



RELEASE NOTES

DK6 Production Flash Programmer

JN-SW-4407

Build v4564

NXP Semiconductors

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DK6 Production Flash Programmer Build 4564

1. Software Components

This release of the DK6 Production Flash Programmer includes the following components and versions:

Component	Version
DK6 Production Flash Programmer package	Build 4564

2. Supported Hardware Products

This software release supports the following hardware products:

Chips	Modules	Evaluation Kits
JN5188HN JN5188THN	JN5189-M10	JN5189-DK006 (OM15076-JN5189)
JN5189HN JN5189THN	JN5189-M16	QN9090-DK006 (OM15076-QN9090)
QN9030HN QN9030THN	QN9090-M10	OM15080-JN5189
QN9090HN QN9090THN	QN9090-M16	OM15080-QN9090

3. Operating System Support

This release of the DK6 Production Flash Programmer supports the following operating system: **Microsoft Windows 7 Enterprise (64bit), Microsoft Windows 10 Enterprise (64bit)**

4. File Integrity

The following table indicates the MD5 checksum of files included in the release.

File	MD5
JN-SW-4407 DK6 Production Flash Programmer v2282.exe	9d8ae9c01cf76573daa0e7fb4d9473d7

5. Installation

The DK6 Production Flash Programmer is installed directly from the supplied installer. Please refer to the *DK6 Production Flash Programmer User Guide* (JN-UG-3127) for the complete process.

6. Release Details

6.1 New Features and Changes

None.

6.2 Bug Fixes

MCB-2795	ISP Read/Write error via FTDI after enable authentication by set auth_level=2
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6.3 Modifications Required

If migrating from the JN518x Production Flash Programmer, writing of IEEE802.15.4 MAC address by using the aliases 154_fmac0, 154_cmac0 and 154_cmac1 now requires the MAC address bytes to be presented with the most significant byte first; previously the bytes had to be reversed.

If performing multiple memory operations in a single command, be aware that multiple consecutive writes to the pFlash or PSECT regions will no longer work although some combinations may have worked previously. It is always recommended that each write to the pFlash or PSECT regions should always be followed by a chip reset, so that the write is committed to memory, before the next write.

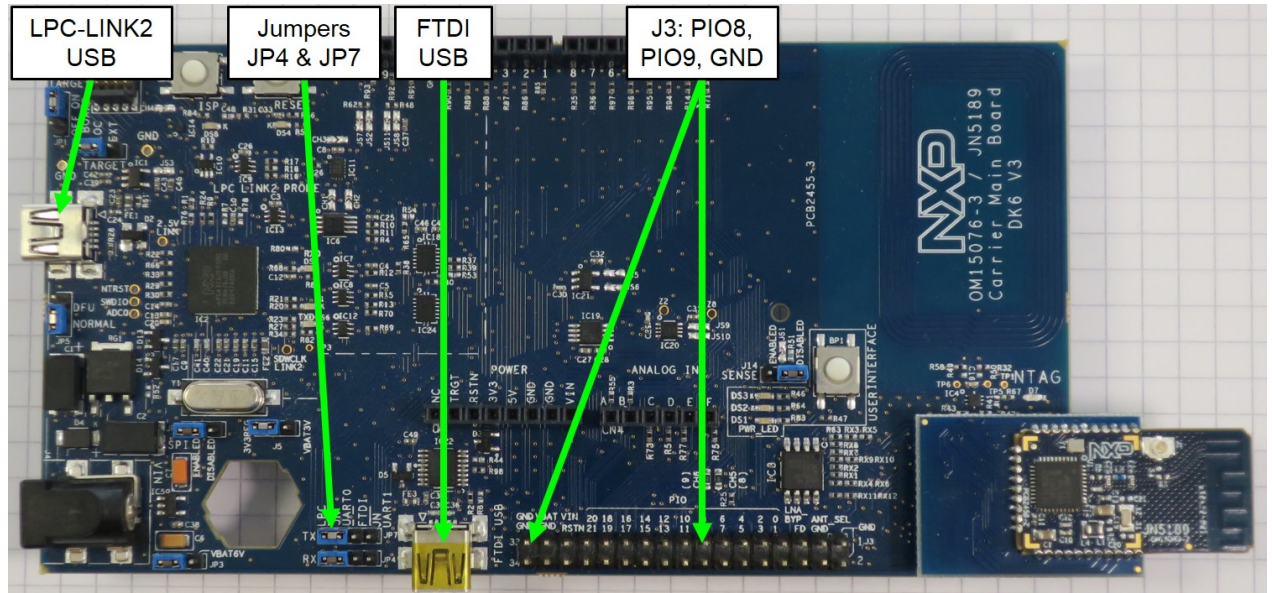
6.4 Known Issues

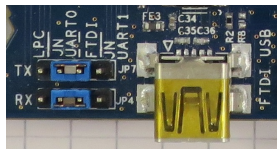
Flashing at 1M baud rate is supported, but not through the LPC-LINK2 USB connection. For example, when running the following command:

```
DK6Programmer.exe -s COMx -P 1000000 -p binary.bin
```

- If the COM port (COMx) used is connected to the LPC-LINK2, the command may fail to flash the binary
- If the COM port (COMx) used is connected to the FTDI USB or to a USB-UART serial converter connected to PIO8 & 9, the command shall always succeed

The picture below shows the various connection options for UART0 on the DK6 carrier board. The table beneath summarizes the baud rates supported on the connectors.



