

# GQ-5X NAND/SPI Flash High Speed Programmer User Guide

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## Overview

GQ-5X NAND/SPI Flash Programmer is the newest generation model of GQ series device programmer from MCUmall Electronics Inc Canada.

With its complete new professional design, it owns the following unique features:

- Support any NAND flash chip(TSOP48 package on this top module).
- No NAND chip size limitation.
- Highest speed provides most efficient work.
- Easy change to any other professional level programmer.
- By using GQ Blaster software, users are able to add their own chips.
- Raw data write provide a best tool to backup NAND flash data.
- NAND Reading speed above 12 Mbytes/second. A 1G bytes NAND chips only takes 98 seconds on reading.
- TSOP48ZIF socket ready for all TSOP48 NAND flash.
- More NAND function will be added in the future.

## Setup with Windows

The GQ-5X NAND Flash programmer works with computer with Windows OS installed. The programmer's connection to computer via USB cable. No additional power adapter needed.

In order to work with Windows, a USB driver for Windows and the GQBlaster application software need to be installed on computer.

Both USB driver and GQBlaster software can be found from CD OR download from following links:

1. Windows USB driver for Win XP, Vista, 7, 8, 8.1,10 32/64 bit OS

[http://www.mcumall.com/download/TrueUSBWillem/USBDriverV3.0\\_32\\_64Bit.zip](http://www.mcumall.com/download/TrueUSBWillem/USBDriverV3.0_32_64Bit.zip)

2. GQBlaster software for Windows 32/64 bit

<http://www.mcumall.com/downloads/download.asp?DownloadID=54>

3. The programmer performance and test data can be found from:

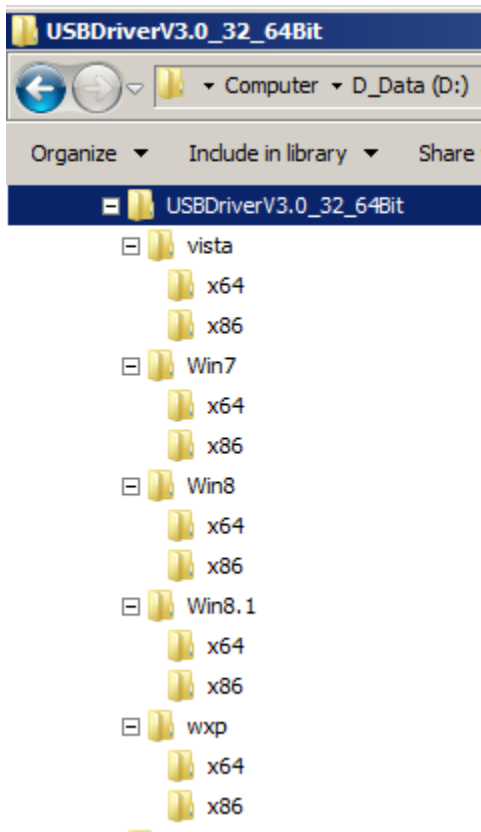
<http://www.mcumall.com/devicelib/TList.asp>

