

# **Dediware Software User Manual For Micron SPI NOR Flash Option Bytes**

**Version 1.0**





## Table of Content:

I.	Description .....	3
II.	Micron Data Protection Feature .....	3
III.	Read Register Value.....	3
IV.	Option Bytes Setting.....	4
V.	Revision History.....	8

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## I. Description

This application note illustrates how to set up Dediware for programming the Micron SPI NOR Flash option bytes. Learn more about DediProg products and how to use them.

## II. Micron Data Protection Feature




- **Advanced Security Protection**

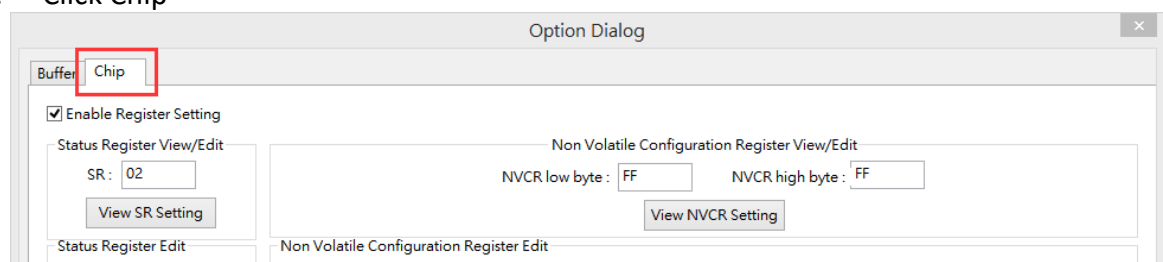
The MT25Q offers an advanced security protection scheme where each sector can be independently locked, by either volatile or nonvolatile locking features. The nonvolatile locking configuration can also be locked, as well password-protected.

(Reference MT25QL01GB Datasheet “Security Registers” chapter <https://www.micron.com/resource-details/2dd46e97-8a6c-4ed2-81c8-7d77528076c2> )

## III. Read Register Value

Read IC register value according to the following steps.

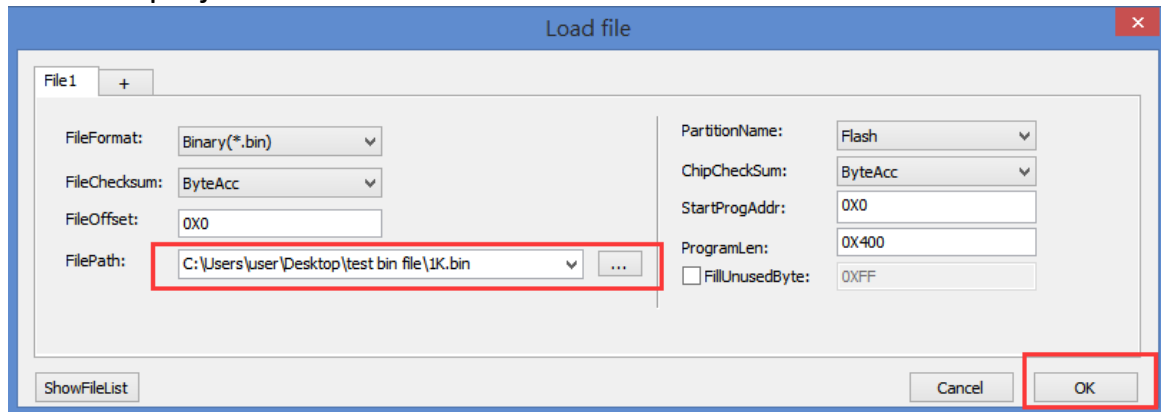
1. Click **Select**  → Select Chip
2. Click **Read IC** 
3. Click **Partition 2** 
4. Click **Chip**



## IV. Option Bytes Setting

Please load the file before programming the register.