UART connection	1M baud rate support?	Comments
LPC-LINK2 USB connector	No	In this configuration the jumpers JP4 & JP7 (close to the FTDI USB connection) shall be in the leftmost position as shown in the picture above
FTDI USB connector	Yes	In this configuration the jumpers JP4 & JP7 (close to the FTDI USB connection) shall be in the middle , as shown here: 
J3 debug connector (PIO8 & PIO9)	Yes	Use USB to UART serial converter supporting rates up to 1M. For instance, the Prolific USB-to-Serial converter is supported. It is available at: https://www.olimex.com/Products/Components/Cables/USB-Serial-Cable/USB-Serial-Cable-F/

7. Related Documentation

The following user documentation supports this software release:

- DK6-UG-3127: DK6 Production Flash Programmer User Guide

Note that the sequence of parameters passed to the flash programmer is important as they are processed in the order in which they are provided. Therefore, when intending

to perform a full erase and program the device **care should be taken to have the -e option before the -p option.**

For example, the following command will first erase all the flash and then flash the binary (binary.bin) at address 0x00000000:

```
DK6Programmer.exe -s COM56 -e FLASH -p binary.bin
```

As another example, the following command will first flash the binary (binary.bin) at address 0x00000000 and then erase one page of flash (512 bytes) at offset = 64Kb (assumption is made here that size of binary.bin is less than 64K):

```
DK6Programmer.exe -s COM56 -p binary.bin -e FLASH:512@65536
```

RELEASE HISTORY

8. Build 2282

8.1 New Features and Changes

List of tickets for the new features and changes:

MCUZIGBEE-2542	<p>Rename of the alias backdoor_dis to hw_test_mode_dis, to match a change to the terminology in the device documentation</p> <p>Writing of BLE MAC addresses via the aliases ble_fmac0, ble_cmac0 and ble_cmac1: addresses are 6 bytes long but are stored in 8 byte fields. Values now padded with zeroes at the start so programmed as the device reads them (other data fields are padded out at end if the supplied data is shorter than the field size)</p> <p>Warning for old version of the boot loader/ROM patch changed to mention application note</p>
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8.2 Bug Fixes

None.

8.3 Modifications Required

If migrating from the JN518x Production Flash Programmer, writing of IEEE802.15.4 MAC address by using the aliases 154_fmac0, 154_cmac0 and 154_cmac1 now requires the MAC address bytes to be presented with the most significant byte first; previously the bytes had to be reversed.

If performing multiple memory operations in a single command, be aware that multiple consecutive writes to the pFlash or PSECT regions will no longer work although some combinations may have worked previously. It is always recommended that each write to the pFlash or PSECT regions should always be followed by a chip reset, so that the write is committed to memory, before the next write.

8.4 Known Issues

Flashing at 1M baud rate is supported, but not through the LPC-LINK2 USB connection.

9. Build 2273

9.1 New Features and Changes

List of tickets for the new features and changes:

MCUZIGBEE-2518	<p>Renamed from "JN518x" to "DK6"</p> <p>Writing and reading of IEEE802.15.4 MAC addresses via the aliases 154_fmac0, 154_cmac0 and 154_cmac1: the data is written or displayed in the desired order rather than in the native little-endian order (other data still uses native order)</p>
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	Warning shown if device is detected to have an old version of the boot loader/ROM patch installed
--	---

9.2 Bug Fixes

None.

9.3 Modifications Required

If migrating from the JN518x Production Flash Programmer, writing of IEEE802.15.4 MAC address by using the aliases 154_fmac0, 154_cmac0 and 154_cmac1 now requires the MAC address bytes to be presented with the most significant byte first; previously the bytes had to be reversed.

If performing multiple memory operations in a single command, be aware that multiple consecutive writes to the pFlash or PSECT regions will no longer work although some combinations may have worked previously. It is always recommended that each write to the pFlash or PSECT regions should always be followed by a chip reset, so that the write is committed to memory, before the next write.

9.4 Known Issues

Flashing at 1M baud rate is supported, but not through the LPC-LINK2 USB connection.

10. Build 2183

10.1 New Features and Changes

None.

