

# SmartSnippets Toolbox Release Notes for v5.0.20

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## 1.0 Introduction

### 1.1 Scope

This document describes the release of SmartSnippets Toolbox application from Dialog Semiconductor.

### 1.2 Terms and abbreviations

BLE Bluetooth Low Energy

CLI Command-Line Interface

FW Firmware

OTP One-Time Programmable memory

SPotA Software Patch over the Air

SUotA Software Update over the Air

SST Smart Snippets Toolbox

### 1.3 Release Data

PROJECT	SmartSnippets Toolbox
RELEASE DATE	09 Jun 2022
VERSION NR.	5.0.20
RELEASE TYPE <sup>1</sup>	FULL (GA)
RELEASE MASTER	Evaggelinos Mariatos

### 1.4 License

Licenses covering this SmartSnippets Toolbox release are displayed as part of the installation process.

### 1.5 History

VERSION	RELEASE MASTER	DATE
5.0.20	Evaggelinos Mariatos	09 Jun 2022
5.0.18	Evaggelinos Mariatos	04 Feb 2022
5.0.16	Evaggelinos Mariatos	24 Dec 2020
5.0.14	Evaggelinos Mariatos	29 May 2020
5.0.12	Evaggelinos Mariatos	28 Feb 2020
5.0.10	Gerard Wolters	25 Sep 2019
5.0.9	Gerard Wolters	21 Jun 2019
5.0.8	Gerard Wolters	03 Apr 2019
5.0.7	Gerard Wolters	08 Feb 2019
5.0.6	Gerard Wolters	07 Nov 2018
5.0.5	Gerard Wolters	18 May 2018
5.0.3	Gerard Wolters	02 Feb 2018
4.8	Gerard Wolters	23 Jun 2017
4.7	Gerard Wolters	24 Mar 2017
4.6	Gerard Wolters	22 Dec 2016
4.5	Gerard Wolters	18 Nov 2016
4.4	Gerard Wolters	24 Aug 2016
4.3	Gerard Wolters	17 Jun 2016
4.2	Gerard Wolters	28 Apr 2016

<sup>1</sup> Releases can be of the following types: FULL (GA), FULL (LA), RELEASE CANDIDATE, ENGINEERING, PATCH or BINARY

4.1	Gerard Wolters	16 Nov 2015
4.0	Gerard Wolters	30 Oct 2015
3.10	Gerard Wolters	3 Dec 2015
3.9	Gerard Wolters	18 Nov 2015
3.8	Gerard Wolters	27 Jul 2015
1.0.2.0	Gerard Wolters	21 Jul 2015
1.0.1.4	Gerard Wolters	15 Jul 2015
1.0.1.3	Gerard Wolters	26 Jun 2015
1.0.0.2	Gerard Wolters	12 Jun 2015
3.7	Gerard Wolters	20 Feb 2015
3.6	Gerard Wolters	3 Nov 2014
3.5	Gerard Wolters	23 Sep 2014
3.4	Gerard Wolters	19 Aug 2014
3.3	Gerard Wolters	06 Aug 2014
3.2	Gerard Wolters	17 Jul 2014
3.1	Gerard Wolters	17 Jun 2014
3.0	Gerard Wolters	27 Mar 2014
2.2	Gerard Wolters	4 Feb 2014
2.1	Gerard Wolters	06 Jan 2014
2.0	Gerard Wolters	23 Dec 2013
1.1	Gerard Wolters	02 Dec 2013
1.0	Gerard Wolters	11 Nov 2013

## 2.0 Release Description

### 2.1 Major Changes

#	DESCRIPTION
<b>OVERVIEW</b>	
<p>This release:</p> <ul style="list-style-type: none"> <li>- Supports a New PMM2 circuit (phase 1).</li> <li>- Supports standard and FabPort DA1470x chip versions.</li> <li>- Supports various tool fixes and improvements.</li> </ul> <p>It supports the following SDKs:</p> <ul style="list-style-type: none"> <li>- SDK5: version 5.0.4 or newer</li> <li>- SDK6: all versions</li> <li>- SDK1: version 1.0.6 or newer</li> <li>- SDK10: all versions</li> </ul>	
<b>NEW FEATURES</b>	
520_01	Add support for PMM1 and PMM2 autodetection mechanism.
520_02	Add support for DA1470x chips [14701, 14705, 14706, 14708]
520_03	Add support for DA1470x FabPort version (ChipIDs: 2798, 3107)
520_04	Add initialization and control support for PMM2 boards.
520_05	Add support for fundamental GUI PMM2 options, features and warnings.
520_06	Add support in Flash Data tool for DA1470x chips, so that users can change the default flash size.
520_07	Add support for USB plug/unplug over PMM1 and PMM2 detection mechanism.
520_08	Optimize ADC initialization and EEPROM reading for PMM2 boards.
520_09	Add support for PMM2 16bit transmission mode.
520_10	Add support for PMM2 CLI in PowerProfiler tool.
520_11	Add support for PMMx info on csv exported file.
520_12	Add support for Project operations under a fixed default path.
520_13	Add support for optimized PMM2 intercommunication.
520_14	Remove support for "studio_sdk" option.
520_15	Add support for DA1470x chips to be used as a SUOTA agent device.
520_16	Add support for PMM2 offset calibration feature.
<b>FIXES / IMPROVEMENTS</b>	
480/01	Improve how RF Master related tools under Manager group are exposing a special menu.
431/01, 225/01	Add autodetection support for the new DA1470x (D3107) FabPort chip.
519/01	Fix libprogrammer's selected Erase function in FlashCode.
453/01	Improve big file support for Booter over UART for DA1469x.
487/01	Update correct DA1470x product family members.

489/01	Add active Ports (UART, PowerProfiler, JTAG) information over Application's title.
490/01	Fix connectivity issues over the Linux distro.
492/01	Add support for SUOTA tool improvements.
471/01	Remove Oscilloscope mode from PowerProfiler tool.
491/01	Reorganize windows as tabs over areas that occupy the available space in a 80%-20% order.
495/01	Add support for OQSPI and remove support for PSRAM in Data Flash tool.
493/01	Add support for Macronix MX25U6432 flash.
500/01	Fix incorrect detection of DA14586 as a DA14585 device.
504/01	Fix issue with dynamic Flash memory size on SUOTA tool for DA1470x agent device.
499/01	Update Address to an Offset from Base-Address reference, in Flash Data tool.
220510/01	Migrate Dialog support e-mail references to <a href="mailto:DLG-bluetooth.support@dm.renesas.com">DLG-bluetooth.support@dm.renesas.com</a> .
<b>OPEN ISSUES &amp; LIMITATIONS</b>	
407/03	If tool or log panel becomes too short, reposition, resize or close visible windows to increase the area of interest
407/02	No default RF master firmware for DA14682/3 chips, user needs to load binary provided by SDK
407/01	OTA services, Data Rate Monitor and Sleep Mode Advisor not enabled for DA14585/586 chips
408/04	OTA services are not enabled for DA14581 and DA14583 chips
503/01	In QSPI, the entire partition table is deleted when user asks to delete only the last partition
503/05	No default RF master firmware for D1469x chips
505/03	QSPI Layout Controller enforces only a limited number of validations when it comes to writing different sections on the QSPI
509/01	SPI Flash operations are not functional for DA14531 chips when being connected over 2-wire UART
518/01	Sporadic "first-time-read" over Flash-XiP tool fails for DA14531 chips
465/01	Not stable operation under Windows 11 (especially when running in a debugging mode).