## Windows USB Driver installation

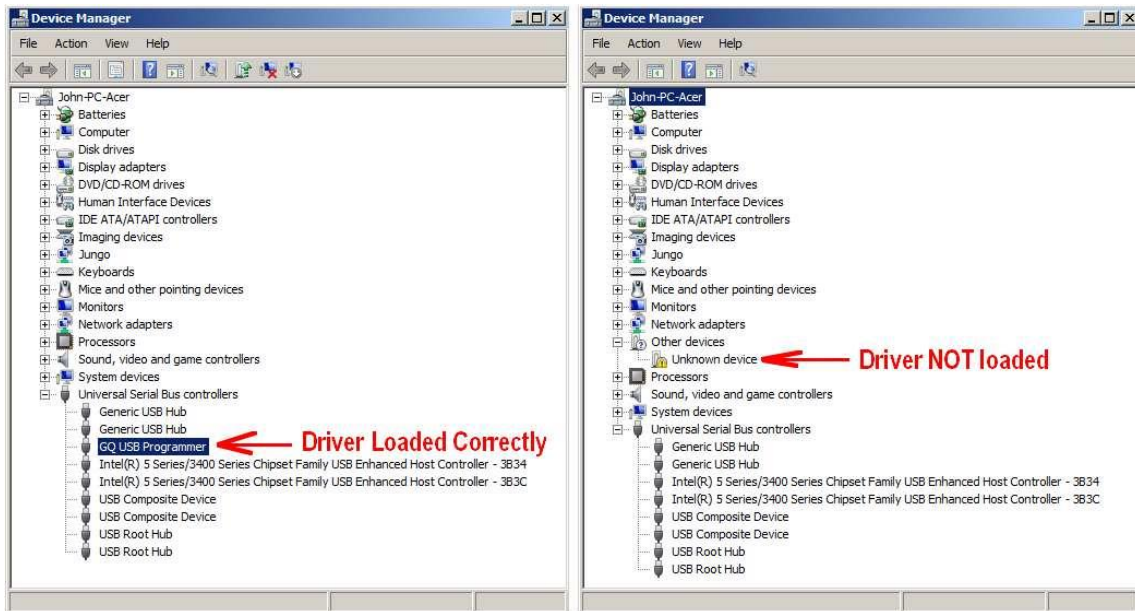
When the first time connect the programmer to a computer, the Windows should detect the a new USB device and launch a USB driver installation wizards. Follow the Windows driver wizards instruction, let it know the driver location, then the wizards should install the driver for you automatically.

If you skipped the driver installation wizards, then the Window may not show the driver installation wizard on next connection. In that case you need to use device manager to install the USB driver.

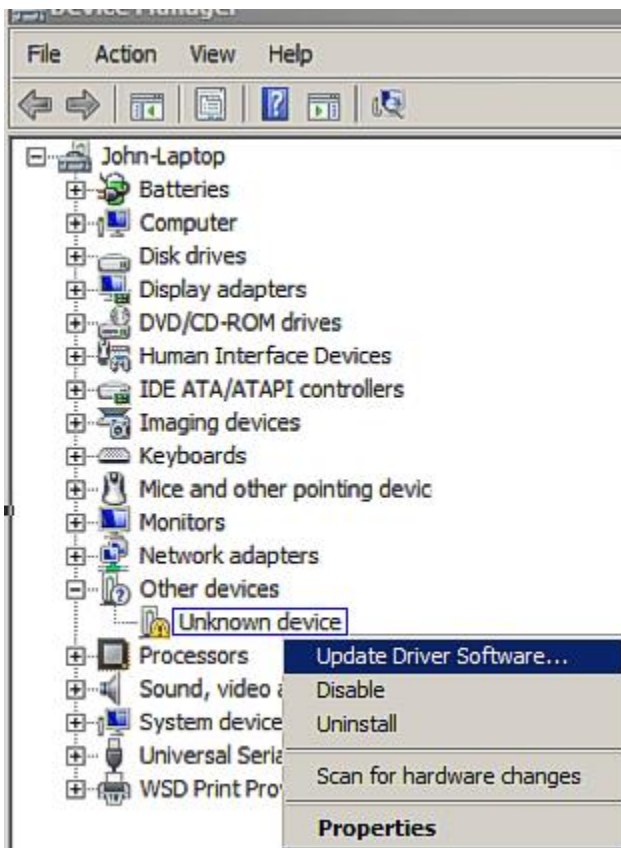
The USB drivers are located in different subdirectory. For 32 bit Windows, use x86 subdirectory. For the 64 bit Windows, use x64 subdirectory.



