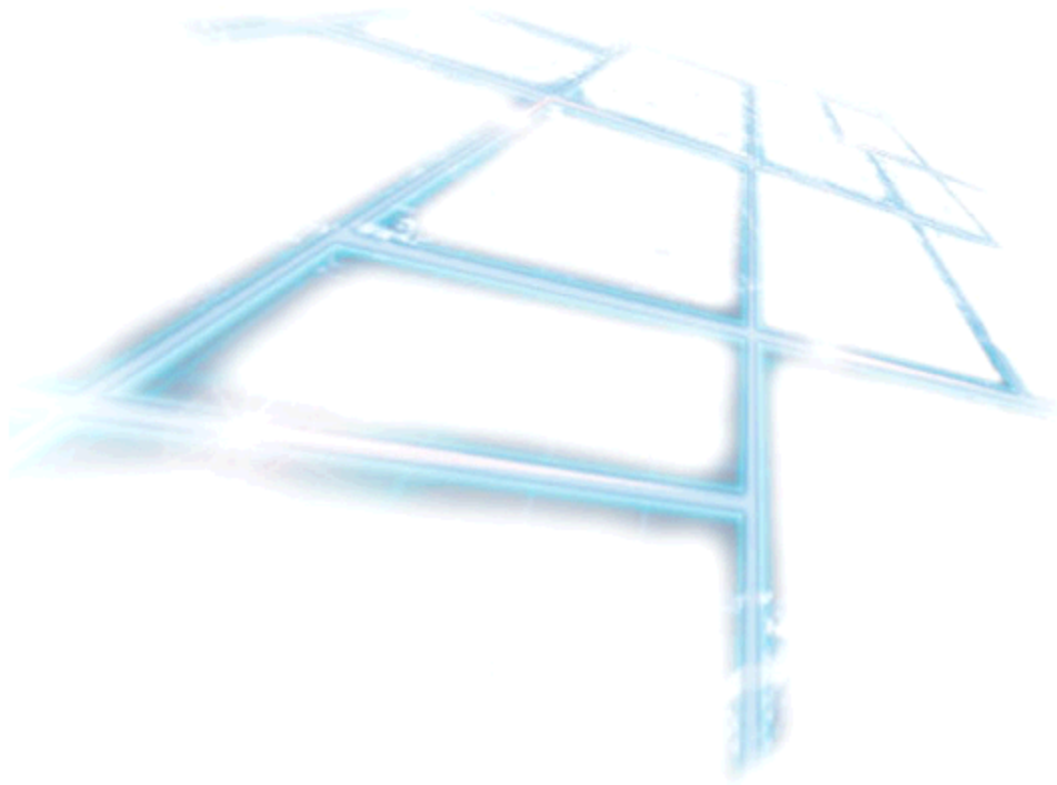


QCLI



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Wesseling, Juni 2012 Version 4.1.0

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1. Overview

1.1 Introduction

Das **Quancom Command Line Interface (QCLI)** ist für diejenigen gedacht, die sich in der Programmierwelt nicht zurechtfinden, oder auch keine Lust haben sich ein eigenes Programm für den Zugriff auf unsere **QUANCOM** Karten zu schreiben. Das **QCLI** ist recht einfach gehalten, um leicht schnelle Steuerungen der Karten vorzunehmen. Deshalb ist es auch langsamer, verglichen zu einer komplex programmierten Anwendung.

Mit einfachen Funktionen der QAPI lassen sich über das **QCLI QUANCOM** Karten und Module bedienen und konfigurieren.

Für die Nutzung des **QCLI** ist die Installation der **QLIB (QUANCOM Library)** erforderlich. Es ist kein Setup für das Programm notwendig und kann deshalb überall kopiert werden.

1.2 Our experience is your profit

QUANCOM is specialised in development of hard- and software. QUANCOM has become one of the leading suppliers of measuring and automation technology in industry. At its design centres QUANCOM has developed an impressive range of products.

1.3 Customer Communication

QUANCOM wants to receive your comments on our products and manuals. We are interested in the applications you develop with our products, and we want to help you if you have problems with them. For easy contacting, this manual contains comment and configuration forms for you to complete, which are in chapter "Customer Communication and Help" at the end of this manual.

