PROCESS TO DOWNGRADE NAV-PAD

This document describes a process on how Navpad can downgraded:

The process has been automated by writing windows batch script.

**IBM\_DOWNGRADE.BAT**

The batch script functions as follows:

* Extract current configuration data e.g. Version number, serial number etc and store them in file.
* Load latest firmware using NavpadDownloaderUtility.exe. This utility first, captures all configuration data e.g. serial number. Then upgrades the Navpad with latest firmware. Then re-configures the Navpad with the serial number.
* If for any reason the upgrade process fails then the script will try and re-load firmware and reconfigure from back up file.

# Automated Batch file usage

1. Extract the zip file contents to a local file.
2. Run **IBM\_DOWNGRADE.BAT** within its folder to downgrade the attached Nav-Pad Device to 000-IC-169-EZKV06-DWG.txt. Version 6 Firmware.
3. Wait for the script to complete.
4. Press any key to exit.

# Utilities

**NavpadDownloaderUtility**

The NavpadDownloaderUtility is used to retrieve the current configuration of the device and to download the firmware to the device.

1. To retrieve current configuration use following parameters:

NavpadDownloaderUtility -p <PRODUCT NAME> -v

-p <PRODUCT NAME> where PRODUCT NAME is always NAVPAD

-v Retrieves current configuration of unit

If successful the output will be :

C:\>NavpadDownloaderUtility.exe -p NAVPAD -v

Navpad Downloader Console Utility Version V1.0

Vendor Id:2047

Product Id:9bf

Device manager: found device with VID: 2047 PID: 9bf

called constructer 1

vid 8263 pid 2495

vid 2047 pid 9bf

manufacture Storm-Interface.com

Connected

Connected to NAVPAD - VID 2047 PID 9bf

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Device Information before firmware upgrade:

Buzzer 1

Buzzer Period 1

Led Brightness 6

Navpad has 8 keys

Keypad Table 0

Keycode values :

0 72 0 6c 0 73 0 70 0 71 0 6d 0 6e 0 6f 0 6a 0 6b

Version Number V6.0

Serial Number 12345678

1. To download firmware to device:

NavpadDownloaderUtility -p <PRODUCT NAME> -f <filename> -r <NUMBER>

-p <PRODUCT NAME> where PRODUCT NAME is always NAVPAD

-f <Filename> Where filename is firmware file.

-r <NUMBER> Where NUMBER is how many retries to attempt before failure.

**NavpadUtility**

The NavpadUtility is used to set number of configuration parameters and also to compare settings of device before upgrade and after upgrade. It uses the files ibm\_before\_downgrade.txt and ibm\_after\_downgrade.txt.

1. To set main configuration parameters, number of keys and serial number:

NavpadUtility -k <KEYS> -n <SERIAL NO>

-k < KEYS > Sets number of keys for Navpad (it can have 5, 6 or 8)

-n <SERIAL NO> Sets the serial number of Navpad.

1. To compare before and after upgrade files.

NavpadUtility -c <AFTER UPGRADE FILENAME> <BEFORE UPGRADE FILENAME>

Note: Files should be in format as generated by NavpadDownloaderUtility.

1. To update Navpad from a backup file

The Backup file must be in correct format.

NavpadUtility -b <backup filename>

# Script Usage

Instruction on how to use the script:

NavpadDowngrade filename firmwareFile

Where filename: This filename will be used to store all configuration data. The script will create following text (.txt) files.

**Filename\_before\_downgrade.txt**

**Filename\_after\_downgrade.txt**

**Filename\_backup.txt**

**Filename\_before\_upgrade.txt** – This hold configuration data before upgrade.

**Filename\_backup.txt** – This is copy of above and it is used when the upgrade process fails, to recover the serial number and number of keys.

**Filename\_after\_upgrade.txt** – This holds configuration data after upgrade.

Where firmwareFile – This file is the firmware file that will be used to upgrade the Navpad. This can include full path.

