is a program to write and read registers in FPGA, capture complex data from FPGA and visualize them in Oscilloscope, IQ Constellation or Spectrum Analyzer modes.

## UART Settings

Connect an evaluation board with USB-cable (VCP) or RS-232 (UART) cable to the PC. Choose Serial Port to which you connect the evaluation board.

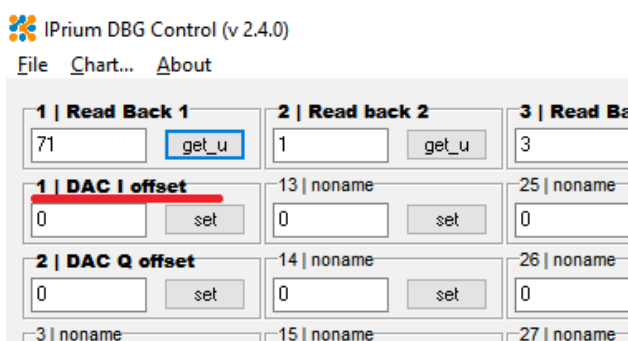


You can change default Serial Port Baud Rate in dbg\_control.ini.

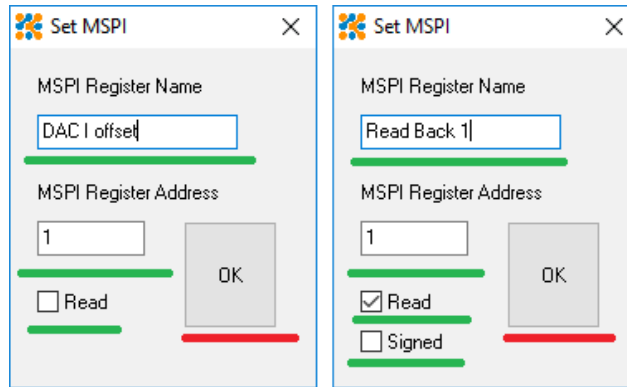
## Read/Write registers

To control the evaluation board you need to setup Register Address and Register Value.

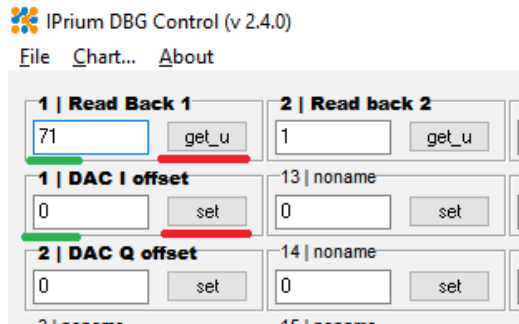
To change Register Name, Register Address and Register Value, press the right mousebutton at the Register Name.



You can set new Register Name, Register Address, Read/Write type of operation and Signed/Unsigned type of read.



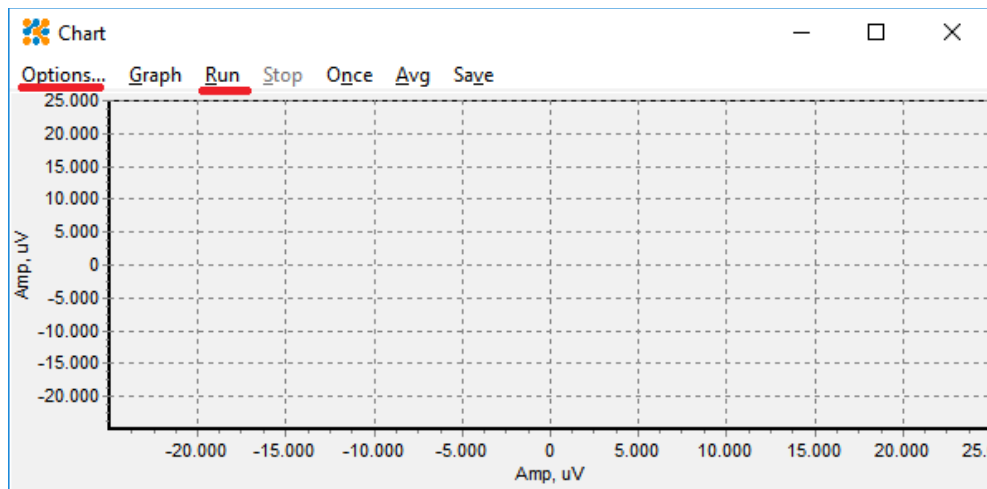
To change Register Value in FPGA, enter new value in the box to the desired Register Address and press the **set** button. To read Register Value from FPGA, press the **get\_u** button.



## Chart mode

Menu **Chart ...** opens a window displaying graphs.

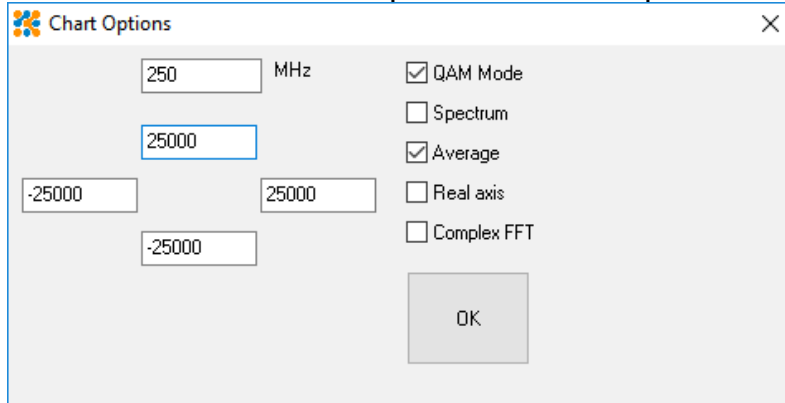
To start capturing data from the evaluation board and display them in graphs, click **Run** (Continuous reading) or **Once** (Single reading).



**Options ...** menu allows you to change settings:

- Maximum and minimum values for each axis;
- Enable QAM constellation mode;
- Enable Spectrum Analyzer mode;
- Plot axes in samples or in MHz;
- Enable Average mode;

- Choose Real or Complex FFT for the Spectrum Analyzer mode.



## Zoom and Scroll

To zoom in on a Chart, press the right mousebutton at the top left hand corner of the area you wish to zoom in on and, maintaining the mousebutton pressed, drag out the rectangle to the bottom righthand corner of the zoom area. Releasing the mousebutton will force the Chart to redraw the area selected.

To undo the zoom, press the left mousebutton anywhere on the Chart area and drag up and left with the mousebutton depressed. Releasing the button will force the Chart to redraw to the originally defined Chart area.

To scroll a Chart across, press the left mousebutton and, maintaining the mousebutton pressed, drag the mouse in the direction you wish to scroll the Chart. When you release the mousebutton the Chart will remain at the new location.

To undo the scroll, press the left mousebutton anywhere on the Chart area and drag up and left with the mousebutton depressed. Release the button and the Chart will redraw to the originally defined Chart area.

## Data dump

To save the current displayed data in the file you can use **Save** menu. Data are saved in "dump.bin" file in the same directory as the dbg\_control.exe in complex float32 format.

## Close program

The program closes UART connection and stops all charts when you what to exit. All settings are stored in the dbg\_control.ini file that is created automatically when you first start the program.

### Feedback

For up-to-date information on the DBG Control Software visit website page

<https://www.iprium.com/download/>

### Contacts

IPrium LLC

634029, Russia, Tomsk, Frunze ave, 20, office 427

Tel.: +7(952)7542219

E-mail: [info@iprium.com](mailto:info@iprium.com)

Skype: fpgahelp

website: <https://www.iprium.com/contacts/>