## 2.2 Major Release Files

#	File Name	Description
1	SmartSnippets_Toolbox_v5.0.20_windows.msi (standalone)	RELEASE FILE
2	SmartSnippets_Toolbox-linux.x86_64-5.0.20.run (standalone)	RELEASE FILE
3	SmartSnippets_Toolbox_Release_Notes.doc	RELEASE NOTES

## 3.0 Release History

### 3.1 Version 5.0.18

#	DESCRIPTION
<b>OVERVIEW</b>	
<p>This release:</p> <ul style="list-style-type: none"> <li>- Supports a New Graphical User Interface Facelift.</li> <li>- Removes SST Initial Screen (dependency configuration screen).</li> <li>- Supports Tool-Ribbon reorganization in Workspace, Programmer, Manager, Configurator, Monitor &amp; Estimator groups.</li> <li>- Supports new SST Project Menu/Concept re-organization.</li> <li>- Supports new SST Device Menu/Concept re-organization.</li> <li>- Supports ability to Show/Hide Main Ribbon Tools from Advanced Settings.</li> <li>- Supports new OTP Programmer tool.</li> <li>- Supports new RAM Programmer tool.</li> <li>- Supports new Flash(XiP) Programmer tool.</li> <li>- Supports new Flash(Data) Programmer tool.</li> <li>- Supports optimizations for Flash(XiP) `entry-user` view mode.</li> <li>- Supports optimizations for Power Profiler tool.</li> <li>- Removes old-tools support.</li> <li>- Supports Universal chip Auto-Detection feature.</li> <li>- Supports dynamic web-based upgrade via the Dialog Portal site.</li> <li>- Supports new DA1469x-GF chips.</li> <li>- Supports configurable JTAG_TIMEOUT delay.</li> </ul> <p>It supports the following SDKs:</p> <ul style="list-style-type: none"> <li>- SDK5: version 5.0.4 or newer</li> <li>- SDK6: all versions</li> <li>- SDK1: version 1.0.6 or newer</li> <li>- SDK10: all versions</li> </ul>	
<b>NEW FEATURES</b>	
518_01	Introduce SPI read/erase checks on corner cases that exceed available max memory size.
518_02	Introduce new facelifted version of SST Graphical User Interface.
518_03	Remove SST Initial screen (startup dependency satisfaction screen).
518_04	Introduce target selection panel when no chip/family is found selected during SST startup.
518_05	Add support for independent file system location that SST-project can be located/saved.
518_06	Add support for device details over SST's application window title.
518_07	Add support for Home-Page resume ability after SST gets restarted (requires a previous existing project).
518_08	Introduce Project menu re-organization feature.
518_09	Introduce Device menu re-organization feature.
518_10	Introduce Recent-projects feature.

518_11	Introduce Project Info menu option.
518_12	Add detection of second SNC-M0 JTAG interface.
518_13	Introduce Communication-Interfaces-Update menu option.
518_14	Add support for multiple SST running instances.
518_15	Introduce Device Info menu option.
518_16	Introduce new FLASH(XiP) tool.
518_17	Add support for prepare image feature over FLASH(XiP) tool.
518_18	Introduce Export to File option in FLASH(XiP) tool.
518_19	Introduce Import from File option in FLASH(XiP) tool.
518_20	Add support for CS filtering capabilities for FLASH(XiP) tool.
518_21	Add support for Add-New-Section option in FLASH(XiP) tool.
518_22	Add highlight support for contents-to-burn / editable values, in FLASH(XiP) tool.
518_23	Introduce Advanced Settings and ability to "show/hide" special tools through ribbon menu.
518_24	Introduce universal chip Auto-Detection mechanism by consolidating information through UART and JTAG interfaces, on the connected devices.
518_25	Introduce Current Session Device Selection Dialog, using the list of found devices during Auto-Detection process.
518_26	Add Smart Filtering support for non-eligible UART Ports.
518_27	Add Auto-Detection support for Linux JTAG interface.
518_28	Introduce new FLASH(Data) tool.
518_29	Introduce Import from File option in FLASH(Data) tool.
518_30	Handle SNC-M0 UART interface under Normal and Auto-Detection modes.
518_31	Add support for dynamic FLASH/PSRAM memory configurations for FLASH(Data) tool.
518_32	Add recalculation support for Start/End Addresses when selected memory changes in FLASH(Data) tool.
518_33	Introduce new RAM tool.
518_34	Introduce a Remote Site Web-Based Upgrade mechanism.
518_35	Add support for `Aborting` procedure on Web-Based Upgrade mechanism.
518_36	Add support for Booter options in new RAM tool.
518_37	Introduce Import from File option in RAM tool.
518_38	Introduce new OTP tool.
518_39	Add support for checking new App Upgrades, on Startup and upon User Request.
518_40	Add support for dynamic RAM Size Configuration in RAM tool.
518_41	Add support for `Ignore` and `Ignore forever` options under Web-Based Upgrade Dialog.
518_42	Introduce Import from File option in OTP tool.
518_43	Introduce Export to File option in OTP tool.
518_44	Add support for `Configuration Script` handling in OTP tool.



518_45	Add support for Downloading Cancelation on update Support Pack mechanism.
518_46	Introduce `What is changed` feature for new Support Pack updates received from a Web-Based Update site.
518_47	Add Highlight support for User Edited fields in OTP tool.
518_48	Add NVDS support for DA1458x devices in OTP tool.
518_49	Add support for dynamic list of FLASH types received directly from Support Pack.
518_50	Add support for dynamic FLASH type selection in Flash(XiP) tool.
518_51	Add support for SPI Memory detection using JEDEC ID.
518_52	Add support for `Importing/Exporting` the "whole file image" in Flash(XiP) tool.
518_53	Add support for `Remove Prepare Image` in Flash(XiP) tool.
518_54	Add support for exporting `Contents Read` to a file, in Flash(Data) tool.
518_55	Add support for `bin` and `img` files in Flash(XiP) tool.
518_56	Remove support for older tools (wherever there is a newer candidate).
<b>FIXES / IMPROVEMENTS</b>	
408/01	Improve how installers select the default OS Drive to get installed.
436/01	Improve Info Messages / User Guidance after burning an SPI bootable Image (applies to 531/585/586 chips).
381/01	Introduce optimization on default read SPI data after a full-erase cycle.
419/01	Improve the `Update Support Pack` mechanism based on selected device or User Request.
419/02	Adapt "Custom Support Pack" logic when SST gets connected with an SDK.
419/03	Adapt remote "Support Pack" support for new SST (that is initial screen decoupled).
461/01	Apply 1MHz speed over SWD interface for DA1469x device.
433/01	Apply General SST improvements.
456/01	Add support for parametric JTAG Timeout delay through a configuration file.
323/01	Update Support Pack configuration files to expect only 64bit of resources.
465/01	Set default DA1469x Flash Size to 0x400000.
<b>OPEN ISSUES &amp; LIMITATIONS</b>	
407/03	If tool or log panel becomes too short, reposition, resize or close visible windows to increase the area of interest
407/02	No default RF master firmware for DA14682/3 chips, user needs to load binary provided by SDK
407/01	OTA services, Data Rate Monitor and Sleep Mode Advisor not enabled for DA14585/586 chips
408/04	OTA services are not enabled for DA14581 and DA14583 chips
503/01	In QSPI, the entire partition table is deleted when user asks to delete only the last partition
503/05	No default RF master firmware for D1469x chips
505/03	QSPI Layout Controller enforces only a limited number of validations when it comes to writing different sections on the QSPI
509/01	SPI Flash operations are not functional for DA14531 chips when being connected over 2-wire UART
518/01	Sporadic "first-time-read" over Flash-XiP tool fails for DA14531 chips
465/01	Not stable operation under Windows 11 (especially when running in a debugging mode).