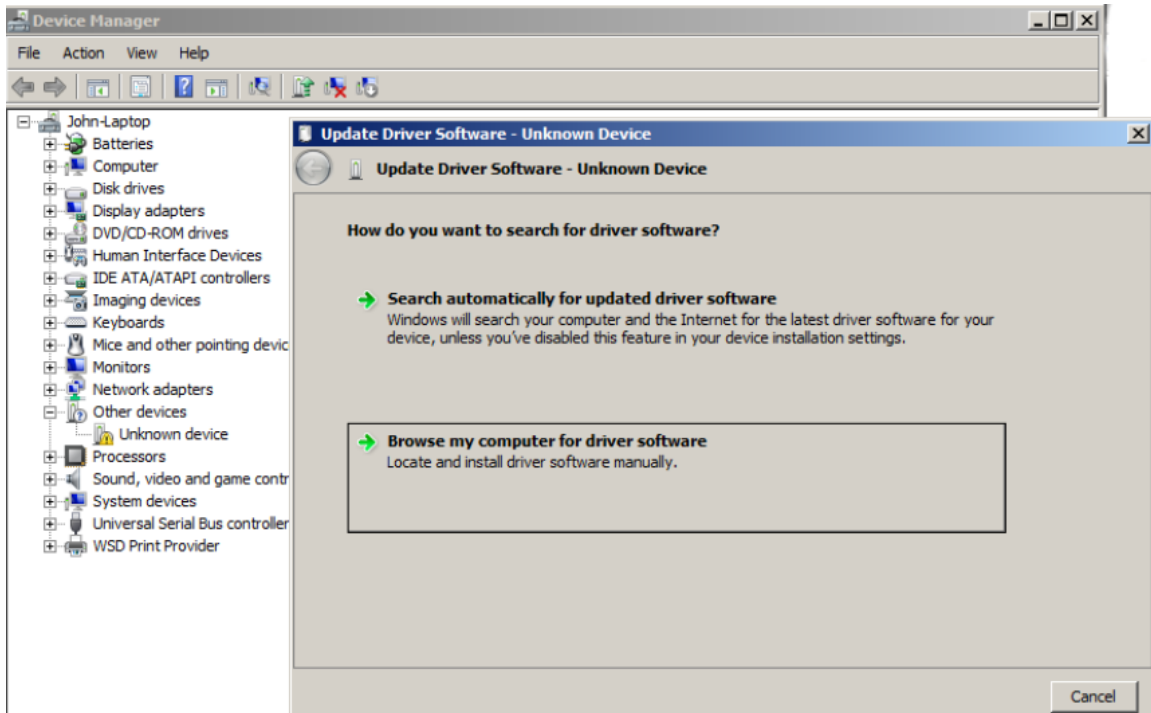
Here is an example for USB driver installation from Windows device manager:



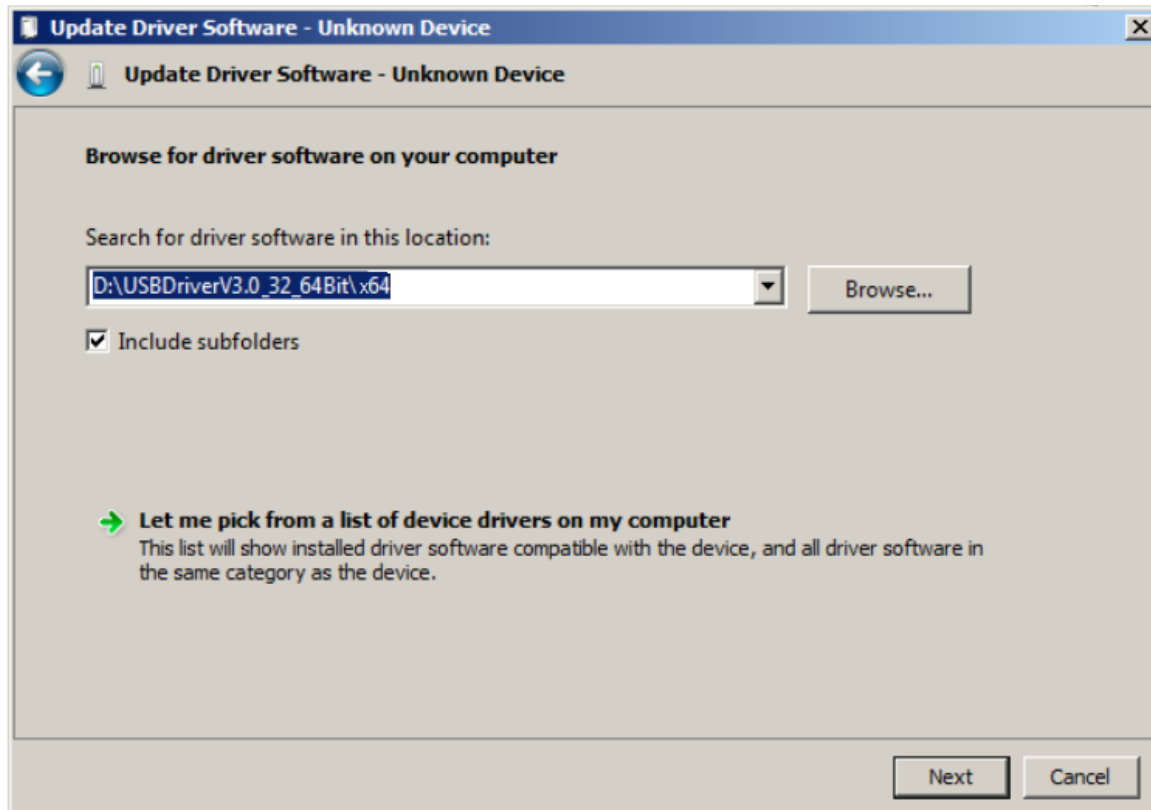
Right click on Unknown device to update the driver:

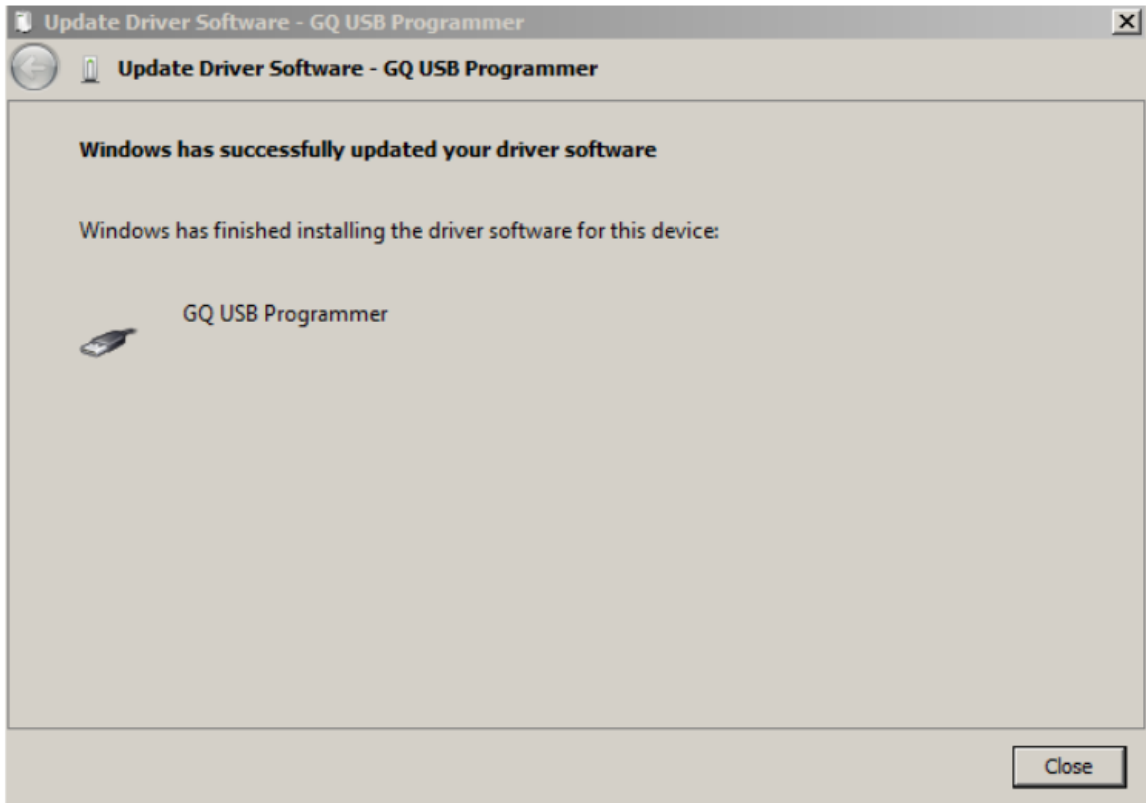


Start the driver update/installation:



Select UB driver location:

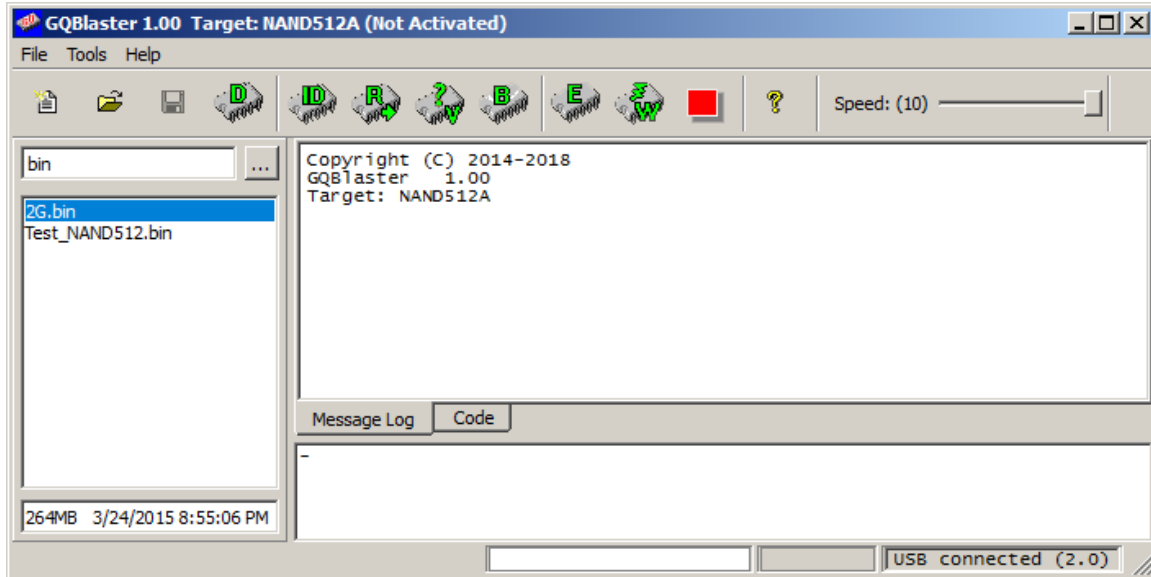




## GQBlaster software

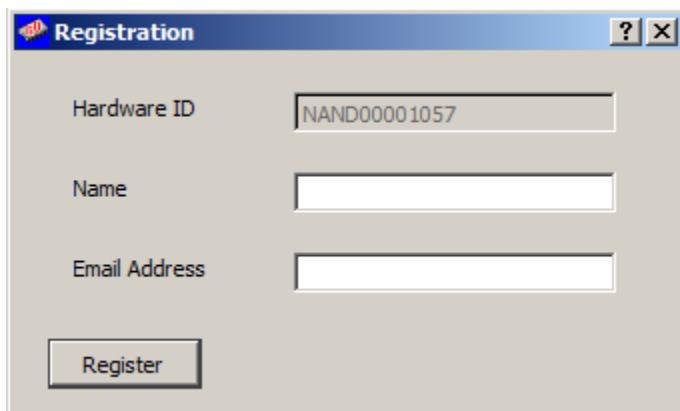
The GQBlaster software is a user application to operate the programmer. The software installation is easier, just click on the set up software should install the software.

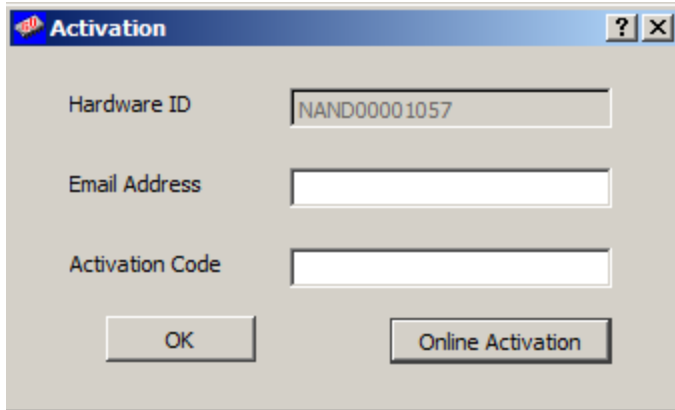
The main user interface:



## Software Registration and Activation

The GQBlaster software needs to be registered on first time run.





