

ThePod TCL support

Version: 1.01
Released: March 19, 2007



The Pod can be directly controlled via the **Tcl** scripting language. ZP Engineering provides a dedicated DLL (thepod_tcl.dll) that exports several of the functions available in the main DLL (thepod_zp.dll).

References:

- ThePod User's Manual, available on www.zpeng.com/thepod
- <http://www.tcl.tk/>
- <http://wiki.tcl.tk/>

Latest documentation, drivers and
application software at
www.zpeng.com/thepod



Command reference

COMMAND	ANSWER
tpod_open <index> [bit_mode] [cs_sel] [lsb] [clk_div]	<ret_code>
tpod_ver	<ret_code> <ver>
tpod_wrblk8 <index> <list> [cs_mode]	<ret_code>
tpod_wr8 <index> <list> [cs_mode]	<ret_code>
tpod_rdwr8 <index> <list> [cs_mode]	<ret_code> <list>
tpod_rdwrblk8 <index> <list> [cs_mode]	<ret_code> <list>
tpod_rdbl8 <index> <size> <wr_dont_care> [cs_mode]	<ret_code> <list>
tpod_setNRESET <index> <level>	<ret_code>
tpod_setCSAUX <index> <level>	<ret_code>
tpod_setCS <index> <level>	<ret_code>
tpod_getNREQ <index>	<ret_code> <value>
tpod_configGPIO <index> <gpio> <mode>	<ret_code>
tpod_setGPIO <index> <gpio> <level>	<ret_code>
tpod_getGPIO <index> <gpio>	<ret_code> <value>
tpod_close <index>	<ret_code>

Please note that:

- <index> refers to which ThePod is being addressed, useful when multiple devices are being used; it is a required parameter
- parameters in square brackets are optional
- clk_div is a 16-bit value that sets a clock frequency equal to :

$$12\text{MHz} / ((1 + [\text{clk_div}]) * 2)$$

SPI mode	bit_mode
0	0
1	1
2	2
3	3 (default)

CS change	cs_mode
Automatic	0 (default)
Manual	1

CS select	cs_sel
MAIN (pin 8)	0 (default)
AUX (pin 13)	1

Bit order	lsb
MS bit first	0 (default)
LS bit first	1

Which pin	gpio
14	0
15	1

Direction	mode
INPUT	0
OUTPUT	1

Some examples of clk_div values

SPI clock	clk_div
6 MHZ	0x0000
3 MHZ	0x0001 (default)
2 MHZ	0x0002
1.5 MHZ	0x0003
1.2 MHZ	0x0004
1 MHZ	0x0005
800 KHZ	0x0006
750 KHZ	0x0007
650 KHZ	0x0008

Return values

0	OK
1	Command fail
2	Wrong parameter

Usage examples

As any external library, you need to load the library first:

load thepod_tcl

assuming that the required DLLs (thepod_tcl.dll and thepod_zp.dll) are in the current directory or in the windows search path.

To open the SPI port in mode 3, 1 Mbps, MBS first, automatic CS:

tpod_open 0 3 0 0 5

To give a reset pulse (active low):

tpod_setNRESET 0 0

tpod_setNRESET 0 1

To write the 4-byte value 0x12345678, MS-byte first, with automatic CS:

tpod_wrbk8 0 [list 0x78 0x56 0x34 0x12] 0

To perform a 10-byte read while sending 0xFF, with automatic CS:

tpod_rdbk8 0 10 0xff 0

At the end of operation, you need to close the handle:

tpod_close 0

If you exit the Tcl application, then the handle is automatically closed.

For more usage examples, please refer to example tcl files.

ZP Engineering srl
via Ardito Desio, 60 – 00131 ROME - ITALY
tel. +39.06.41230392, fax +39.06.41293033
www.zpeng.com