1. Click **Load**
2. Load the project file→**OK**



3. Click **Config**



4. Click **SPI NOR**



- **Status Register(SR)**

1. Enter the SR(hex) value→**View SR Setting** or select the status for each Bit in Status Register

– Status Register View/Edit

SR:

– Status Register Edit

SRWD :

BP3 :

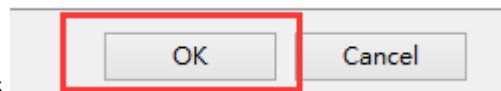
TB :


BP2 :

BP1 :

BP0 :

2. Click **OK** to save values

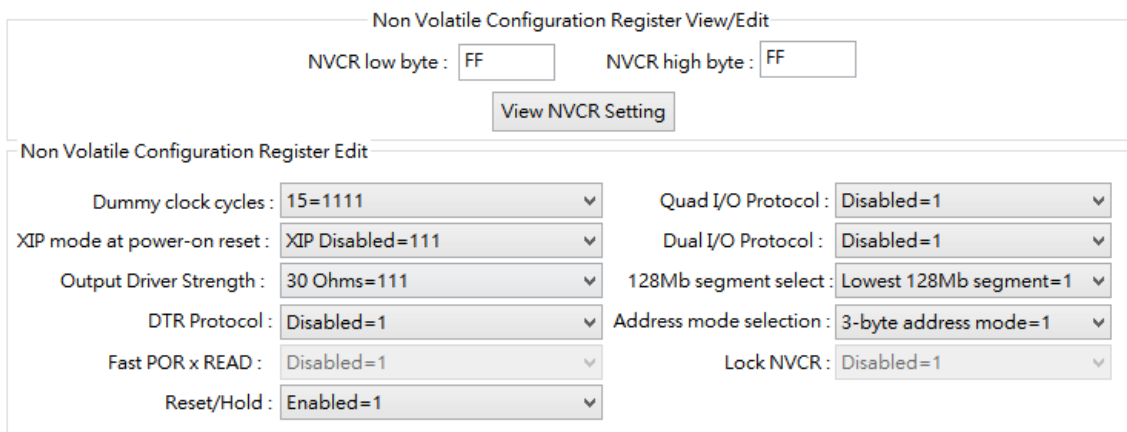


3. Program  →Config

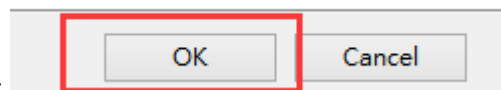
**Note: Program Flash or Erase Flash will erase Status Register to 00h.**

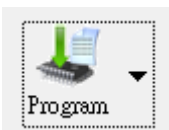
● **Non Volatile Configuration Register(NVCR)**

1. Enter the NVCR low/high byte(hex) value→**View NVCR Setting** or select the status for each Bit in Non Volatile Configuration Register



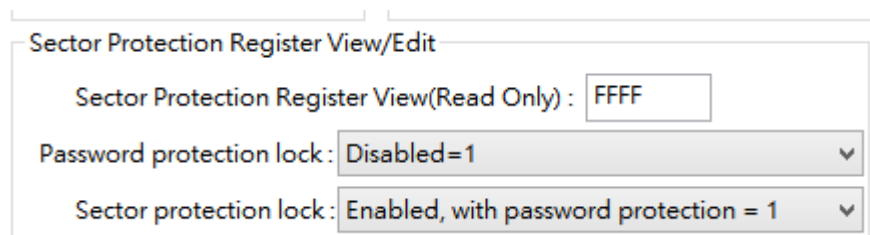
2. Click **OK** to save values



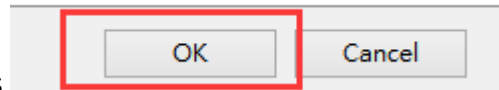
3. Program  →Config


● **Sector Protection Security Register**

1. Select the status for each Bit in Sector Protection Security Register



2. Click **OK** to save values



3. Program  →Config

- **Password Register**

1. Password Setup

Selected sector(s) protect  
 64 bit Password (Byte0, Byte1, ....Byte7) (hex):  
 Program Password

