

REFLASHING DKWF121 WITH PICKIT 3

APPLICATION NOTE

Saturday, 24 November 2012

Version 0.2

Copyright © 2001 - 2012 Bluegiga Technologies

Bluegiga Technologies reserves the right to alter the hardware, software, and/or specifications detailed herein at any time without notice, and does not make any commitment to update the information contained herein. Bluegiga Technologies assumes no responsibility for any errors which may appear in this manual. Bluegiga Technologies' products are not authorized for use as critical components in life support devices or systems.

Bluegiga Access Server, Access Point, AX4, BSM, iWRAP, BGScript and WRAP THOR are trademarks of Bluegiga Technologies.

The *Bluetooth* trademark and logo are registered trademarks and are owned by the Bluetooth SIG, Inc.

ARM and ARM9 are trademarks of ARM Ltd.

Linux is a trademark of Linus Torvalds.


All other trademarks listed herein belong to their respective owners.

TABLE OF CONTENTS

- 1. Preconditions 4
 - 1.1 Required components 4
- 2. Programming the module 5
- 3. Setting the MAC address after recovery 6
- 4. Updating the firmware after recovery 7
- 5. Contact information 8

1 Preconditions

You should always prefer using the Device Firmware Update (DFU) provided with the Wi-Fi GUI software. The DFU does not require extra hardware and preserves the MAC address of your module.

 Re-flashing with PICkit3 will erase your MAC address!

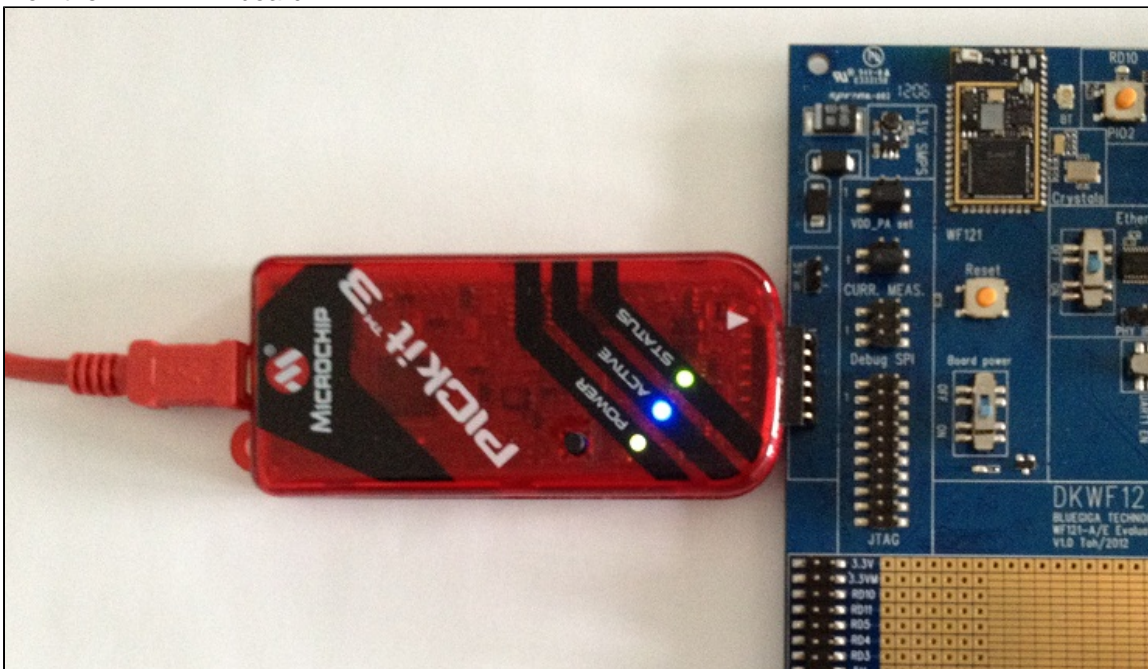
If you have the possibility to retrieve the MAC address of you module prior to re-flashing, please do so.

1.1 Required components

You will need the following:

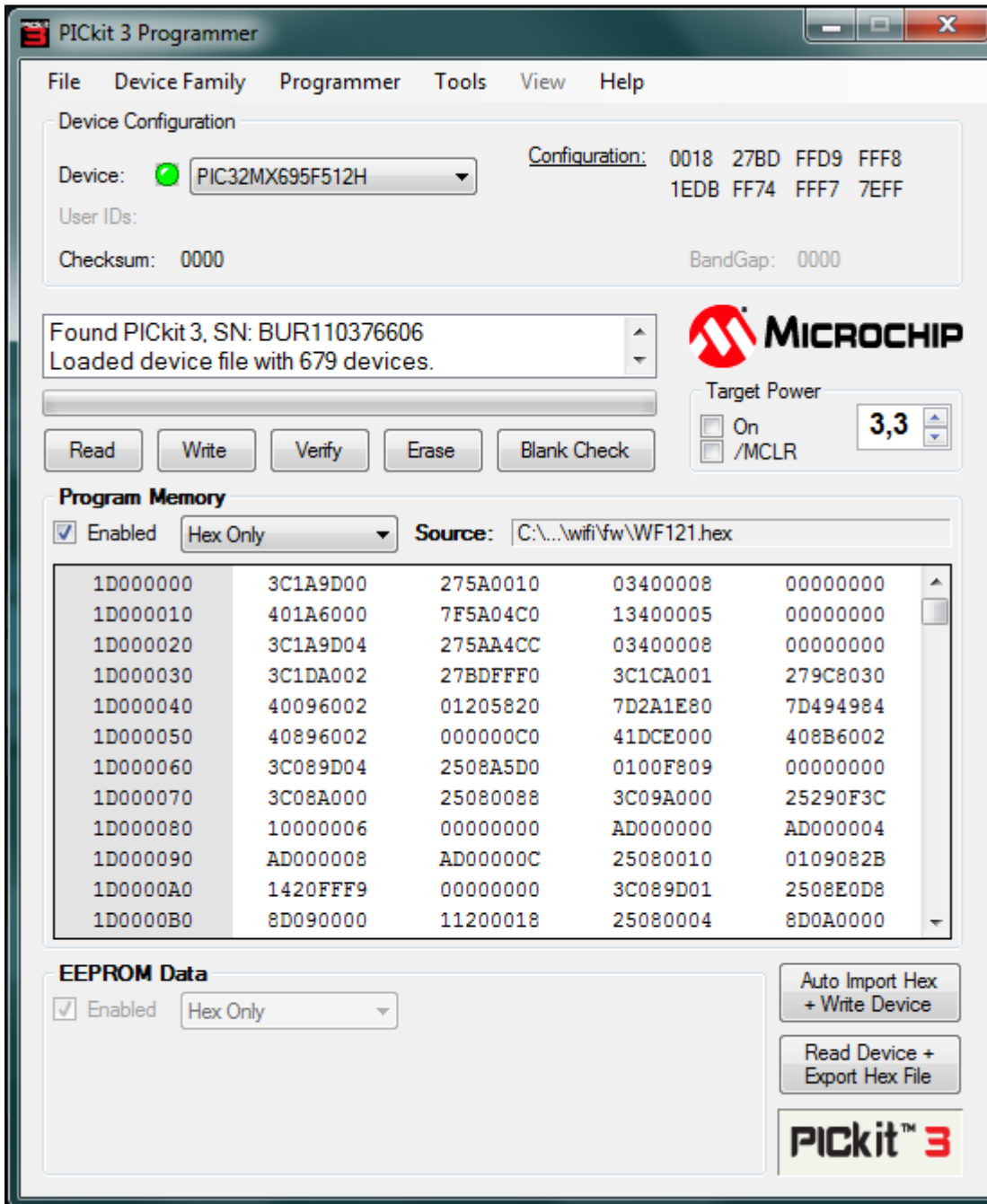
- [Microchip PICkit3 device](#)
- [PICkit 3 Stand Alone Programmer for Windows.](#)
- [WF121 development kit](#)

Connect the PICkit 3 to the ICSP port of your DKWF121 board. Make sure you align the arrow to the pin number 1 on the DKWF121 board.