### 3.2 Version 5.0.16

#	DESCRIPTION
<b>OVERVIEW</b>	
<p>This release:</p> <ul style="list-style-type: none"> <li>- Supports dynamic Support Pack updates via the Dialog Portal site</li> </ul> <p>It supports the following SDKs:</p> <ul style="list-style-type: none"> <li>- SDK5: version 5.0.4 or newer</li> <li>- SDK6: all versions</li> <li>- SDK1: version 1.0.6 or newer</li> <li>- SDK10: all versions</li> </ul>	
<b>NEW FEATURES</b>	
516_01	Adds support in Power Profiler for multiple drawing window sizes (10, 20, 30, 40, 50, 60 sec)
516_02	Adds support for dynamic Support Pack updates via the Dialog Portal site
<b>FIXES / IMPROVEMENTS</b>	
3082/01	For DA14583 devices, fixes issue with exporting NVDS table contents in csv format
3091/01	Improves file parsing stability related to path values enabled with space characters
3094/01	For DA1453x devices, adds support for RF Master: set power input option
3122/01	For DA1453x devices, fixes 0xFF padding issue found in OTP DMA field
3139/01	For DA1453x devices, fixes issue with data byte order in CLI OTP Header tool, when trying to burn the "application flag 1"
3425/01	For DA14695 and DA14697 devices, fixes issue with non-recognized CS registers when adding OTP fields
3599/01	For DA14585 and DA14531 devices, fixes issue with burning in a bitwise-AND form when writing to SPI flash memories
<b>OPEN ISSUES &amp; LIMITATIONS</b>	
407/03	If tool or log panel becomes too short, reposition, resize or close visible windows to increase the area of interest
407/02	No default RF master firmware for DA14682/3 chips, user needs to load binary provided by SDK
407/01	OTA services, Data Rate Monitor and Sleep Mode Advisor not enabled for DA14585/586 chips
408/04	OTA services are not enabled for DA14581 and DA14583 chips
503/01	In QSPI, the entire partition table is deleted when user asks to delete only the last partition
503/05	No default RF master firmware for D1469x chips
505/03	QSPI Layout Controller enforces only a limited number of validations when it comes to writing different sections on the QSPI
509/01	SPI Flash operations are not functional for DA14531 chips when being connected over 2-wire UART

### 3.3 Version 5.0.14

#	DESCRIPTION
<b>OVERVIEW</b>	
<p>This release:</p> <ul style="list-style-type: none"> <li>- Enhances Battery Lifetime Estimator to support DA14531 chips</li> <li>- Supports new DA14530 chip</li> <li>- Adds new SUOTA tool for DA1469x chips</li> <li>- Enhances RF Master tool for DA1469x chips</li> <li>- Upgrades Toolbox environment to latest stable versions of tools and libraries</li> <li>- Officially supports 64-bit windows (no longer supports 32-bit windows)</li> </ul> <p>It supports the following SDKs:</p> <ul style="list-style-type: none"> <li>- SDK5: version 5.0.4 or newer</li> <li>- SDK6: all versions</li> <li>- SDK1: version 1.0.6 or newer</li> <li>- SDK10: all versions</li> </ul>	
<b>NEW FEATURES</b>	
514_01	Enhances Battery Lifetime Estimator to support DA14531 chips
514_02	Supports new DA14530 chip
514_03	Adds new SUOTA tool for DA1469x chips
514_04	Adds RF Master commands for DA1469x chips
514_05	Upgrades Java to OpenJDK version 13.0.1
514_06	Supports motherboard detection utility for DA14531 Development Kits
<b>FIXES / IMPROVEMENTS</b>	
2604/01	Improves stability and consistency of all memory-related tools for all chip families
2722/01	Improves stability of QSPI memory reads for DA1469x chips
2497/01	Improves stability of Proprietary Header Programmer
2637/01	Improves the stability of firmware downloading on DA14580/1/3 and DA14585/586 chips
2598/01	Improves padding-related logic when reading/writing hex files
2646/01	Battery Lifetime Estimator displays warning when advertising interval is not among iPhone recommended values
2689/01	Fixes 'File not found' error occurring in Linux when browsing for files with uppercase characters
2500/01	Fixes issue with applying some Power Profiler configurations even when user closes the configuration dialog by pressing the 'x' button
2616/01	Increases the font size of the Terminal Scripting log window
2607/01	When trying to filter log messages for a specific tool, the tool list now displays only the available tools for the selected chip family
2758/01	Fixes an issue with FW hex2bin conversion affecting DA1458x Data Rate Management tool
2816/01	For DA1453x chips, removes unsupported STOP command from Manage Configuration Script Dialog
2816/02	For DA1468x, DA1469x and DA14585/6 families, RF Master supports packet lengths up to 255
2865/01	Improves messages displayed when burning with OTP
2883/01	Fixes issue with "Clear Selection" button on Support pack window applying even if user cancels
2857/01	For DA1453x chips, fixes an issue causing invalid warnings being displayed when trying to write the OTP using the CLI commands
2994/01	For DA1469x chips, validates F/W image starting address before writing to QSPI
2994/02	For DA1453x, Power Profiler allows values between 1.1V and 3.3V for voltage configuration

3008/01	For DA1468x and DA1469x chips, QSPI Programmer downloads image binaries faster
3017/02	Improves performance when writing to OTP via the command line interface
3017/03	Improves logic and messages related to QSPI Product Header CRC validations
3020/01	Power Profiles proposes better default values for multiplication factor depending on chip family
3022/01	Improves stability of command-line functionality for DA1453x chips
3024/01	Improves the workflow of multi-file 'Make Image Wizard' tool
3042/01	Improves labels related to UART and SPI signal names in Board Setup tool
3055/01	On DA14531 chip, sends ACTION_RESET_MODE command after burning a bootable image on SPI / EEPROM
3065/01	Improves functionality and documentation related to DA1469x and DA13531 CLI commands
3066/01	Updates Public Bluetooth Addresses from 80:EA:CA:XX:XX:XX to 48:23:35:XX:XX:XX
<b>OPEN ISSUES &amp; LIMITATIONS</b>	
407/03	If tool or log panel becomes too short, reposition, resize or close visible windows to increase the area of interest
407/02	No default RF master firmware for DA14682/3 chips, user needs to load binary provided by SDK
407/01	OTA services, Data Rate Monitor and Sleep Mode Advisor not enabled for DA14585/586 chips
408/04	OTA services are not enabled for DA14581 and DA14583 chips
503/01	In QSPI, the entire partition table is deleted when user asks to delete only the last partition
503/05	No default RF master firmware for D1469x chips
505/03	QSPI Layout Controller enforces only a limited number of validations when it comes to writing different sections on the QSPI
509/01	SPI Flash operations are not functional for DA14531 chips when being connected over 2-wire UART

