



Arrow USB Programmer2 Diagnostic Program

Functional Description

The Arrow USB Programmer2 Diagnostic Program is a simple command line program that executes on any PC running 64-bit Windows. The program checks whether the PC is set-up properly for using the Arrow USB Programmer2 hardware. The console output of the program might look like this:

```
C:\> Administrator: C:\windows\system32\cmd.exe

D:\> Arrow_USB_Programmer2_diagnostic.exe

Arrow USB Programmer2 Diagnostic Program V1.0

Reading version info.
- Operating system version number is 6.1.7601.
- Quartus version is 15.1.0.185.

Searching programmer hardware.
- Arrow USB Programmer2 AR24JGWA found.
- Successful.

Reading registry.
- Successful. TCK frequency is 20.000.000 Hz.

Searching programmer DLL.
- Successful. Programmer DLL installed properly.

Checking Altera JTAG server service.
- Service has been stopped successfully.
- Service has been started successfully.

Total errors: 0
Hit any key to exit program.

D:\>
```

Depending on the current execution rights, the program may not be able to check all settings or to stop and re-start the JTAG server. Running the program as Admin should help in that case.

The program can also be used for to set the TCK frequency for the Arrow USB Programmer2 by using the command line parameter `-f` followed by a space character and the desired TCK frequency in Hertz.

```
D:\> Arrow_USB_Programmer2_diagnostic.exe -f 20000000
```

The frequency is stored in the PC's registry just as it is given. When using the programmer hardware, the programmer DLL automatically chooses the highest possible valid TCK frequency below or equal to the desired TCK frequency. In case the frequency given is too low or too high, an appropriate TCK frequency is chosen. Both maximum and minimum frequencies depend on the USB controller device used.

USB controller	Maximum frequency	Other valid frequencies
FT2232D	6 MHz	3 MHz, 2 MHz, 1.5 MHz, 1.2 MHz ... 92 Hz
FT2232H	20 MHz	15 MHz, 10 MHz, 7.5 MHz, 6 MHz ... 460 Hz

Revision History

Version	Date	Remarks
1.0	2018-04-26	Initial Release.