2 Programming the module

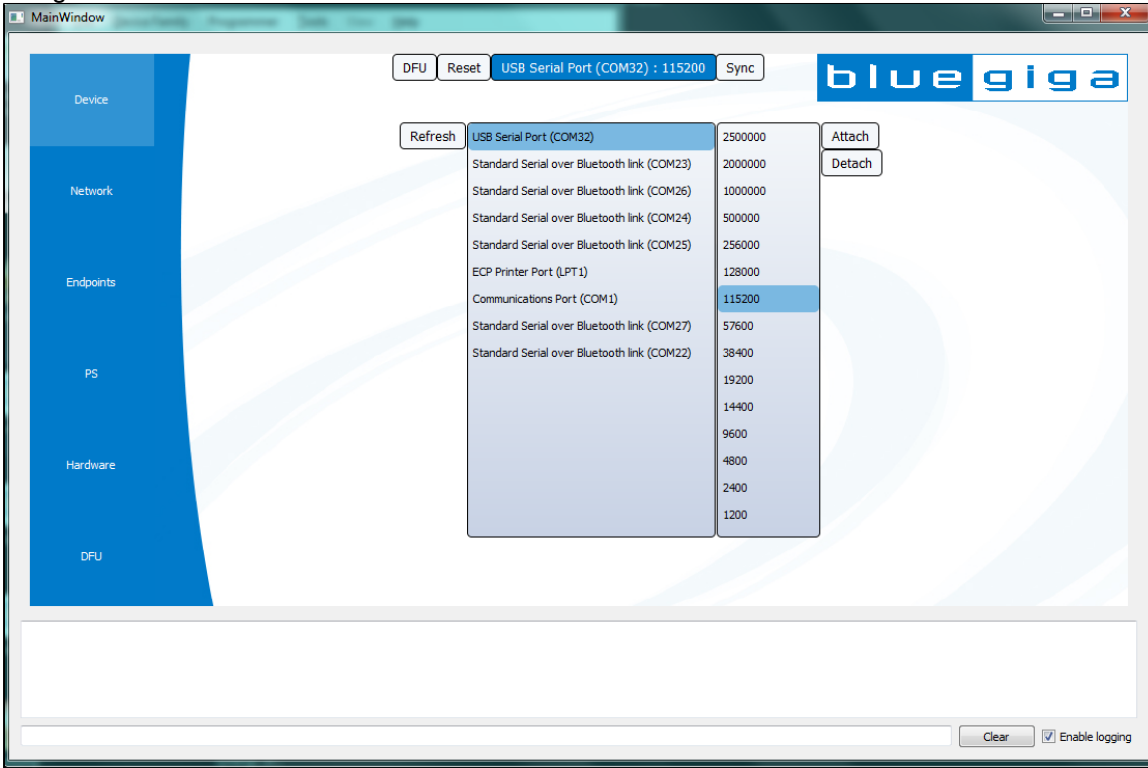
1. Open the PICkit 3 application.
2. Select the Device **PIC32MX695F512H** from the drop down list
3. Go to **File->Import** hex and select the desired .hex file either from the fw/ directory or one of the examples from the examples/ directory. The WF121.hex in the fw directory has the second UART enabled and operating at a 115200 baudrate.
4. Click on the **Write** button



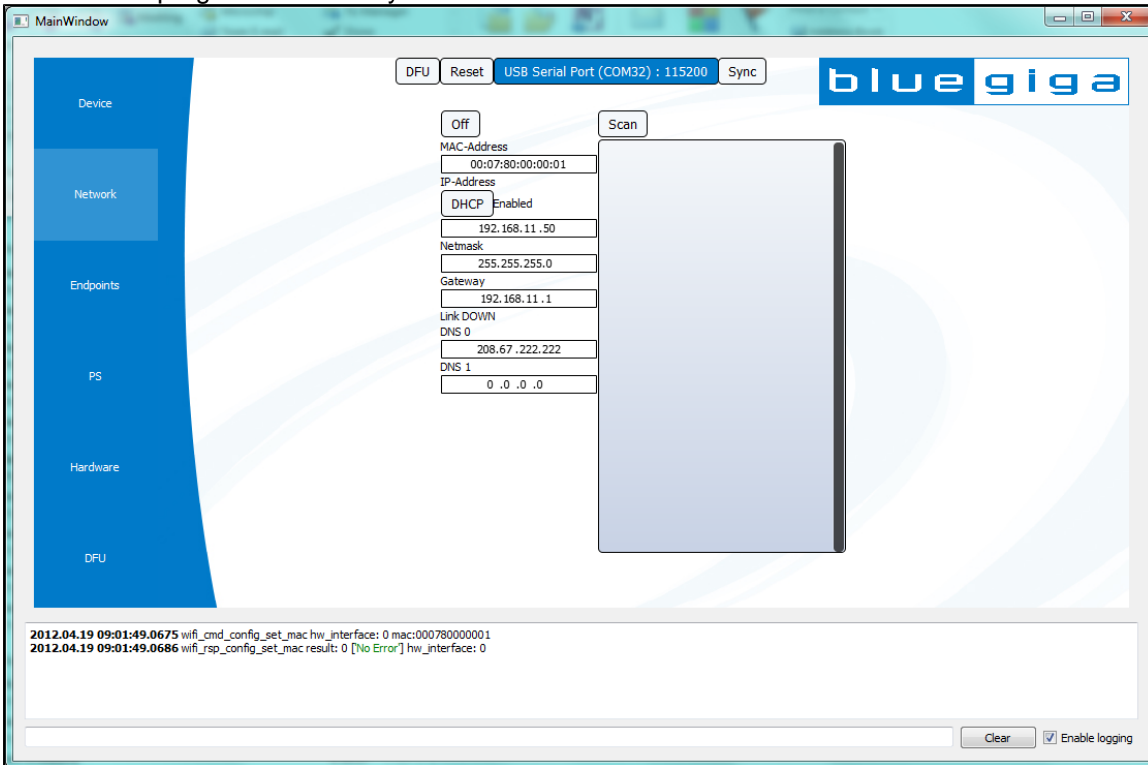
3 Setting the MAC address after recovery

Since the PICkit 3 software will erase the MAC address you will need to re-write the MAC address.