### 3.4 Version 5.0.12

#	DESCRIPTION
<b>OVERVIEW</b>	
<p>This release:</p> <ul style="list-style-type: none"> <li>- Supports DA14531 USB Development Kit</li> <li>- Includes multiple improvements to the 'Make Image Wizard' tool</li> </ul> <p>It supports the following SDKs:</p> <ul style="list-style-type: none"> <li>- SDK5: version 5.0.4 or newer</li> <li>- SDK6: all versions</li> <li>- SDK1: version 1.0.6 or newer</li> <li>- SDK10: all versions</li> </ul>	
<b>NEW FEATURES</b>	
512_01	Supports DA14531 USB Development Kit
<b>FIXES / IMPROVEMENTS</b>	
2699/01	Changes the buffer size used for communication with DA14531 chips
2699/02	Includes fixes to allow DA14531 USB Development Kit work with RF Master tool
2705/01	Properly initializes connection to DA14531 chips over 1-wire UART
2710/01	Fixes failure to correctly identify input file type when filename includes multiple dots
2710/02	Fixes memory alignment issues when writing a multi-image via the 'Make Image Wizard'
2710/03	In 'Make Image Wizard', .hex and .ihex input files are now converted to .bin files, so that they can properly be used from mkimage.exe
2710/04	For both single and multi images, a save option was added to the last wizard page, allowing user to save generated files for later use
2710/05	In 'Make Image Wizard', default secondary bootloader.bin for DA14531 has been updated
2710/06	At "Memory Offsets" page of the 'Make Image Wizard', default values for locations of 1 <sup>st</sup> and 2 <sup>nd</sup> images have been changed.
2710/07	In 'Make Image Wizard', default option for "Add a secondary bootloader to the image" option has changed from unchecked to checked
2710/08	'Make Image Wizard' now restricts the types of the input files
2702/01	Includes padding improvements when working with hex files
<b>OPEN ISSUES &amp; LIMITATIONS</b>	
407/03	If tool or log panel becomes too short, reposition, resize or close visible windows to increase the area of interest
407/02	No default RF master firmware for DA14682/3 chips, user needs to load binary provided by SDK
407/01	OTA services, Data Rate Monitor and Sleep Mode Advisor not enabled for DA14585/586 chips
408/04	OTA services are not enabled for DA14581 and DA14583 chips
503/01	In QSPI, the entire partition table is deleted when user asks to delete only the last partition
503/05	No default RF master firmware for D1469x chips
505/03	QSPI Layout Controller enforces only a limited number of validations when it comes to writing different sections on the QSPI
509/01	SPI Flash operations are not functional for DA14531 chips when being connected over 2-wire UART

### 3.5 Version 5.0.10

#	DESCRIPTION
<b>OVERVIEW</b>	
This release: <ul style="list-style-type: none"> <li>- Adds new Make Image tool for facilitating making images for DA1458x/DA1453x chips</li> <li>- Provides significant enhancements on the Terminal Scripting tool</li> <li>- Supports new motherboard for DA1458x / DA1453x chips and new SDK6 and SDK10 versions</li> </ul> It supports the following SDKs: <ul style="list-style-type: none"> <li>- SDK5: version 5.0.4 or newer</li> <li>- SDK6: all versions</li> <li>- SDK1: version 1.0.6 or newer</li> <li>- SDK10: all versions</li> </ul>	
<b>NEW FEATURES</b>	
510_01	Adds new Make Image tool for facilitating making images for DA1458x/DA1453x chips
510_02	Terminal Scripting supports additional commands: echo, delay, branch, check, return
510_03	Terminal Scripting includes a formatter that support text replacement and coloring
510_04	Supports new motherboard for DA1458x / DA1453x chips and new SDK6 and SDK10 versions
<b>FIXES / IMPROVEMENTS</b>	
2373/01	Fixes an issue preventing booting from QSPI on DA1469x chips
2402/01	Fixes an issue preventing booting from QSPI on DA1469x chips after upgrading FW
2389/01	Makes modifications on RF Master tool for DA1469x chips
2389/01	Adjusts to new API for making DA1469x QSPI images
2401/01	Improves the flow when user decides to switch to a different Support Pack
2406/01	Fixes some issues affecting downloading FW files over JTAG for DA1458x chips
2405/01	Updates the bundled SEGGER JLink version from v6.14 to v6.40
2407/01	Improves text displayed when Toolbox needs to failover to bundled Support Pack
2408/01	Reads from SPI Flash and EEPROM in chunks of 0x4000 bytes for all DA145xx chips
2408/02	Improves chip detection for DA14531 chips
2415/01	Fixes functionality of 'x' button for the dialog that shows up when memory is already written
2410/01	Various small improvements to the 'Proprietary Header Programmer' tool
508/02	Fully supports DA1468x USB Development Kits
<b>OPEN ISSUES &amp; LIMITATIONS</b>	
407/03	If tool or log panel becomes too short, reposition, resize or close visible windows to increase the area of interest
407/02	No default RF master firmware for DA14682/3 chips, user needs to load binary provided by SDK
407/01	OTA services, Data Rate Monitor and Sleep Mode Advisor not enabled for DA14585/586 chips
408/04	OTA services are not enabled for DA14581 and DA14583 chips
503/01	In QSPI, the entire partition table is deleted when user asks to delete only the last partition
503/05	No default RF master firmware for D1469x chips
505/03	QSPI Layout Controller enforces only a limited number of validations when it comes to writing different sections on the QSPI
509/01	SPI Flash operations are not functional for DA14531 chips when being connected over 2-wire UART

### 3.6 Version 5.0.9

#	DESCRIPTION
<b>OVERVIEW</b>	
This release: <ul style="list-style-type: none"> <li>- Supports recent DA14531 improvements</li> </ul> It supports the following SDKs: <ul style="list-style-type: none"> <li>- SDK5: version 5.0.4 or newer</li> <li>- SDK6: all versions</li> <li>- SDK1: version 1.0.6 or newer</li> <li>- SDK10: all versions</li> </ul>	
<b>NEW FEATURES</b>	
509_01	Supports DA14531 over single-wire UART
509_02	Enables RF Master for DA14531
<b>FIXES / IMPROVEMENTS</b>	
2338/01	Improves the workflow related to downloading firmware over JTAG for tools that require UART communication
2329/01	Improves configuration of maximum DA1469x QSPI memory size
2331/01	Fixes some UI issues happening on Linux environments
2342/01	Terminal Scripting tool displays more clear messages
<b>OPEN ISSUES &amp; LIMITATIONS</b>	
407/03	If tool or log panel becomes too short, reposition, resize or close visible windows to increase the area of interest
407/02	No default RF master firmware for DA14682/3 chips, user needs to load binary provided by SDK
407/01	OTA services, Data Rate Monitor and Sleep Mode Advisor not enabled for DA14585/586 chips
408/04	OTA services are not enabled for DA14581 and DA14583 chips
503/01	In QSPI, the entire partition table is deleted when user asks to delete only the last partition
503/05	No default RF master firmware for D1469x chips
505/03	QSPI Layout Controller enforces only a limited number of validations when it comes to writing different sections on the QSPI
506/01	SPI Flash Options are not supported for DA14585/586 chips
508/02	DA1469x USB Development kits for Linux are not fully supported
509/01	SPI Flash operations are not functional for DA14531 chips when being connected over 2-wire UART

