

Executing commands of the class *K9F8G08U0M*

This application note shows how a possible execution script for the class *K9F8G08U0M* (see *AN-1-003* [1]) may look like.

Main parts which should be included in an execution script

Import of the needed scripting modules

The module *HpeJTAG* contains basic functions for general use and the class *SamsungNand_basis* and it's methods

The module *K9F8G08* contains the class *K9F8G08U0M* and it's methods

```
import JtagExampleLib.HpeJTAG ← module
import JtagExampleLib.SamsungNands.K9F8G08
      ↑           ↑
      directory  module
```

Figure 1: Import of scripting modules

More information about the *jtag* methods can be found in the *Hpe[®]_JTAG* manual [2].

Reloading needed scripting modules

The reloading of modules which contain scripting classes is a very usefull feature. All in this execution python file used modules will be reloaded as shown in figure 2. This has the advantage that the *Hpe[®]_JTAG* always uses the newest class definitions for new created scripting class objects

```
try:
    reload(JtagExampleLib.HpeJTAG)
    reload(JtagExampleLib.SamsungNands.SamsungNand)
    reload(JtagExampleLib.SamsungNands.K9F8G08)
except NameError:
    pass
```

Figure 2: Reload scripting modules

Initialization of the JTAG-Chain

```

board = "ALC-AS3"

# avoid that the JTAG gui is used while the script is running.
#jtag.lockGUI(True)
#initialize the JTAG interface

try:
    boardConfig
except:
    if board == "ALC-AS3":
        jtag.initialize("ALTERA_INTERFACE", "EPM1270F256, EP3SL50F780, EP3SL50F780")
    else:
        apputil.Msg("Unknown board: %s" % board)

# get signal ids for sample and extest
JTAG_DEVICE_IDX = 1
boardConfig = jtag.getBoardConfiguration()
devConfig = boardConfig.getDeviceConfigurations()[JTAG_DEVICE_IDX]

apputil.Msg("Prepared for board: " + board)

```

Figure 3: Initialization of the JTAG-Chain

Creation of an object from the class *K9F8G08U0M* and the later on pin assignment

flash0 is the created object of the class *K9F8G08U0M*.

The pin assignment is done with the method registerPinInfos()

The strings "cen, ren, wen, cle, ale, wpn and rbn" are variables of the class *K9F8G08U0M* to which the actual pinning on the FPGA will be assigned to.

```

flash0 = JtagExampleLib.SamsungNands.K9F8G08.K9F8G08U0M(1,jtag) ← creating an object of the class K9F8G08U0M
apputil.Msg("\nTesting Flash 1\n")
if board == "ALC-AS3":
    devConfig.registerPinInfos([("AE23", "ale", "OUT"),
                                ("AE24", "AF24", "AH22", "AE21", "AF21", "AE20", "AF20", "AH25"), "databus[0:7]", "OUT"),
                                ("AF23", "cle", "OUT"),
                                ("AC28", "ren", "OUT"),
                                ("AH23", "wen", "OUT"),
                                ("AH24", "wpn", "OUT"),
                                ("AD27", "cen", "OUT"),
                                ("AD24", "rbn", "IN")],
                                flash0) ← actual pin assignment
ExecNandFunctions(jtag, flash0, [{"0", [{"0", JtagExampleLib.HpeJTAG.Denary2Binary(1)},
{"1", JtagExampleLib.HpeJTAG.Denary2Binary(5)},
{"2", JtagExampleLib.HpeJTAG.Denary2Binary(10)}]},
{"1", [{"0", JtagExampleLib.HpeJTAG.Denary2Binary(2)},
{"1", JtagExampleLib.HpeJTAG.Denary2Binary(4)},
{"2", JtagExampleLib.HpeJTAG.Denary2Binary(8)},
{"3", JtagExampleLib.HpeJTAG.Denary2Binary(16)},
{"4", JtagExampleLib.HpeJTAG.Denary2Binary(32)},
{"5", JtagExampleLib.HpeJTAG.Denary2Binary(64)},
{"6", JtagExampleLib.HpeJTAG.Denary2Binary(128)}]},
{"2", [{"0, JtagExampleLib.HpeJTAG.Denary2Binary(144)}]})

```

Figure 4: Import of scripting modules

The *execute_K9F8G08U0M* python-file can be found in the same directory as the module *K9F8G08* python-file.

The execution and the results are shown in AN-1-003 [1].

Revision History

Version 1.0: Initial Version

Bibliography

- [1] Gleichmann Electronics Research. *AN-1-003: K9F8G08U0M* class description. <http://www.ge-research.com/downloads.html>, March 2007.
- [2] Gleichmann Electronics Research. *Hpe[®]_JTAG* manual. <http://www.ge-research.com/downloads.html>, March 2009.

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