Open the wifigui.exe application and attach to the module. If you reflashed using fw/WF121.hex, then connect using the baudrate 115200.



After this switch to the "Network" view (the menu on the left). There you will be able to enter the new address, and it will be programmed when you hit enter.

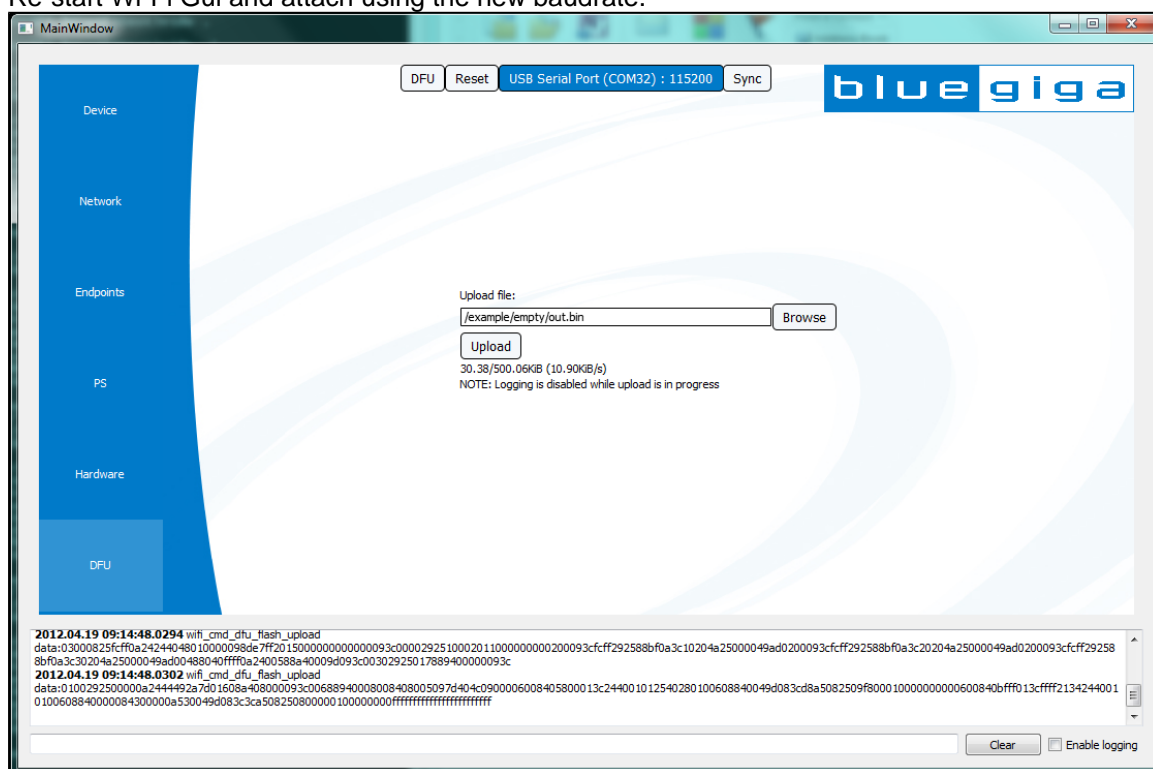


4 Updating the firmware after recovery

Once you have successfully recovered your module, there should not be a reason to use the PICKit3 for updates. Instead the recommended way of doing updates is by using the DFU update tool.

The DFU update process will not erase the MAC address.

1. Go to the DFU view (the menu on the left)
2. Click on the **"DFU" button on the top**, this will reset the module into DFU mode
3. Click browse and select the file to upload. The "empty" example project has good defaults, which you can see in its project file.
4. Press upload
5. Once the update has finished, close Wi-Fi Gui, and reset the module, for example by pressing the reset button on the DKWF121 board
6. Re-start Wi-Fi Gui and attach using the new baudrate.



5 Contact information

Sales: sales@bluegiga.com

Technical support: support@bluegiga.com
<http://techforum.bluegiga.com>

Orders: orders@bluegiga.com

WWW: <http://www.bluegiga.com>
<http://www.bluegiga.hk>

Head Office / Finland: Phone: +358-9-4355 060
Fax: +358-9-4355 0660
Sinikalliontie 5 A
02630 ESPOO
FINLAND

Head address / Finland: P.O. Box 120
02631 ESPOO
FINLAND

Sales Office / USA: Phone: +1 770 291 2181
Fax: +1 770 291 2183
Bluegiga Technologies, Inc.
3235 Satellite Boulevard, Building 400, Suite 300
Duluth, GA, 30096, USA

Sales Office / Hong-Kong: Phone: +852 3182 7321
Fax: +852 3972 5777
Bluegiga Technologies, Inc.
19/F Silver Fortune Plaza, 1 Wellington Street,
Central Hong Kong