1.4 Changes in this manual and software updates

QUANCOM - products are marked out by their constant further development. You can watch all the actual information of the changes in the README-file on the installation disk or CD. You can always get more information and free software updates from our internet website.

www.quancom.de

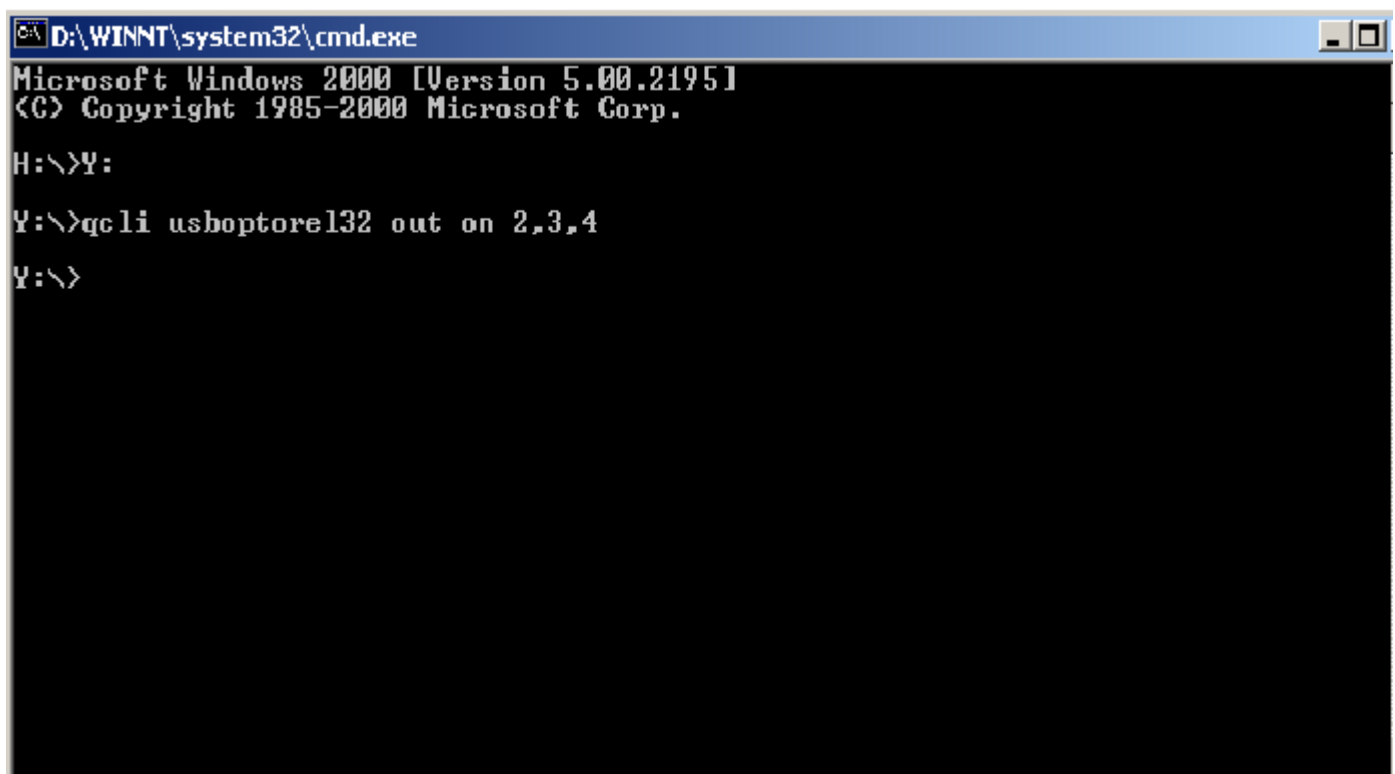
2. Installation

QCLI is available as precompiled executable for Windows systems and as source code for Linux systems.

2.1 Windows

In Windows console QCLI is directly executable.

Sample:



```
D:\WINNT\system32\cmd.exe
Microsoft Windows 2000 [Version 5.00.2195]
(C) Copyright 1985-2000 Microsoft Corp.
H:\>Y:
Y:\>qcli ushoptorel32 out on 2,3,4
Y:\>
```

2.2 Linux

In Linux QCLI has to be compiled. The path to QLIB library and header files has to be adjusted accordingly.

The following steps depend on your system configuration.

2.3 Usage

Die Steuerung und Konfigurierung der Karten erfolgt durch Befehle der Funktionen aus der **QUANCOM** Library (QLIB).

Die Benutzung des **QCLI** erfolgt durch die Windows Konsole. Es gibt zwei Arten für die Benutzung: die **einfache** und die **fortgeschrittene** Benutzung.

2.3.1 Simple Usage

The syntax for the simple usage of QCLI is described in the following string.

```
q c l i <cardtype> <cardid> <command> [<output/ input numbers>]
```

2.3.1.1 Card Type Parameter

```
q c l i <cardtype> The official card type. I.e. USBOPTOREL32 or USBREL8
```

The card type has to be declared always.