Enter the name and email address and then press the Register button. Then the software registration request will be sent to server. Wait for the server replay (up to 24 hours) for the software activation code. If you do not receive the activation code in 24hours, then contact [activation@mcumall.com](mailto:activation@mcumall.com) OR [support@mcumall.com](mailto:support@mcumall.com) with your order information provided.

If you already registered and install the software on another computer, just click on Online Activation button, the software will be activated automatically.

## Software Functions



### Read

Read the NAND flash chip content.

Note: All NAND flash chip reading require hard drive available space larger than chip capacity. For example: if your chip is 16G bytes, then you need at lease 16G bytes space in order to read. All buffer data are stored on hard drive, not the RAM. So, when doing reading, the software let you input a data file name for the reading data storage.



### Write (Program)

The write operation includes a verify operation. It will prompt with an error message if writing fail. The extra verify operation should be executed if the write operation is completed successfully.





## Erase

Erase the entire device and fill it with "FF". This only works on Electrically-Erasable devices. EPROMs need a separate UV eraser to erase the device.



## Blank

Blank checks the device to see if it's empty or blank. This is an important step before any write operation. All bytes in the device must be filled "FF". It will stop the check and display a message if the device is not blank.



## Verify

This compares the data in the buffer with the data in the device. It will stop the verification operation and display a message if a difference is detected.



## Read ID

This reads the device signature. It includes manufacturer ID as well.

## Speed

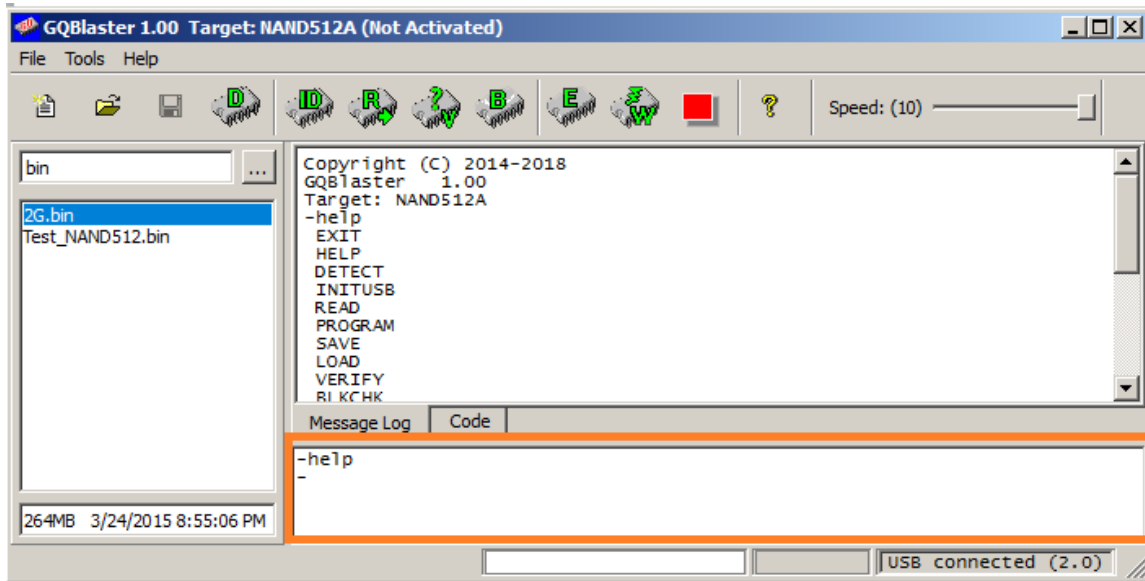
### Speed slider bar



The speed range is from 1-10. It used to set read and write speed on different grade NAND flash chip. If the reading and write is not consistent, then you may need to reduce the speed and try again.

## Command line operation

The software is able to accept operation command from software command line box. User may type the operation command from keyboard. The latest command set will be listed when type the “help” in the command line box.



The following are example commands (Capital letters are key word):

-----  
Help list all command available

-help  
EXIT  
HELP  
DETECT  
INITUSB  
READ  
PROGRAM  
SAVE  
LOAD  
VERIFY  
BLKCHK  
WRITE  
DEVICE  
ABOUT  
CLS  
ERASE  
SPEED

DEVICES  
LOG  
SCRIPT  
COLOR  
RANDOMFILE  
D