### 3.7 Version 5.0.8

#	DESCRIPTION
<b>OVERVIEW</b>	
This release:	
- Adds the 'Terminal Scripting' tool	
<b>NEW FEATURES</b>	
508_01	Adds the 'Terminal Scripting' tool
508_02	Supports DA14531 QFN package
508_03	Supports DA1469x USB Development kits for Windows
<b>FIXES / IMPROVEMENTS</b>	
2272/01	Uses the term 'settings' instead of 'project' to avoid confusion with Studio projects
2273/01	Supports QSPI NVPARAMS fields of different sizes
2280/01	For DA14531 chips, removes warning when reading OTP header application flags
2287/01	In Data Rate Monitor tool, clears the scan list when a new scan is triggered
2289/01	For DA14581/583 chips, removes the toolbar buttons for OTA services
2290/01	For DA14583 chips, enables Sleep Mode Advisor button
2309/01	For QSPI Layout Controller for DA1469x chips, fixes an issue resulting in FW image counter increase by one on read
2313/01	Fixes an issue with qspi_write_partition_uart/qspi_write_partition_jtag command-line commands for DA1468x and DA1469x families
<b>OPEN ISSUES &amp; LIMITATIONS</b>	
407/03	If tool or log panel becomes too short, reposition, resize or close visible windows to increase the area of interest
407/02	No default RF master firmware for DA14682/3 chips, user needs to load binary provided by SDK
407/01	OTA services, Data Rate Monitor and Sleep Mode Advisor not enabled for DA14585/586 chips
408/04	OTA services are not enabled for DA14581 and DA14583 chips
503/01	In QSPI, the entire partition table is deleted when user asks to delete only the last partition
503/05	No default RF master firmware for D1469x chips
505/03	QSPI Layout Controller enforces only a limited number of validations when it comes to writing different sections on the QSPI
506/01	SPI Flash Options are not supported for DA14585/586 chips
508/01	DA14531 single-wire setup is not supported
508/02	DA1469x USB Development kits for Linux are not fully supported



### 3.8 Version 5.0.7

#	DESCRIPTION
<b>OVERVIEW</b>	
This release:	
<ul style="list-style-type: none"> <li>- Supports chip family DA1453x</li> <li>- Improves the logic of identifying port pairs</li> </ul>	
<b>NEW FEATURES</b>	
507_01	Supports chip family DA1453x
<b>FIXES / IMPROVEMENTS</b>	
507/01	Improves the logic of identifying port pairs
507/02	Improves control on baud rate and port number through the configuration file
2249/01	Fixes issue preventing users with specific locales from opening DA1458x projects
2255/02	Fixes issue with some already-written DA1469x Configuration Script fields not being highlighted in yellow
2246/03	Fixes issue after executing the 1st command of Toolbox 'bundle' CLI commands
2249/04	Improves opening time of Toolbox projects
<b>OPEN ISSUES &amp; LIMITATIONS</b>	
407/03	If tool or log panel becomes too short, reposition, resize or close visible windows to increase the area of interest
407/02	No default RF master firmware for DA14682/3 chips, user needs to load binary provided by SDK
407/01	OTA services, Data Rate Monitor and Sleep Mode Advisor not enabled for DA14585/586 chips
408/04	OTA services are not enabled for DA14581 and DA14583 chips
503/01	In QSPI, the entire partition table is deleted when user asks to delete only the last partition
503/05	No default RF master firmware for D1469x chips
505/03	QSPI Layout Controller enforces only a limited number of validations when it comes to writing different sections on the QSPI
506/01	SPI Flash Options are not supported for DA14585/586 chips

### 3.9 Version 5.0.6

#	DESCRIPTION
<b>OVERVIEW</b>	
This release:	
<ul style="list-style-type: none"> <li>- Adds Battery Lifetime Estimator tool for DA1458x and DA14585/586 families</li> <li>- Implements several improvements for supporting DA1469x SDK 10</li> </ul>	
<b>NEW FEATURES</b>	
506_01	Adds Battery Lifetime Estimator tool for DA1458x and DA14585/586 families
506_02	Decodes the TCS section of the Configuration Script section
506_03	Works with new booter of DA1469x chips
506_04	Is compliant with SDKs supporting more than one chip families
506_05	CLI interface now supports passing serial # as an option for OTA services
506_06	Power Profiler supports auto-stop functionality upon identifying a software cursor
506_07	Enables installing multiple Toolbox standalone versions on the same machine
<b>FIXES / IMPROVEMENTS</b>	
505/01	Allows writing to the OTP memory and appending Configuration Script commands
2124/01	Keeps documentation in one place in html format
2148/02	Fixes an issue preventing Power Profiler collect data over SPI channel while UART port was in use.
2149/03	Fixes an issue causing instabilities when trying to make an image in DA1469x chips
2150/04	Fixes issue with libprogrammer not getting reloaded when changing support pack
2151/05	Support more command line options related to DA1469x QSPI writing commands
2176/06	Enables addition of product header through the DA1469x QSPI layout Controller
2177/07	Fixes endian-ness of 'QSPI related code segments' of DA1468x OTP Header
<b>OPEN ISSUES &amp; LIMITATIONS</b>	
407/03	If tool or log panel becomes too short, reposition, resize or close visible windows to increase the area of interest
407/02	No default RF master firmware for DA14682/3 chips, user needs to load binary provided by SDK
407/01	OTA services, Data Rate Monitor and Sleep Mode Advisor not enabled for DA14585/586 chips
408/04	OTA services are not enabled for DA14581 and DA14583 chips
503/01	In QSPI, the entire partition table is deleted when user asks to delete only the last partition
503/05	No default RF master firmware for D1469x chips
505/03	QSPI Layout Controller enforces only a limited number of validations when it comes to writing different sections on the QSPI
506/01	SPI Flash Options are not supported for DA14585/586 chips

### 3.10 Version 5.0.5

#	DESCRIPTION
<b>OVERVIEW</b>	
This release:	
<ul style="list-style-type: none"> <li>- Supports DA1469x SDK 10</li> <li>- Supports DA14585/586 SDK 6.0.8</li> <li>- Supports 'make image' functionality for DA1469x chips</li> </ul>	
<b>NEW FEATURES</b>	
505_01	Supports DA1469x SDK 10
505_02	Supports DA14585/586 SDK 6.0.8
<b>FIXES / IMPROVEMENTS</b>	
503/02	Supports 'make image' functionality for DA1469x chips
2054/01	OTP Header tool enables users to decode the Configuration Script section (read-only)
2013/02	'QSPI Layout Controller' tools allow users write to QSPI
2057/03	Implements tighter integration with the SDKs
2051/04	Better handles erroneous cases when working with SDK libraries
2052/05	In tables, improves address handling and supports address gaps between consecutive table fields
2026/06	Adds support for read-only fields in NVParams table
2015/07	Fixes popup position when users press Help button on initial dialog (Project Selector)
2014/08	Removes non-printable characters from all Support Pack header files
2025/09	Enforces '0x' prefix for hex addresses
2015/10	Fixes 'Connect' action sometimes not working after a SPotA download on SPI
2052/11	Follows the same standard versioning logic as the SDKs
2052/12	Fixes connectivity issue with basic 585/586 chips over UART when trying to read OTP Header
<b>OPEN ISSUES &amp; LIMITATIONS</b>	
407/03	If tool or log panel becomes too short, reposition, resize or close visible windows to increase the area of interest
407/02	No default RF master firmware for DA14682/3 chips, user needs to load binary provided by SDK
407/01	OTA services, Data Rate Monitor and Sleep Mode Advisor not enabled for DA14585/586 chips
408/04	OTA services are not enabled for DA14581 and DA14583 chips
503/01	In QSPI, the entire partition table is deleted when user asks to delete only the last partition
503/05	No default RF master firmware for D1469x chips
505/01	OTP Header tool does not allow users to modify any fields (including the Configuration Script)
505/02	OTP Header tool does not allow users to modify any fields (including the Configuration Script)
505/03	QSPI Layout Controller enforces only a limited number of validations when it comes to writing different sections on the QSPI