2.3.1.2 Card ID Parameter

```
qcli <cardid> By dip switch or software configured address of the card or module
```

This parameter is redundant, if the address is 0 (default).

2.3.1.3 Command Parameter

```
q c l i <command> May be "out", "in" or "watchdog"
```

- "out" for writing to the outputs.
- "in" for reading the inputs

- "watchdog" for usage with watchdog boards

2.3.1.4 Options for Input Command

Simple Usage:

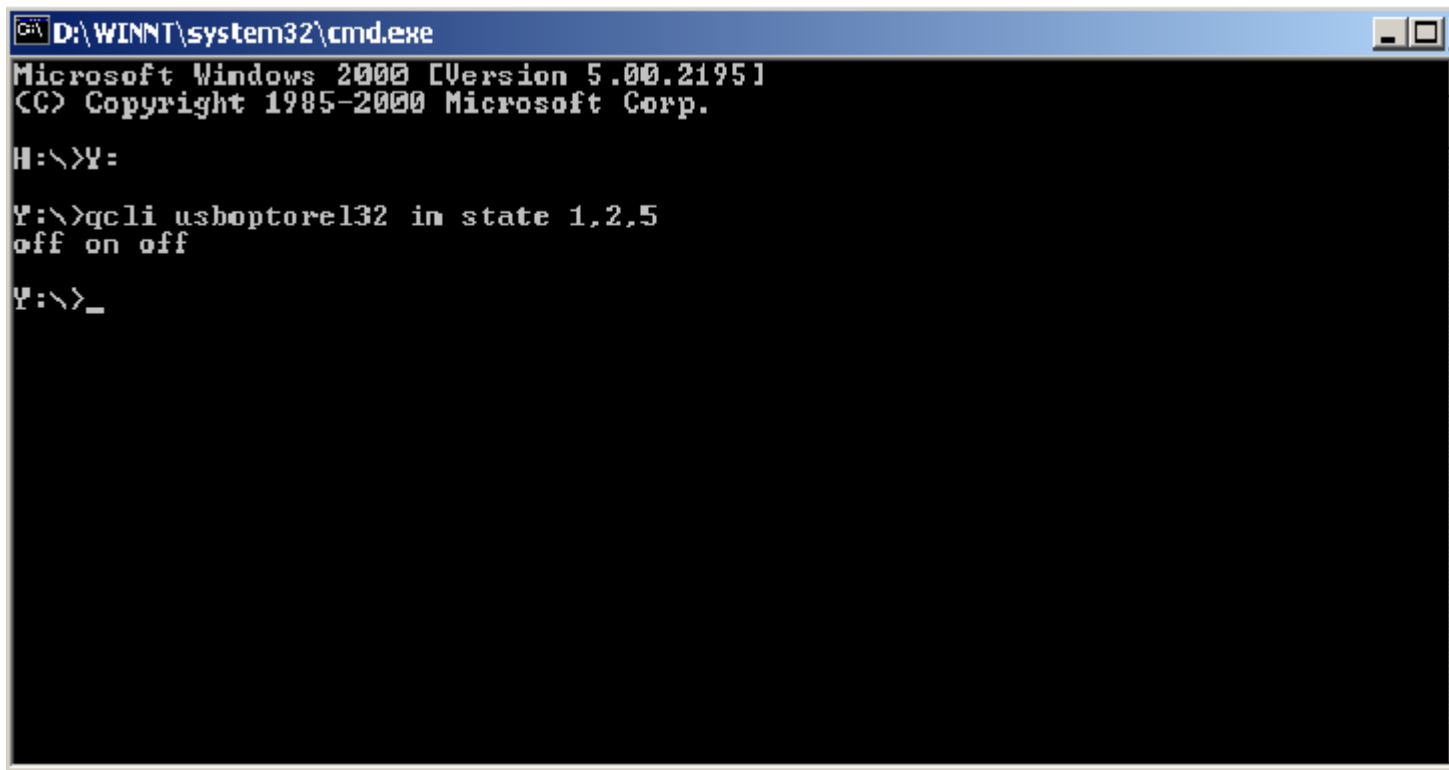
```
qcli <cardtype> <cardid> in state <input numbers>
```

The inputs for the parameter <input numbers> start with 1. It is also possible to call for several inputs at the same time. The equivalent numbers just have to be separated by a comma.