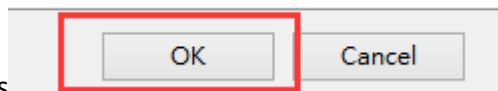
Byte3-Byte0	Byte7-Byte4
FFFFFFF	FFFFFFF


2. Check **Program Password**

64 bit Password (Byte0, Byte1, ....Byte7) (hex):  
 Program Password

Byte3-Byte0	Byte7-Byte4
FFFFFFF	FFFFFFF

3. Click **OK** to save values



4. Program  →Config

**Note: Once password protection lock bit = 0, you will not be able to change the password.**

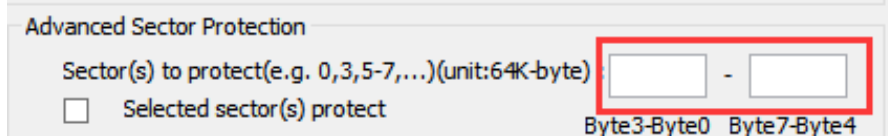
- **Nonvolatile Sector Lock Bits Security**

1. If password protection lock bit = 0, please set up a password for unlock. If not, then skip this setup.

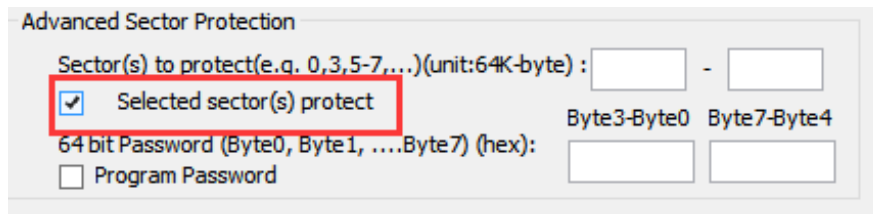
Selected sector(s) protect  
 64 bit Password (Byte0, Byte1, ....Byte7) (hex):  
 Program Password

Byte3-Byte0	Byte7-Byte4
FFFFFFF	FFFFFFF

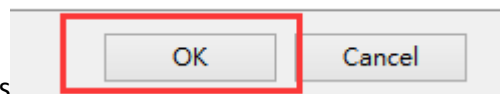
2. Set up the Block that needs protection (The size of one block is 64K Byte)




3. Check **Selected sector(s) protect**



4. Click **OK** to save values

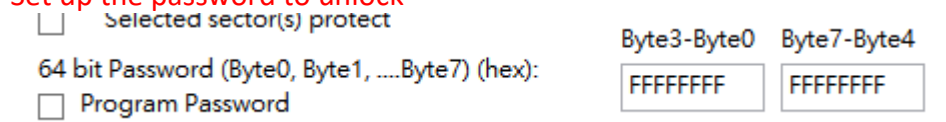


5. Program  →Config

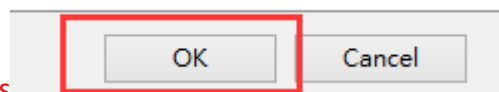
**Note:**


1. Program Flash or Erase Flash will change all Nonvolatile Lock Bit to unprotected
2. If password protection lock bit = 0, please follow the below steps to unlock the Nonvolatile Lock Bit

A. Set up the password to unlock



B. Click **OK** to save values



C. Program  →Config

D. Program Flash or Erase Flash will change all Nonvolatile Lock Bit to unprotected

3. If password protection lock bit = 0, then it cannot unlock Nonvolatile Lock Bit in Production Mode, so if IC needs re-work while Nonvolatile Lock Bit is protected, please follow step 2 to unlock Nonvolatile Lock Bit in the Engineering Mode first.

## V. Revision History

Date	Version	Changes
10/14/2016	1.0	Initial release

## DediProg Technology Co., Ltd

- **Taiwan Headquarter** TEL: 886-2-2790-7932 FAX: 886-2-2790-7916  
4F., No.7, Ln. 143, Xinming Rd., Neihu Dist., Taipei City 114, Taiwan
- **Shanghai Office** TEL: 86-21-5160-0157 FAX: 86-21-6126-3530  
Room 503, Block E, No.1618, Yishan Road, Shanghai, China
- **U.S. Office** TEL: +1 480-775-5139  
2266 South Dobson Road, Suite 200, Mesa, AZ, 85202, USA

Technical Support : [support@dediprogram.com](mailto:support@dediprogram.com)

Sales Support : [sales@dediprogram.com](mailto:sales@dediprogram.com)

[www.dediprogram.com](http://www.dediprogram.com)

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