### 3.11 Version 5.0.3

#	DESCRIPTION
<b>OVERVIEW</b>	
This release: <ul style="list-style-type: none"> <li>- Supports D1469x chips</li> <li>- Integrates Toolbox with SDKs</li> </ul>	
<b>NEW FEATURES</b>	
503_01	Supports core functionality for communicating with D1469x chips
503_02	Adds 'QSPI Layout Controller' tool
503_03	Integrates Toolbox with SDKs
<b>FIXES / IMPROVEMENTS</b>	
1813/02	Updates jre version to 1.8.0_144
1817/03	Fixes issue with NVPARAMS table showing each line twice when changing project and chip at the same time
1822/04	Gets user confirmation when deleting the entire 585 flash memory
1822/05	Fixes crash issue when pushing browse button
1837/01	Improves handling of partitions for DA1468x chips
1889/01	Supports changes made on 'make image' under DA1468x SDK 1.0.10
<b>OPEN ISSUES &amp; LIMITATIONS</b>	
407/01	OTA services, Data Rate Monitor and Sleep Mode Advisor not enabled for DA14585/586 chips
407/02	No default RF master firmware for DA14682/3 chips, user needs to load binary provided by SDK
407/03	If tool or log panel becomes too short, reposition, resize or close visible windows to increase the area of interest
408/04	OTA services are not enabled for DA14581 and DA14583 chips
503/01	In QSPI, the entire partition table is deleted when user asks to delete only the last partition
503/02	Does not offer making images when writing QSPI
503/03	OTP Header tool provides basic listing of OTP Header fields
503/04	'OTP Header' and 'QSPI Layout Controller' tools do not allow writing to OTP/QSPI
503/05	No default RF master firmware for D1469x chips

### 3.12 Version 4.8

#	Major Changes from last Release
<b>OVERVIEW</b>	
This release:	
<ul style="list-style-type: none"> <li>- Adds partial erase command for DA14585/586 chips</li> <li>- Supports configurable pins for DA14585/586 chips</li> </ul>	
<b>NEW FEATURES</b>	
408_01	Adds partial erase command for DA14585/586 chips
408_02	Supports configurable pins for DA14585/586 chips
408_03	Lays out windows in a way that leaves more vertical space for tools
408_04	For DA1468x, adds device's IRK to the list of NVMS parameters
408_05	Allow RF Master to start without prior downloading of image in RAM
<b>FIXES / IMPROVEMENTS</b>	
1772/01	Improves the Power Profiler oscilloscope plot
1772/02	Fixes loading of .csv files holding Power Profiler data in linux
1772/03	Fixes Power Profiler 'capture data' functionality in linux
1772/04	For DA1458x, improves description of some OTP header fields
1772/05	Becomes more configurable in terms of OTP, GPIO and PIN configuration
1772/06	Avoids reading twice the currently-viewed flash section after an erase
1772/07	Improves messages to avoid confusion between read-only and protected fields
407/04	Allows use of more than 64kByte on external I2C memories for DA14585/586 chips
<b>OPEN ISSUES &amp; LIMITATIONS</b>	
407/01	OTA services, Data Rate Monitor and Sleep Mode Advisor not enabled for DA14585/586 chips
407/02	No default RF master firmware for DA14682/3 chips, user needs to load binary provided by SDK
407/03	If tool or log panel becomes too short, reposition, resize or close visible windows to increase the area of interest
408/04	OTA services are not enabled for DA14581 and DA14583 chips

### 3.13 Version 4.7

#	Major Changes from last Release
<b>OVERVIEW</b>	
This release:	
<ul style="list-style-type: none"> <li>- Adds support for device DA14585/586 chips</li> <li>- Adds support for device DA14682/3 chips</li> <li>- Detects connected devices over JTAG</li> <li>- Merges RF Master inside Toolbox</li> <li>- Adds oscilloscope mode for Power Profiler</li> </ul>	
<b>NEW FEATURES</b>	
407_01	Adds support for device DA14585/586 chips
407_02	Adds support for device DA14682/3 chips
407_03	Detects connected devices over JTAG
407_04	For all chips, it protects from writing read-only OTP fields
407_05	Merges RF Master inside Toolbox
407_06	Enables RF Master for all chip families
407_07	Adds oscilloscope mode for Power Profiler
407_08	Enables Power Profiler when board is connected on a single UART and a JTAG
407_09	Replaces toolbar with a more powerful one
407_10	Enables accessing user manual from project selector window
<b>FIXES / IMPROVEMENTS</b>	
1650/01	Improves RF Master's layout and steps
1650/02	Bundles jre version 1.8.0.111
1650/03	On RF Master, user now controls when/what FW to download
<b>OPEN ISSUES &amp; LIMITATIONS</b>	
407/01	OTA services, Data Rate Monitor and Sleep Mode Advisor not enabled for DA14585/586 chips
407/02	No default RF master firmware for DA14682/3 chips, user needs to load binary provided by SDK
407/03	If tool or log panel becomes too short, reposition, resize or close visible windows to increase the area of interest
407/04	Does not allow use of more than 64kByte on external I2C memories for DA14585/586 chips

### 3.14 Version 4.6

#	Major Changes from last Release
<b>OVERVIEW</b>	
This release implements several Power Profiler enhancements and enables multiple QSPI Flash type	
<b>NEW AND UPDATED FEATURES</b>	
406_01	Adds ability to program OTP Header's 'ECC Ucode' and 'QSPI header' fields through a file
406_02	Enables working with multiple QSPI Flash types
406_03	In Power Profiler, treats configuration option for Voltage as a range between 1.8V and 4.3V
406_04	In Power Profiler, supports adjustable scaling for all plotting windows
<b>FIXES / IMPROVEMENTS</b>	
1540/01	Improves stability of JTAG operations on DA1468x chips
1540/02	In Power Profiler, reminds and guides the user when calibration is required
1540/03	In Power Profiler, supports 4 decimal points for Software Cursor Tolerance setting
1540/04	In Power Profiler, disables extended/deep sleep fixed values for DA148x chips
1540/05	Removes baudrate command-line option for DA1468x chips
1540/06	Avoids error occurring when there is no 'loadbin.txt' file when using DA1458x SPOTA tool
<b>OPEN ISSUES &amp; LIMITATIONS</b>	

### 3.15 Version 4.5

#	Major Changes from last Release
<b>OVERVIEW</b>	
This release applies various improvements to the previous version	
<b>NEW AND UPDATED FEATURES</b>	
<b>FIXES / IMPROVEMENTS</b>	
1508/01	Improves OTP Burn functionality when user tries to write to an area with already-written words
1508/02	Remembers whether the user has changed the Power Profiler multiplication factor and, if not, applies the default value no matter what the chosen chip is
1508/03	Handles the first 3 bytes of OTP Header 'Package Used' field as reserved for future use
1508/04	Fixes an issue preventing user to export data read from flash or OTP memory
1508/05	Improves performance of OTP Header writing when header log file has become too large
<b>OPEN ISSUES &amp; LIMITATIONS</b>	



### 3.16 Version 4.4

#	Major Changes from last Release
<b>OVERVIEW</b>	
This release adds the partition tables and applies several Power Profiler improvements	
<b>NEW AND UPDATED FEATURES</b>	
404_01	Includes partition table basic functionality
404_02	Enhances CLI to support SUOTA
404_03	On DA1468x boards, Power Profiler displays all low values as being captured; no modification / activity level validation is applied
404_04	On DA1468x boards, Power Profiler supports plotting very-low level values (< 200mA)
404_05	On DA1468x boards, default Power Profiler calibration value has been set to -17.24
404_06	Power Profiler displays energy (in uJoule) information in the tooltip displayed when the user has placed cursors
<b>FIXES / IMPROVEMENTS</b>	
1418/01	Uses improved library for connectivity over JTAG
1418/02	Fixes issue with QSPI Flash programming for files larger than ~250 KB
1418/03	Fixes issue where wrong values are written in TCS section of the OTP header after the first zero byte
<b>OPEN ISSUES &amp; LIMITATIONS</b>	

