



ICP Family Programmers

Command Line Interface

1 Installation

- Run DLL installation file "IcpDll_setup_dll_XXX.exe".

2 Files

- IcpWinComLine.exe
- IcpDll.dll
- GetDllVersion.bat: run it to check your versions
- c_icpexp.h (not required for command line)
- fr_exp.h (not required for command line)

3 ICP Firmware Options

DLL/Command Line Support (D) should be activated in order to use ICP family command line interface

4 Command Line Switches

Note: all switches are **not** case sensitive

###	Switch	Description	Example	Minimum DLL version	Comments
1.	/c	Load configuration file	/cicp01.cfg	-	Mandatory excluding /n,/h,/?
2.	No switch	Hex file to be loaded	Hex1.hex	-	-
3.	/s	Serialization file to be loaded	/sser1.ser	-	-
4.	/i	Programming (standalone mode)	/i	4.4.1	Always use for multi-channel parallel programming
5.	/n<channel>	Get result from selected GANG channel	/n1	4.4.2	Use after GANG programming is done
6.	/a<space>	Programming (PC-driven mode), <space> is a sum (decimal) of the following memory spaces: 1 - PM (program memory) 2 - ID 4 - DM (EEPROM) 8 - reserved 16 - CB (configuration bits) 32 - BOOT memory 64 - OTP	/a23	-	23 means "all spaces" for the most devices. PC-driven mode is not available for GANG multi-channel programming
7.	/r<space>	Read (PC-driven mode only)	/r23	-	-
8.	/v<space>	Verify (PC-driven mode only)	/v23	-	-
9.	/l<space>	Blank check (PC-driven mode only)	/l23	-	-
10.	/f<filename>	File to be saved after read	/fRead1.hex	-	-

ICP Family Command Line Interface

###	Switch	Description	Example	Minimum DLL version	Comments
11.	/g<value>	Save errorcode(s) in file "auto01.res"	/g0 - disable /g, /g1-enable /g2-extended	4.4.2 for /g2	Always set to /g2 for ICP2-GANG/COMBO
12.	/b<value>	PM beginning (hex), valid if both /b and /e are specified	/b50	-	-
13.	/e<value>	PM end (hex), valid if both /b and /e are specified	/e1FFE	-	-
14.	/d<value>	Enable/disable debug message box after an operation	/d0 (disable) /d1 (enable) /d2 (on error)	4.4.1 for /d1	Default: disabled
15.	/w<value>	Enable/disable progress window	/w0 (disable) /w1 (enable)	-	Default: enabled
16.	/h /?	Display command line and DLL version string	/h	-	Use with /d0 to disable message box
17.	/t<filename>	Transfer environment file to programmer	/tenv1.pj2	4.4.1	-
18.	/u<filename>	Transfer secure environment file to a single channel of programmer	/usecenv1.sen	4.8.2	-
19.	/x	Enable/disable PC "sleep" NOTE: - 0: faster ICP operation in PC-driven mode - 1: less PC load	/x0 (faster ICP operation)		Default: 1 (less PC load)
20.	/o	Enable/disable gap eliminator for: 1 - PM (program memory) 4 - DM (EEPROM)	/o5 (enable for PM and DM) /o0 (disable)	4.12.1	Default: disabled
21.	/q	Select environment (use with /l, /t or /u)	/q6 (select environment 6 for ICP2-COMBO)	4.13.1	Default: last used
	/y	Load security bit to programming buffer (PC-driven mode) which is not a part of HEX file. Valid for ATSAMC21 and similar families	/y1 (enable)	8.1.3a	Default: 0 (no security or taken from HEX file)

5 Return Values (Errorcodes)

See document "[DLL Description.pdf](#)" for a list of error codes

6 Examples

6.1 Program Device in PC-driven Mode

- Configuration file: icp01.cfg
- Hex file: hex1.hex
- Space for programming: all memories (PM, EEPROM, ID, Configuration bits)

<path to lcpWinComLine.exe> **/c**icp01.cfg hex1.hex **/a**23

6.2 Program Device in PC-driven Mode + Serialization + Message Box

- Configuration file: icp01.cfg
- Hex file: hex1.hex
- Serialization file: ser1.ser
- Space for programming: all memories (PM, EEPROM, ID, Configuration bits)

<path to lcpWinComLine.exe> **/c**icp01.cfg hex1.hex **/s**ser1.ser **/a**23 **/d**1

6.3 Erase Device (Using Program Operation)

- Configuration file: icp01.cfg
- Hex file: Blank1.hex (file contains blank values only)
- Space for programming: all memories (PM, EEPROM, ID, Configuration bits)
- PM start: 0
- PM end: 3E (valid for any PIC10/12/16/18)

