

GigaDevice MCU Team	Version	6 Pages
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	Name : GigaDevice GD-Link Console User Manual	

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1 Introduction

This user manual describes an application used to operate the flash or config GigaDevice MCUs with available USB cable and GD-Link adaptor. GD-Link CLI is a tool for the user to use MCUs with high speed.

1.1 Function description

With GD-Link CLI, user can download the application program to the internal flash memory or secure chip and so on.

1.2 Operating environment

Software Requirements:

- Chinese or English Windows XP、Windows 7、Windows 10 and advanced operation systems.
- Linux: Ubuntu 22.04.2 LTS and advanced operation systems.

Hardware Requirements: GD-Link adapter, referring to the **GD-Link Adapter User Manual**.

1.3 Package composition

All files listed in Figure 1-1 are required for Windows.

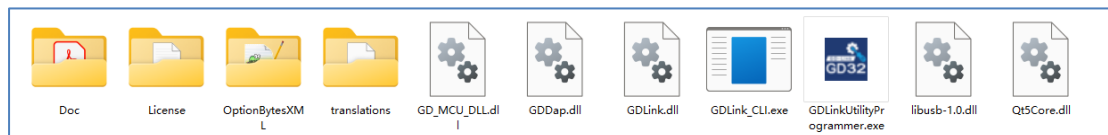


Figure 1-1 File List for Windows

In the Linux environment, the software includes two folders: "bin" and "lib". The "bin" folder contains executable files and documents, while the "lib" folder contains dependent library files, as shown in Figure 1-2 and Figure 1-3.



Figure 1-2 File List for Linux

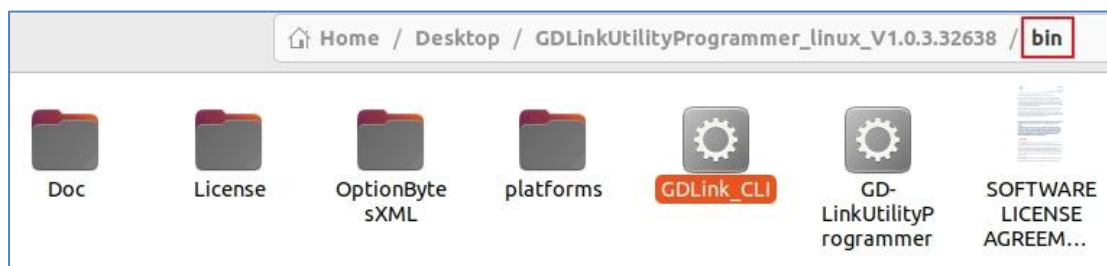


Figure 1-3 File List in Bin

2 Instructions

2.1 Command set

The command set is as follows:

Table 2-1 Command set

Command	Remarks
?	Show the help
Connect	Connect the target MCU.
mem	Read memory. Syntax: mem [<Zone>:]<Addr>, <NumBytes> (hex)
mem8	Read 8-bit items. Syntax: mem8 [<Zone>:]<Addr>, <NumBytes> (hex)
mem16	Read 16-bit items. Syntax: mem16 [<Zone>:]<Addr>, <NumItems> (hex)
mem32	Read 32-bit items. Syntax: mem32 [<Zone>:]<Addr>, <NumItems> (hex)
w1	Write 8-bit items. Syntax: w1 [<Zone>:]<Addr>, <Data> (hex)
w2	Write 16-bit items. Syntax: w2 [<Zone>:]<Addr>, <Data> (hex)
w4	Write 32-bit items. Syntax: w4 [<Zone>:]<Addr>, <Data> (hex)
erase	Erase internal flash of selected device. Syntax: Erase
r	Reset target
g	go
h	halt
step	step
load	Load *.bin file into target memory. Syntax: load <filename>, <Addr> Load *.hex file into target memory. Syntax: load <filename>
savebin	Saves target memory into binary file. Syntax: savebin <filename>, <Addr>, <NumBytes>
setOPT	Load *.bin file into option bytes. Syntax: setopt <filename>

readOPT	Saves option bytes into binary file. Syntax: readopt <filename>, <NumBytes>
writeOTP	Load *.bin file into OTP block. Syntax: writeotp <filename>, <Addr>
readOTP	Saves OTP block into binary file. Syntax: readotp <filename>, <Addr>, <NumBytes>
SetPC	Set the PC to specified value. Syntax: SetPC <Addr>
SetRDP	Set the RDP(Read Protect) to specified level. Syntax: SetRDP <level>
ReadAP	Read a CoreSight AP register. Syntax: ReadAP <Addr>
WriteAP	Write a CoreSight AP register. Syntax: WriteAP <Addr>, <Data> (hex)
ReadDP	Reads a CoreSight DP register. Syntax: ReadDP <Addr>
WriteDP	Write a CoreSight DP register. Syntax: WriteDP <Addr>, <Data> (hex)
si	Change target interface. Syntax: si <interface>, where 0=JTAG and 1=SWD
sd	Set up the device Part No. manually. Syntax: sd <Part No.>
c	Change the USB Device. Syntax: c <SN or Device Index>
q	Quit

2.2 Other usage

GD-Link CLI can also be used by the bat script, like in Figure 2-2 and Figure 2-3. Figure 2-1 shows the commands in the sample file (test.gdlink). And the next two figures show two ways to use the GD-Link CLI.

```
Connect
r
sleep 30
h
sleep 30
mem 8000000 10
```

Figure 2-1 Commands in the test.gdlink file

In Figure 2-2, GD-Link CLI will execute all the commands in the test.gdlink file in sequence, regardless of whether the commands are successfully executed. The "-speed" command is used to set the connection speed. If the "-speed" command is not used, the default speed of 10000 kHz will be applied.

```
GDLink_CLI.exe -speed 10000 -commandfile test.gdlink
pause
```

Figure 2-2 The content of bat file without exit code

In Figure 2-3, GD-Link CLI will execute the commands in the test.gdlink file in sequence, and if the command fails to execute, it will terminate the process and return an

exit code.

```
GDLink_CLI.exe -commandfile -e test.gdlink
pause
```

Figure 2-3 The content of bat file with exit code

The difference between the two ways is whether the “-e” keyword is included. These exit codes and their corresponding meanings are shown in Table 2-2. “0b” indicates that the number is binary.

Table 2-2 Exit code description

Exit Code	binary	Meaning
0	0b0	SUCCESS
1	0b1	FAIL
2	0b10	UnConnectedError
4	0b100	InvalidGDLinkFileError
8	0b1000	InvalidBinFileError
16	0b10000	InvalidCommandError
32	0b100000	CommandFailedError

If the exit code is greater than or equal to 1, an error occurred during the command execution. The exit code can be converted to binary, and the specific cause of the error can be confirmed by confirming the location of the “1”. For example, when the exit code is 33, the conversion to binary is 0b00100001, which corresponds to CommandFailedError in Table 2-2.