### 3.17 Version 4.3

#	Major Changes from last Release
<b>OVERVIEW</b>	
This release supports DA1468x AE	
<b>NEW AND UPDATED FEATURES</b>	
403_01	Supports DA1468x AE
<b>FIXES / IMPROVEMENTS</b>	
1378/01	Uses an updated second stage bootloader
1378/02	Improves standalone installer to help user install 3rd-party libraries
1378/03	No longer requires its own environment variables to operate
	Project Selector screen has been updated with all supported chip versions
<b>OPEN ISSUES &amp; LIMITATIONS</b>	

### 3.18 Version 4.2

#	Major Changes from last Release
<b>OVERVIEW</b>	
This release enables Toolbox for Linux and applies various improvements across all tools	
<b>NEW AND UPDATED FEATURES</b>	
402_01	Supports communication over JTAG for DA1468x chips
402_02	Supports Linux (linux_x86_64)
402_03	Adds a 'Power Profiler Activated' message in Project Selector dialog when UART/SPI mode is selected
402_04	Allows cleaning primary Power Profiler data
402_05	Supports different OTP Headers for different chips
402_06	Updates OTP Headers for DA14680AD
402_07	In case of JTAG connections, adds the 'Close Debug Session' button on the main toolbar
402_08	Adds the option to make SPI Flash and EEPROM bootable, even if starting burning address is other than 0x00
402_09	Allows user to export SPI Flash, EEPROM and QSPI memory data to file. User can specify offset and memory size.
402_10	QSPI supports DA14681 basic DKs
402_11	Adds the NVPARAMS tool
<b>FIXES / IMPROVEMENTS</b>	
1323/01	Updates firmware files
1323/02	Adds the release number in Splash Screen and Project Selector dialog
1323/03	Proposes different multiplication factors depending on motherboard type (revC and revD)
1323/04	Improves performance when reading from QSPI
1323/05	Shows selected SPI Flash pin configuration in Flash Programmer tool
1323/06	Fixes removal of time markers in Power Profiler
1323/07	Avoids Power Profiler buffer overruns
1323/08	Points to the correct folder when reopening the Power Profiler import file browser
1323/09	Keeps the user-preferred Power Profiler layout after finishing importing/exporting .csv files
1323/10	Fixes TCS Header validation error
1323/11	Prevents EEPROM erase progress bar from blocking the erase operation
1323/12	For DA1468x, when closing JTAG debugger session, the connection to the GDB server is now closed too
<b>OPEN ISSUES &amp; LIMITATIONS</b>	

### 3.19 Version 4.1

#	Major Changes from last Release
<b>OVERVIEW</b>	
This release supports DA1468xAD chip	
<b>NEW AND UPDATED FEATURES</b>	
401_01	Supports DA1468xAD chip
<b>FIXES / IMPROVEMENTS</b>	
1217/01	Updates bin2image.exe with enable_uart and ram shuffle options
1217/02	Enables -bootable command line option for Da1458x chips
<b>OPEN ISSUES &amp; LIMITATIONS</b>	

### 3.20 Version 4.0

#	Major Changes from last Release
<b>OVERVIEW</b>	
This release merges the previously-separate version for DA1458x and DA1468x into one application. Also, supports DA14680 AC/DevKit Rev B, new QSPI type W25Q80EW and various enhancements to most tools	
<b>NEW AND UPDATED FEATURES</b>	
400_01	Supports DA14680 AC/DevKit Rev B
400_02	Supports new DA1468x OTP Header format
400_03	Adds new QSPI type: W25Q80EW
400_04	Adds "Refresh COM ports" button in horizontal toolbar
400_05	Supports new property 'STX_VALUE' to override the default STX value (0x02)
400_06	Adds [-bootable] option to SPI and EEPROM write commands to make memory bootable
400_07	Memory Programmer: Adds verification step after burning or erasing SPI Flash or EEPROM. Available on Command-Line Interface too
400_08	Memory Programmer: Allows erasing the entire EEPROM with zeroes (0x00) or ones (0xFF). Available on Command-Line Interface too
400_09	Command-Line Interface: Allows specifying the max SPI Flash and EEPROM memory size and applies the appropriate max size validations
400_10	General: Catches 3 consecutive timeout errors and advises the user to unplug and plug again the DK
<b>FIXES / IMPROVEMENTS</b>	
1193/01	Resolves timing issues with basic DKs when reading the OTP immediately after downloading the firmware
1193/02	Updated application icons
1193/03	Fixes a bug resulting in some firmware files not being parsed correctly by the OTP Programmer
1193/04	Removes padding hex file data with byte 0x00 to align to 8-bytes multiple
1193/05	Power Profiler: fixes issue with delta character not being displayed properly
1193/06	OTP Header: on 'Protected' fields, it does not force 0xFFs protection bytes when the field is empty
1193/07	Fixes a bug in Cache Architecture and Serial Configuration Mapping DA1468x OTP Header fields
1193/08	Avoids "ERR_PROT_CMD_REJECTED" error during burn by ensuring that a cell (64 bits) is empty before burn
<b>OPEN ISSUES &amp; LIMITATIONS</b>	

### 3.21 Version 3.10

#	Major Changes from last Release
<b>OVERVIEW</b>	
This release enables reading/writing on odd ports of 2-port boards for DA1458x chips	
<b>NEW AND UPDATED FEATURES</b>	
310_01	Enables reading/writing on odd ports of 2-port boards
<b>FIXES / IMPROVEMENTS</b>	
<b>OPEN ISSUES &amp; LIMITATIONS</b>	

### 3.22 Version 3.9

#	Major Changes from last Release
<b>OVERVIEW</b>	
This release improves application stability/reliability for DA1458x chips	
<b>NEW AND UPDATED FEATURES</b>	
309_01	Supports new property 'STX_VALUE' to override the default STX value (0x02)
309_02	Adds [-bootable] option to SPI and EEPROM write commands to make memory bootable
<b>FIXES / IMPROVEMENTS</b>	
1183/01	Improves SPI erase stability
1183/02	Resolves timing issues with basic DKs when reading the OTP immediately after downloading the firmware
1183/03	Fixes a bug resulting in some firmware files not being parsed correctly by the OTP Programmer
1183/04	Removes padding hex file data with byte 0x00 to align to 8-bytes multiple
<b>OPEN ISSUES &amp; LIMITATIONS</b>	

### 3.23 Version 3.8

#	Major Changes from last Release
<b>OVERVIEW</b>	
This release supports DA14583 and includes various enhancements to most tools for DA1458x chips	
<b>NEW AND UPDATED FEATURES</b>	
308_01	Memory Programmer: Adds verification step after burning or erasing SPI Flash or EEPROM. Available on Command-Line Interface too
308_02	Memory Programmer: Allows erasing the entire EEPROM with zeroes (0x00) or ones (0xFF). Available on Command-Line Interface too
308_03	Command-Line Interface: Allows specifying the max SPI Flash and EEPROM memory size and applies the appropriate max size validations
308_04	General: Catches 3 consecutive timeout errors and advises the user to unplug and plug again the DK
308_05	Support for DA14583
308_06	Updated the firmware files for the Flash Programmer, the JTAG Programmer and the Max Data Rate Monitor
308_07	Improves descriptions on some OTP header fields
308_08	On Proprietary Header Programmer, SPI is now the default choice
308_09	Proprietary Header programmer has been enhanced so that user can load the product header (file %SMARTSNIPPETS_WORK%\resources\ProductHeader_583.txt), modify the values of its fields and press the 'Update' button to clean up the appropriate sector and write the product header in memory
308_10	Board Setup has been updated so that user can configure the SPI flash and I2C EEPROM pin settings on non-DA14583 boards
308_11	OTP Image programmer can now be used for burning the advanced bootloader
308_12	On Max Data Rate Monitor, better controls when buttons 'Start Monitor' και 'Start Peripheral' are enabled or disabled
308_13	Improves reading of SPI sectors
<b>FIXES / IMPROVEMENTS</b>	
1115/01	Power Profiler: fixes issue with delta character not being displayed properly
1115/02	Allows writing files that are 32768 bytes long
1115/03	Fixes an issue resulting in Power Profiler markers not showing up
<b>OPEN ISSUES &amp; LIMITATIONS</b>	