Sample:

Read inputs 1, 2 and 5 of a USBOPTOREL32:

```
qcli usboptorel32 in state 1,2,5
```



```
D:\WINNT\system32\cmd.exe
Microsoft Windows [Version 5.00.2195]
(C) Copyright 1985-2000 Microsoft Corp.

H:\>Y:
Y:\>qcli usboptorel32 in state 1,2,5
off on off
Y:\>_
```



There must not be a space between the numbers and comma.

2.3.1.5 Options for Output Command

Simple Usage:

```
q c l i <cardtype> <cardid> out on <output numbers>  
q c l i <cardtype> <cardid> out off <output numbers>
```

The inputs for the parameter <output numbers> start with 1. It is also possible to call for several inputs at the same time. The equivalent numbers just have to be separated by a comma.

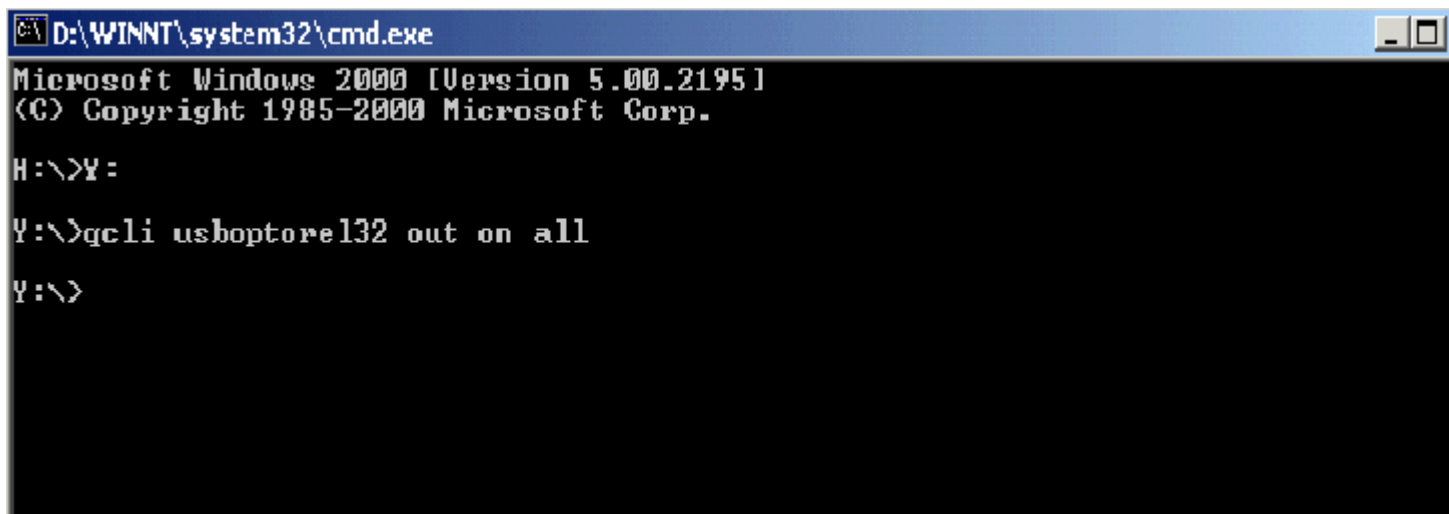
Samples:

Switch off output 1 and 5 of a USBOPTOREL32:

```
q c l i usboptorel32 out off 1,5
```

Switch on all outputs of a USBOPTOREL32:

```
q c l i usboptorel32 out on all
```



```
D:\WINNT\system32\cmd.exe  
Microsoft Windows 2000 [Version 5.00.2195]  
(C) Copyright 1985-2000 Microsoft Corp.  
H:\>Y:  
Y:\>qcli usboptorel32 out on all  
Y:\>
```



There must not be a space between the numbers and comma.

2.3.1.6 Actions for Watchdog Command

The watchdog actions execute the following commands.

Samples for PWDOG1

Watchdog Befehl:	Aktion:
q c l i p w d o g 1 w a t c h d o g o n	Switches the watchdog on
q c l i p w d o g 1 w a t c h d o g o f f	Switches the watchdog off
q c l i p w d o g 1 w a t c h d o g r e t r i g g e r	Triggers the PWDOG1 and resets the internal timer
q c l i p w d o g 1 w a t c h d o g s t a t u s	checks if a timeout event has occurred

2.3.2 Advances Usage

For more experienced users QCLI offers the advanced usage.

The advanced usage uses the following syntax.

```
q c l i  <cardtype>  <cardid> <command>  <value>  <channel>
```

The parameter values are interpreted in C. This means numbers that start with 0x are interpreted as Hex, those who start with 0 as octal and the rest as decimal.

