

# **USB Firmware Update Utility User Manual**

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## The USB Firmware Update Utility for USB card reader family:

### Concept:

To allow field update, of the USB card reader firmware, the boot loader was introduced with firmware 2.22.

When the USB device is started in boot loader mode, the device will allow update of the firmware and read/write the E<sup>2</sup>prom of the USB card reader.

The E<sup>2</sup>prom holds the configuration data for Field Programmable Formats and the data to enable reading of Mifare<sup>®</sup> sector data.

### Hardware:

USB card reader hardware :

SBR 0814 with firmware 2.22 or later.

SBR 0904 with firmware 2.22 or later.

SBR 0940 with firmware 1.xx or later.

SBR 0951 with firmware 2.31 or later.

### Software:

The USB Firmware Update Utility requires Microsoft .net framework version 3.5 to be installed prior to launching the program.

The .net framework can be downloaded from:

[www.microsoft.com/net](http://www.microsoft.com/net)

### Boot loader Mode:

To bring a USB reader into boot loader / configuration mode one of the following procedures must be used depending on USB Reader hardware type:

SBR 0814 / SBR 0904:

- Disconnect the USB cable.
- Set DIP switch to :  
1   2   3   4   5   6   7   8  
Off Off Off Off Off Off Off On
- Reconnect the USB cable.
- The LED will turn red and then yellow.
- The USB reader is now in boot loader / configuration mode and will be automatically detected by the USB Firmware Update Utility.

To return to normal mode of operation

- Disconnect the USB cable.
- Set DIP switch to the desired format.
- Reconnect the USB cable.

SBR 0940 / SBR 0950:

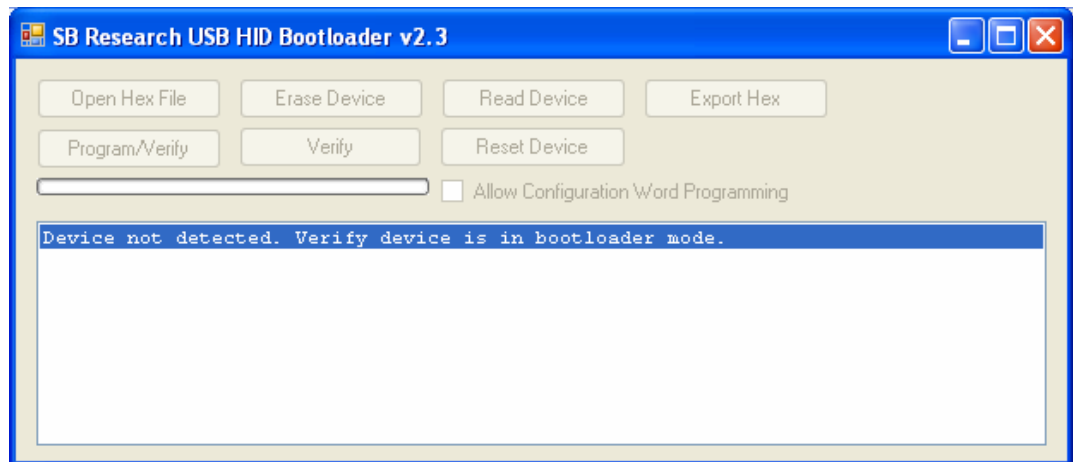
- Disconnect the USB cable.
- Press and HOLD the mode switch.
- Reconnect the USB cable.
- The LED will turn red and then yellow.
- Release the mode switch.
- The USB reader is now in boot loader / configuration mode and will be automatically detected by the USB Firmware Update Utility.

To return to normal mode of operation

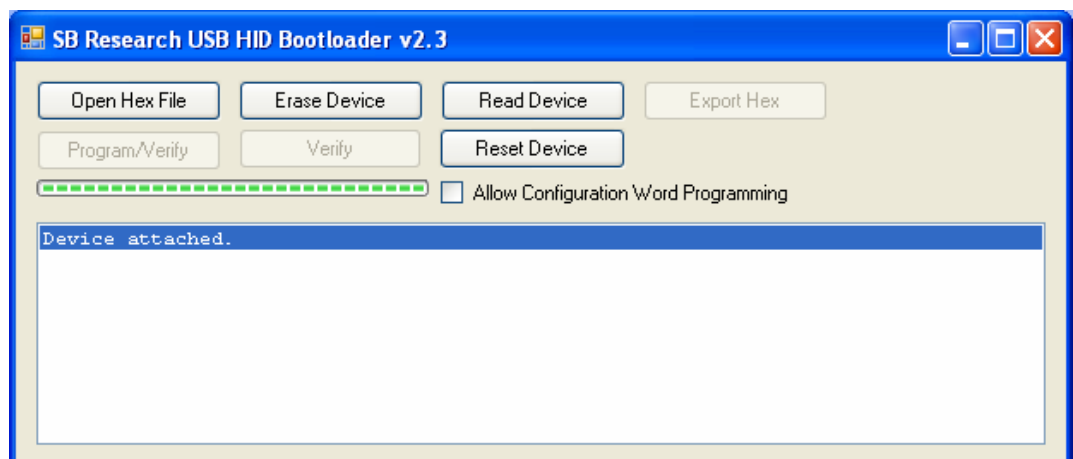
- Disconnect the USB cable.
  - Reconnect the USB cable.