When the script is executed each step will be highlighted in Yellow e.g

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== STEP 3 Retrieve configuration data after upgrade ==

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and if Navpad has been upgraded successfully then a message in Green will displayed.

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== PASSED - KEYPAD HAS BEEN SUCCESSFULLY UPGRADED ==

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If upgrade process is unsuccessful then the final message will be displayed in Red:

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== FAILED TO UPGRADE FIRMWARE ==

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Examples:

1. Successfully downgraded Navpad

C:\NavpadDowngrade.bat navpadConf 000-IC-169-EZKV06-DWG.txt

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== STEP 1 Retrieve configuration data before downgrade ==

== KIOSKNAME KI00050 ==

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1 file(s) copied.

Serial Number 170312345678

170312345678

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== STEP 2 Upgrading keypad using 000-IC-169-EZKV06-DWG.txt ==

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Navpad Downloader Console Utility Version V1.0

Vendor Id:2047

Product Id:9bf

Device manager: found device with VID: 2047 PID: 9bf

called constructer 1

vid 8263 pid 2495

vid 2047 pid 9bf

manufacture Storm-Interface.com

Connected

Connected to NAVPAD - VID 2047 PID 9bf

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Device Information before firmware downgrade:

Buzzer 1

Buzzer Period 1

Led Brightness 9

Navpad has 6 keys

Keypad Table 0

Keycode values :

0 72 0 6c 0 73 0 70 0 71 0 6d 0 6e 0 6f 0 6a 0 6b

Version Number V6.0

Serial Number 170312345678

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Please wait, starting BSL

Successfully started BSL

Dispose

Dispose 1

Dispose 2

Dispose 3

Dispose 4

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BSL Scripting application 1.06

The local time is: 12:20 on 06.10.2017

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Password Sent Successfully

Sending RAM BSL

Sending 000-IC-169-EZKV06-DWG.txt

Firmware Sent

Verifying memory

Memory successfully verified

Resetting Device...

Starting application

called constructer 1

called constructer 1

vid 8263 pid 2495

vid 2047 pid 9bf

manufacture Storm-Interface.com

Connected

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Device Information after firmware downgrade:

Buzzer 1

Buzzer Period 1

Led Brightness 9

Navpad has 5 keys

Keypad Table 0

Keycode values :

0 72 0 6c 0 73 0 70 0 71 0 6d 0 6e 0 6f 0 6a 0 6b

Version Number V6.0

Serial Number

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Restore all the values back

Successful in setting number of keys 6

Successful in setting serial number of keys 170312345678

vid 8263 pid 2495

vid 2047 pid 9bf

manufacture Storm-Interface.com

Connected

Successful in SetLedLevel 9

Successful in SetBuzzer 1

Successful in SetBuzzerPeriod 1

Successful in SetKeypadTable 0

Successful in LoadCodeTable

Successful in write to flash

Read device info after restoring the values

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Device Information after values restored:

Buzzer 1

Buzzer Period 1

Led Brightness 9

Navpad has 8 keys

Keypad Table 0

Keycode values :

0 72 0 6c 0 73 0 70 0 71 0 6d 0 6e 0 6f 0 6a 0 6b

Version Number V6.0

Serial Number 170312345678

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Dispose

Dispose 1

Dispose 2

Dispose 3

Dispose 4

Dispose

Dispose 1

Dispose 2

Dispose 3

Dispose 4

======================================================================

== STEP 3 Retrieve configuration data after downgrade ==

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== STEP 4 Compare result of before downgrade and after downgrade ==

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Matched Buzzer 1

Matched Buzzer Period 1

Matched Led Brightness 9

Matched Navpad has 8 keys

Matched Keypad Table 0

Matched 0 72 0 6c 0 73 0 70 0 71 0 6d 0 6e 0 6f 0 6a 0 6b

Keypad has been successfully upgraded to Version Number V6.0

Matched Serial Number 170312345678

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== PASSED - KEYPAD HAS BEEN SUCCESSFULLY UPGRADED ==

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1. Unsuccessful upgrade process

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== FAILED TO UPGRADE FIRMWARE ==

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