ds30 Loader
Console manual

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Introduction

ds30 Loader

ds30 Loader is a boot loader supporting PIC12, PIC16, PIC18, PIC24, and dsPIC families of MCUs from Microchip. It supports all devices in each family out of the box (those in production). The firmware is written in assembler. The PC clients run on Windows, Linux, and Mac OS X.

Prerequisites and Requirements

.NET framework 2.0 or Mono

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Usage

Requirements

ds30 Loader console requires a .NET framework to run. For Windows there are two different frameworks available; .NET framework from Microsoft and Mono sponsored by Novell. For Linux and MAC OS X, only Mono is available. Mono is constantly being developed and bug fixed. It is recommended to use the latest version. Download links are available in appendix A.

Installation

The ds30 Loader console does not require to be installed; it can be run directly from the bin director.

Starting

Windows

- Use run on the start menu, browse to ds30LoaderConsole.exe
- Run from command prompt: ds30LoaderConsole.exe

Linux .NET client

Run command: mono ds30LoaderConsole.exe

Linux native client

Run command: ds30LoaderNativeConsoleLinuxArm or ds30LoaderNativeConsoleLinuxx86

MAC OS X .NET client

Run command: mono ds30LoaderConsole.exe

Usage syntax

The syntax is:

```
ds30LoaderConsole options
```

Option values containing spaces need to be enclosed with quotation marks, the quotation marks should surround the entire argument like this "option=value".

Options summary

When unknown option or illegal option value is detected, the download is aborted. For more information about each command refer to the ds30 Loader main manual.

Short option name	Long option name	Description
Required		
-f=filename	--file=filename	Hex-file
-d=device	--device=devicename	Devicename

-k=portname	--port=portname	Portname
-r=baudrate	--baudrate=baudrate	Baudrate
Misc		
-h	--help	Display help
-l	--debugmode	Enable debug mode
-o	--non-interactive	Start the selected operation without user interaction
-z	--list-ports	List available ports
n/a	--parse-only	Parse hex file then exit
n/a	--find	Find boot loader then exit
Basic		
-p	--writef	Write flash
-e	--writee	Write eeprom
n/a	--readf	Reads and exports PIC flash*
n/a	--reade	Reads and exports PIC eeprom*
CAN		
n/a	--pic-id=id	CAN id of device to download to*
n/a	--ds30-id=id	CAN id of the ds30 Loader application*
n/a	--ext	CAN extended frames*
n/a	--dlc=dlc	CAN transmit data length code*
Advanced		
-g	--no-goto-app	Don't write goto to user application
-s	--allow-bl-overwrite	Allow overwrite of boot loader
-c	--writec	Download configs
-v	--customplacement=x	Custom bootloader placement, pages from end
-w	--customsize=x	Custom bootloader size, page(s)
-x	--auto-baudrate	Send auto baud rate sync character
-y	--echo-verification	Verify tx echoes
n/a	--add-crc	Writes a checksum of the flash
n/a	--disable-empty-pages	Empty pages will no be written
n/a	--no-goto-bl	Don't write goto to the boot loader
Timing		
n/a	--ht=hello timeout	Time to keep sendin hello before aborting [ms]
-a=time	--polltime=polltime	Polltime [ms]
-t=time	--timeout=timeout	Time before timeout [ms]
n/a	--port-open-delay=del	Delay after port is opened [ms]
Device reset		
-q=cmd	--reset-command=cmd	Reset device by specified command, this option may need to be enclosed in " under Linux, se Linux example in the next section
-u=baudrate	--reset-baudrate=br	Baudrate for reset command
-m	--reset-dtr	Reset device by dtr
-n	--reset-rts	Reset device by rts
-b=time	--resettime=time	Resettime [ms]
n/a	--reset-dlc=dlc	CAN DLC for reset frames*
n/a	--reset-ext	Send CAN extended frames*
n/a	--reset-pic-id=id	CAN id of device to reset*
Device activation		
-i	--activate-dtr	Activate device by dtr
-j	--activate-rts	Activate device by rts
Security		

		Password to send to ds30 Secure Loader*. If no password is entered on the command line it is entered interactively with hidden characters.
n/a	--pw=password	

* Not available in the free edition

Return value

0 is returned after a successful download, else -1.

Examples

Windows

```
ds30LoaderConsole --file=d:\serlcd.hex --device=pic18f2550 --port=com1
--baudrate=115200 --write-program
```

Linux/ MAC OS X .NET client

```
mono ds30LoaderConsole.exe -p -f=serlcd.hex "-q='reset';a" -d=pic18f2550
-k=/dev/ttyUSB0 -r=11520
```

Linux native client

```
ds30LoaderNativeConsoleLinuxArm -p -f=serlcd.hex "-q='reset';a"
-k=/dev/ttyUSB0 -r=11520
```

Appendix A – Links

ds30 Loader website
http://www.ds30loader.com

ds30 Loader free edition website
http://mrmackey.no-ip.org/elektronik/ds30loader/

Microsoft .NET Framework Version 2.0
http://www.microsoft.com/sv-se/download/details.aspx?id=1639

Mono / MonoDevelop
http://www.mono-project.com