<path to lcpWinComLine.exe> **/c**icp01.cfg Blank.hex **/a**23 **/b**0 **/e**3E

6.4 Program 4 Devices using ICP2-GANG (Standalone Mode)

- Configuration file: icp01.cfg, contains GANG channels 1-4

Step 1 - gang programming: <path to lcpWinComLine.exe> **/c**icp01.cfg **/i** **/g**2
Step 2 - get result for channel 1: <path to lcpWinComLine.exe> **/n**1 **/g**
Step 3 - get result for channel 2: <path to lcpWinComLine.exe> **/n**2 **/g**
Step 4 - get result for channel 3: <path to lcpWinComLine.exe> **/n**3 **/g**
Step 5 - get result for channel 4: <path to lcpWinComLine.exe> **/n**4 **/g**

Note: steps 2-5 are not required if return code for step 1 is zero (all channels passed)

6.5 Transfer Environment File to Programmer

- Configuration file: icp01.cfg
- Destination environment: 2
- Environment file: env1.pj2

<path to lcpWinComLine.exe> **/c**icp01.cfg **/q**2 **/t**env1.pj2

IMPORTANT: Environment is saved in **non**-volatile flash memory of ICP2 programmer; therefore avoid multiple transfers of the same environment to keep endurance of the flash memory

7 Getting Started

7.1 *Create a folder with your project*

- Create a folder for your project, for example: C:\Projects\Project1
- Place your hex file into the folder above, for example: C:\Projects\Project1\Hex1.hex

7.2 *Install ICP GUI software*

- Install ICP GUI software by running setup file "IcpWin_setup_X_XX.exe"

7.3 *Create ICP GUI shortcut to your project*

- Copy created shortcut "ICP for Windows" and rename the copy, for example to "My ICP Project"
- Open the shortcut properties and change "Start in:" directory to "C:\Projects\Project1"

7.4 *Run ICP GUI software*

- Press on "My ICP Project" to run ICP GUI software
- Configure ICP family programmer for operation with your device
- Create serialization file in the project directory (if required), for example "ser1.ser"
- Save configuration: select "File/Save Configuration" and exit the software
- In the project directory rename "icp01.cfg" to "MyProject.cfg"

7.5 *Create command line shortcut (PC-driven programming)*

- Create shortcut to "IcpWinComLine.exe"
- Open the shortcut properties and edit as follows:
Target: ".....\IcpWinComLine.exe" /cMyProject.cfg Hex1.hex /sser1.ser /a23 /d1
Start in: "C:\Projects\Project1"
- Press on the created shortcut to validate the operation

8 History

8.1 Version 1.1.12 (Jul-2018)

- "IcpWinComLine.exe" provides more diagnostic messages in case of incorrect or insufficient parameters

8.2 Version 1.1.11 (Jun-2017)

- Added switch /y to load security bit

8.3 Version 1.1.10 (Mar-2017)

- Done correction: "auto01.res" is saved for all errors if /g, /g1 or /g2 is specified (previous: it was saved for programming errors only)
- Added memory spaced: 32 = BOOT memory and 64 = OTP

8.4 Version 1.1.8 (Jan-2015)

- Added switch /q to switch environment

8.5 Version 1.1.7 (Nov-2013)

- Added switch /o to enable/disable gap eliminator for PM or/and DM

8.6 Version 1.1.6 (Jan-2012):

- Added switch /u to transfer secure environment to programmer

8.7 Version 1.1.5 (Nov-2008):

- Switch /x can be used to speed-up the ICP operation

8.8 Version 1.1.4 (Jan-2008):

- Switch /g can be used with switch /n in order save individual results in file "ch_i.res"

8.9 Version 1.1.3 (July-2007):

- Added switches /? and /h to show command line and DLL versions in message box
- Added switch /t for environment transfer
- Expanded support for GANG operation (expanded switch /g: g2 will save global and individual results in "auto01.res" file, added switch /n to get individual results)
- Expanded switch /d: in case of /d2 message box will appear for bad result only

8.10 Version March-2007: initial version

9 Warranty

Softlog Systems (2006) Ltd. warrants this product against defects in materials and workmanship for a period of 1 (one) year. This warranty will not cover programmers that, in the opinion of Softlog Systems, have been damaged due to abuse, improper use, disassembly, replacement of parts or attempted repair by anyone other than an authorized Softlog Systems service technician.

This product must be returned to the supplier for warranty service within the stated period. The buyer shall pay all shipping costs and other charges or assessments for the product by the supplier.

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