Operation:

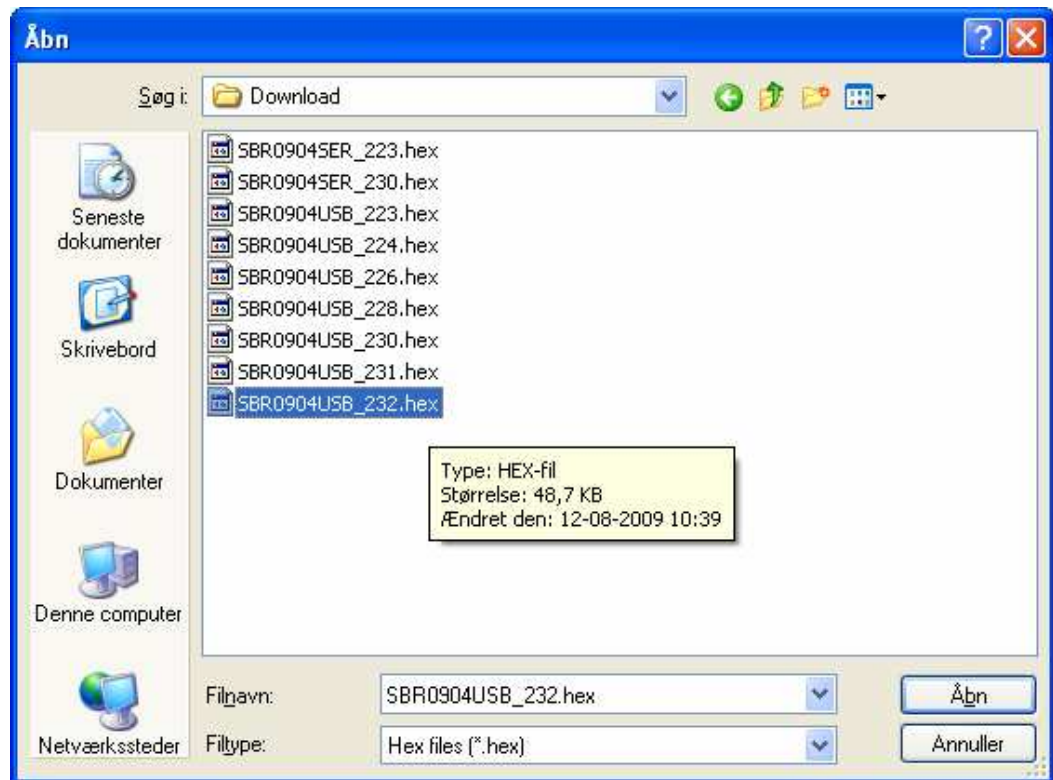
Start the USB Firmware Update Utility and connect the USB device.



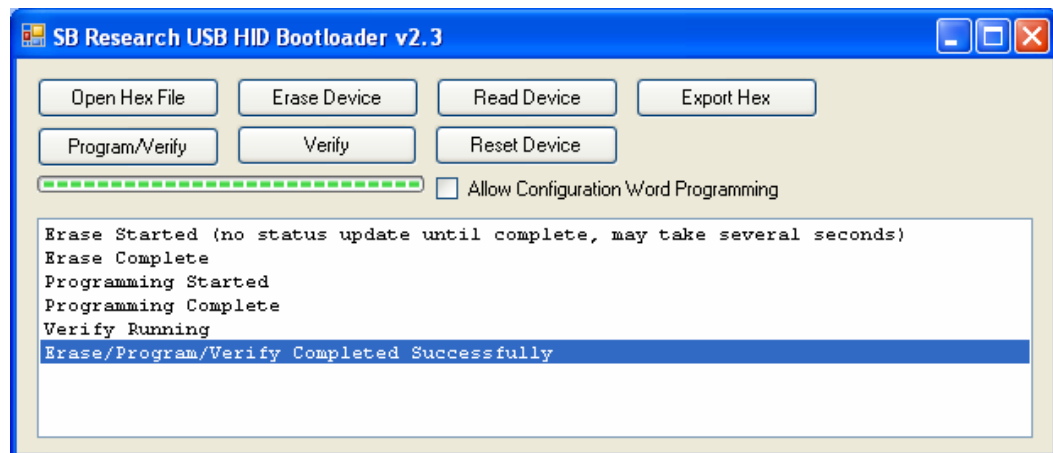
No device detected!



Device detected!



Press 'Open Hex File' to load the new firmware file (.hex).



Press 'Program/Verify' to update firmware.

Please see below table for applicable firmware per device:

Firmware	SBR 0814	SBR 0904	SBR 0940	SBR 0950
SBR0904USB_xxx	Yes	Yes	Yes	No
SBR0904SER_xxx	No	Option*	No	No
SBR0904USBW_xxx	No	Option **	No	No
SBR 0940USB_xxx	No	No	No	Yes
SBR 0940USBW_xxx	No	No	No	Yes

\* Only valid for SBR 0904 TS (Interface with RS232 connection).

\*\* Only valid for SBR 0904 MIS (Mifare sector reader onboard).

#### Revision history:

Date:	Notes:
2009-08-12	First draft .