The <command> parameter for the advanced usage is slightly different from the basic variant. It has to be "in" or "out" as in basic usage, but additionally the needed data width has to be specified. It may be chosen between 8 Bit, 16 Bit, 32 Bit or 64 Bit data width.

The <value> parameter is only needed when using "out" command. it specifies the bit value of the data that has to be written.

The <channel> parameter may be ignored. It then will be supposed to be 0. Otherwise it specifies the channel where the data is written or read from.

Sample:

The following command uses a data width of 16 bits and reads the inputs 17 - 32 of a USBOPTOREL32 module:

```
q c l i  usboptorel32  in 16 1
```

<command>	64 - 57	56 - 49	48 - 41	40 - 33	32 - 25	24 - 17	16 - 9	8 - 1
8 - Bit	Channel 7	Channel 6	Channel 5	Channel 4	Channel 3	Channel 2	Channel 1	Channel 0
16 - Bit	Channel 3		Channel 2		Channel 1		Channel 0	
32 - Bit	Channel 1				Channel 0			
64 - Bit	Channel 0							

2.3.2.1 Input Commands

Advanced Usage

8 Bit data width: q c l i <cardtype> <cardid> in 8 [<channel>]
 16 Bit data width: q c l i <cardtype> <cardid> in 16 [<channel>]
 32 Bit data width: q c l i <cardtype> <cardid> in 32 [<channel>]
 64 Bit data width: q c l i <cardtype> <cardid> in 64 [<channel>]

Samples:

Reading inputs 25 - 32 of the eight bit data channel 3 of an USBOPTOREL32

```
qcli usboptorel32 in 8 3
```

Reading inputs 17 - 32 of the sixteen bit data channel 1 of an USBOPTOREL32

```
qcli usboptorel132 in 16 1
```

Reading inputs 33 - 64 of the thirty three bit data channel 1 of an USBOPTO64IN

```
qcli usbopto64in in 32 1
```

Reading inputs 1 - 64 of the sixty four bit data channel 0 of an USBOPTO64IN

```
qcli usbopto64in in 64 0
```

<command>	64 - 57	56 - 49	48 - 41	40 - 33	32 - 25	24 - 17	16 - 9	8 - 1
8 - Bit	Channel 7	Channel 6	Channel 5	Channel 4	Channel 3	Channel 2	Channel 1	Channel 0
16 - Bit	Channel 3		Channel 2		Channel 1		Channel 0	
32 - Bit	Channel 1				Channel 0			
64 - Bit	Channel 0							

2.3.2.2 Output Commands

Advanced Usage

```

8 Bit data width: q c l i <cardtype> <cardid> out 8 [<channel>]
16 Bit data width: q c l i <cardtype> <cardid> out 16 [<channel>]
32 Bit data width: q c l i <cardtype> <cardid> out 32 [<channel>]
64 Bit data width: q c l i <cardtype> <cardid> out 64 [<channel>]

```

Samples:

Writing outputs 7 and 8 (value 192) of the eight bit data channel 0 of an USBOPTOREL32

```
qcli usboptorel32 out 8 192 0
```

Writing outputs 17 - 32 (value 255) of the sixteen bit data channel 1 of an USBOPTOREL32

```
qcli usboptorel32 out 16 255 1
```

Writing outputs 33 - 37 and 41 (value 287) of the thirty three bit data channel 1 of an USBREL64

```
qcli usbrel64 out 32 287 1
```

Writing outputs 1,2,3 and 4 (value 15) of the sixty four bit data channel 0 of an USBREL64

```
qcli usbrel64 out 64 15 0
```

<command>	64 - 57	56 - 49	48 - 41	40 - 33	32 - 25	24 - 17	16 - 9	8 - 1
8 - Bit	Channel 7	Channel 6	Channel 5	Channel 4	Channel 3	Channel 2	Channel 1	Channel 0
16 - Bit	Channel 3		Channel 2		Channel 1		Channel 0	
32 - Bit	Channel 1				Channel 0			
64 - Bit	Channel 0							

3. Anhang

3.1 Warenzeichen

Linux ist ein eingetragenes Warenzeichen von Linus Torvalds.

MS, MS-DOS, Microsoft, Visual Basic, Windows, Windows Vista/XP/2000/NT/ME/98/95 sind eingetragene Warenzeichen von Microsoft Corporation.

XT und PS/2 sind Warenzeichen und IBM, OS/2 und AT sind eingetragene Warenzeichen der International Business Machines Corporation.

Intel, Pentium ist ein eingetragenes Warenzeichen von Intel Corporation.

USB ist ein eingetragenes Warenzeichen von USB Implementers Forum Inc.

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