10.2 Bug Fixes

List of tickets for the new features and changes:

MCTOOLS-818	Need to re-calculate GPO checksum during updates to Config page, and fix handling of "0x" prefix in data
MCUZIGBEE-2151	During multiple memory operations, close each memory between each operation (previously only did this if the memory being accessed was different to that used for previous operation)
MCUZIGBEE-2065	Better clarity of status error messages and debug messages
MCUZIGBEE-1900	Fixed offset accesses into Config and flash regions

10.3 Modifications Required

If performing multiple memory operations in a single command, be aware that multiple consecutive writes to the pFlash or PSECT regions will no longer work although some combinations may have worked previously. It is always recommended that each write to the pFlash or PSECT regions should always be followed by a chip reset, so that the write is committed to memory, before the next write.

10.4 Known Issues

Flashing at 1M baud rate is supported, but not through the LPC-LINK2 USB connection.

11. Build 2040

11.1 New Features and Changes

In this release of the JN518x Production Flash Programmer, the following changes have been made:

- Added recognition of both existing JN5189 and reduced-memory JN5188 device variants
- Added aliases for the space reserved for customer data in the protected regions

List of tickets for the new features and changes:

MCUZIGBEE-1939	Add support for JN5188 and JN5189
MCUZIGBEE-1981	Add aliases for customer space

11.2 Bug Fixes

None.

11.3 Modifications Required

When using the JN518x Production Flash Programmer, if -R option was previously used it should be removed. If automatic reset after command completion is required, add -N option to command line.

11.4 Known Issues

Flashing at 1M baud rate is supported, but not through the LPC-LINK2 USB connection.

12. Build 1974

12.1 New Features and Changes

In this release of the JN518x Production Flash Programmer, the following changes have been made:

- By default, a reset of the device is done after command completes. To prevent the reset on command completion, the -N option has been added. This is the opposite operation to v1777, but more closely matches the operation of previous releases and the JN516x and JN517x programmer. The -R option to force the reset to occur has been removed as it is now redundant.

List of tickets for the new features and changes:

MCUZIGBEE-1462	Production Flash Programmer changes to reset
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12.2 Bug Fixes

List of tickets for the bugfixes:

MCUZIGBEE-1900	Fixed bug with accessing aliases that are located above 256 bytes into memory regions PSECT or pFlash
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12.3 Modifications Required

When using the JN518x Production Flash Programmer, if -R option was previously used it should be removed. If automatic reset after command completion is required, add -N option to command line.

12.4 Known Issues

Flashing at 1M baud rate is supported, but not through the LPC-LINK2 USB connection.

13. Build 1777

13.1 New Features and Changes

In this release of the JN518x Production Flash Programmer, the following changes have been made:

- Alias support (device specific list of alias available through the online help)
- Flash programmer compatible with JN5189 ES1
- By default now the reset of the device is not done anymore after command completes. To force the reset on command completion, the -R option has been added.
- Support of -v (verify) and -unlockmode options in the command line.
- Multiple operations on the command line supported: programming + erase, erase + programming.

List of tickets for the new features and changes:

MCUZIGBEE-1481	Add new aliases in ES2 flash programmer
MCUZIGBEE-1462	Production Flash Programmer changes to reset

13.2 Bug Fixes

List of tickets for the bugfixes:

MCUZIGBEE-1490	Flash Programmer CLI verify (-v) option has no effect
MCUZIGBEE-1488	Use memory access parameter to do partial erase/full erase/no erase prior programming data
MCUZIGBEE-1479	Update flash programmer installer

MCUZIGBEE-1465	Flash programmer CLI shall support loading unlock key without crashing
MCUZIGBEE-1451	Ensure new ES2 flash programmer is backward compatible with ES1
MCUZIGBEE-1452	Alias shall be supported with new ES2 flash programmer
MCUZIGBEE-1463	Flash programmer fails to do in a single command binary flashing followed by flash erase

13.3 Modifications Required

None.

13.4 Known Issues

1. Flashing at 1M baud rate is supported but not through the LPC-LINK2 USB plug
2. When using FTDI USB connection, please **make sure to provide the -R option to the command line.**

14. Build 1767

14.1 New Features and Changes

In this release of the JN518x Production Flash Programmer, the following changes have been made:

- Correctly display the MAC address of JN5189 ES2 devices
- Default programming baud rate set at 115200 instead of 1000000

14.2 Bug Fixes

None.

14.3 Modifications Required

None.

14.4 Known Issues

Set MAC Address of JN518x Device (JN-UG-3127, section 3.3)

This feature is supported but not using the alias "154_cmac0"

\$ JN518xProgrammer.exe -s COM24 --write 154_cmac0=00158d0012345678 is not currently supported.

Instead use:

\$ JN518xProgrammer.exe -s COM24 --write pFlash:8@64=00158d0012345678

15. Build 1547

15.1 New Features and Changes

- First release

15.2 Bug Fixes

None.

15.3 Modifications Required

None.

15.4 Known Issues

None.