

ds30 Loader
Console manual

Table of contents

| | |
|-------------------------------------|---|
| Introduction..... | 3 |
| ds30 Loader | 3 |
| Prerequisites and Requirements..... | 3 |
| Trademarks..... | 3 |
| Usage | 4 |
| Requirements | 4 |
| Installation..... | 4 |
| Starting | 4 |
| Windows..... | 4 |
| Linux | 4 |
| MAC OS X..... | 4 |
| Usage syntax..... | 4 |
| Options summary..... | 4 |
| Return value | 7 |
| Examples..... | 7 |
| Windows..... | 7 |
| Linux | 7 |
| Appendix A – Links | 8 |

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

Trademarks

All rights to copyrights, registered trademarks, and trademarks reside with their respective owners.

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. However, for Windows users an installation is included for those people who would like the application to be installed and have short cuts created on the start menu.

Starting

Windows

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

Linux

Run command: mono ds30LoaderConsole.exe

MAC OS X

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 | Activate debugmode |
| -o | --non-interactive | Start download 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 | --resetime=time | Resetime [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 | | |
| n/a | --pw=password | Password to send to ds30 Secure Loader*. If no password is entered on the command line it is entered interactively |

| | | |
|--|--|-------------------------|
| | | whith hidde characters. |
|--|--|-------------------------|

* 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

```
mono ds30loaderconsole.exe -p -f=serlcd.hex "-q='reset';a" -d=pic18f2550  
-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/>