### 3.24 Version 1.0.2.0

#	Major Changes from last Release
<b>OVERVIEW</b>	
This release applies some minor improvements to the previous version for DA1468x chips	
<b>NEW AND UPDATED FEATURES</b>	
<b>FIXES / IMPROVEMENTS</b>	
1114/01	OTP Header: improved warnings when failing validating inverted values
1114/02	General: improved logic when applying timeouts
1114/03	QSPI Programmer: shows pop-up message proposing to remove and reconnect the USB when detecting multiple verification errors during writing
1114/04	Power Profiler: fixes issue with delta character not showing correctly
1114/05	General: fixes some layout issues
1114/06	General: fixes the problem with the same project name is used for both SmartSnippets 580 and SmartSnippets 680
<b>OPEN ISSUES &amp; LIMITATIONS</b>	

### 3.25 Version 1.0.1.4

#	Major Changes from last Release
<b>OVERVIEW</b>	
This release applies improvements to Booter, OTP Header, QSPI Programmer and Log Panel for DA1468x chips	
<b>NEW AND UPDATED FEATURES</b>	
1014_01	Installer: SmartSnippets can now be installed and executed simultaneously with the official release version of SmartSnippets DA14580
1014_02	General: detects when board has become unresponsive and proposes the user to unplug the USB and connect again
1014_03	Booter: allows downloading firmware via JTAG without need for the user to change connection type in the project chooser
1014_04	Booter: better handles downloading of new firmware files while an already-downloaded firmware transmits STX periodically
1014_05	OTP Header importing: it now skips CRC validation if CRC field is 0x00
1014_06	OTP Header: Fields description and options have been updated to match the datasheet. Also, default values for all fields have been switched to 0x00
1014_07	OTP Header: includes improved pop-ups for complex fields
1014_08	QSPI programmer: hides 'mirrored' option (to be enabled again with next version)
1014_09	QSPI Programmer: 'Run' button is no longer needed, user can press 'reset' button instead
1014_10	QSPI Programmer: includes new 'length' field to allow the user specify the length (in Kbytes) for erasing or reading a memory area.
1014_11	Logs: Log panel has been unified for all tools. It now supports 'Clear All' functionality and filtering
1014_12	Logs: Warnings have been added when user tries to work in Booter and OTP Programmer with files that are bigger than 64Kbytes
1014_13	User Manual: has been updated to include DA14680 environment
<b>FIXES / IMPROVEMENTS</b>	
1107/01	QSPI Programmer: fixes issue resulting in failing downloading files longer than 64Kbytes
1107/02	QSPI Programmer: fixes offset field so that it accepts hex values
1107/03	QSPI Programmer: fixes problems resulting in failing to erase section larger than 0.5MBs
<b>OPEN ISSUES &amp; LIMITATIONS</b>	

### 3.26 Version 1.0.1.3

#	Major Changes from last Release
<b>OVERVIEW</b>	
This release adds CLI support and applies improvements to OTP Header and Power Profiler for DA1468x chips	
<b>NEW AND UPDATED FEATURES</b>	
1013_01	OTP Header: pop-up panel for fields 7F8EA30, 7F8EA28 and 7F8EA78
1013_02	Support for 64-bit words whose bytes [4..7] are the inversion of bytes [0..3]
1013_03	Command-Line Interface has been enabled
<b>FIXES / IMPROVEMENTS</b>	
1080/01	Power Profiler: remembers user's last-browsed folder when importing a csv file
1080/02	Power Profiler: improves how measurement values are displayed on the plot area
<b>OPEN ISSUES &amp; LIMITATIONS</b>	

### 3.27 Version 1.0.1.2

#	Major Changes from last Release
<b>OVERVIEW</b>	
This release adds basic support for DA1468x chips	
<b>NEW AND UPDATED FEATURES</b>	
1012_01	Booter: download firmware and boot over UART
1012_02	Booter: download firmware and boot over JTAG
1012_03	OTP Programmer: read / write OTP over UART
1012_04	OTP Header: read / write OTP header over UART
1012_05	QSPI Programmer: read/write QSPI memory over UART (cached mode)
1012_06	QSPI programmer: prepare bootable image (cached mode)
1012_07	QSPI programmer: run from QSPI (cached mode)
1012_08	Power Profiler: made compliant with DA14680
<b>FIXES / IMPROVEMENTS</b>	
<b>OPEN ISSUES &amp; LIMITATIONS</b>	

### 3.28 Version 3.7

#	Major Changes from last Release
<b>OVERVIEW</b>	
This release includes improvements for SUOTA, SPOTA, Data Rate Monitor, power Profiler, OTP Header, NVDS tools for DA1458x chips	
<b>NEW AND UPDATED FEATURES</b>	
307_01	SUOTA, SPOTA and Data Rate Monitor tools now support both DA14580 and DA14581 chips
307_02	Applies modifications to make Power Profiler more stable when running for several hours
307_03	In Power Profiler, enables through a GUI checkbox to view negative values too. An activity level validation logic has been adjusted accordingly
307_04	Implements improvements in how Power Profiler communicates with FTDI chip through queues so that the graphical representation is more stable.
307_05	Removes the 'expected trim value' OTP Programmer warnings to avoid confusions
307_06	Improves the names of the OTP header
307_07	Treats 9 OTP header fields as read-only ones
307_08	Treats the NVDS Tag BD address as read-only
307_09	Improves the use of the HALT command in the command sequence of the JTAG booter
307_10	Removes DA14580-00 from the device list
307_11	Allows viewing the user manual in pdf format to enable printing
<b>FIXES / IMPROVEMENTS</b>	
966/01	Fixed an issue resulting in reporting a success instead of failure when getting the wrong CRC from DK14580 while downloading a hex file.
966/02	Fixed issue resulting in negative values for Power Profiler time axis when running for several hours
<b>OPEN ISSUES &amp; LIMITATIONS</b>	

### 3.29 Version 3.6

#	Major Changes from last Release
<b>OVERVIEW</b>	
This release includes minor improvements for DA1458x chips	
<b>NEW AND UPDATED FEATURES</b>	
<b>FIXES / IMPROVEMENTS</b>	
924/01	Uses improved filechooser
924/02	Allows users override the default user.home system variable when they are missing necessary permissions
924/03	References the correct programmer.bin firmware for DA14581 boards
924/04	Corrects application flag description on header file
924/05	Fixes issue with reporting wrong (uninitialized) size of bytes to be written
<b>OPEN ISSUES &amp; LIMITATIONS</b>	

### 3.30 Version 3.5

#	Major Changes from last Release
<b>OVERVIEW</b>	
This release adds Support for DA14581 and includes enhancements for SPOTA, SUOTA, CLI and SPI/EEPROM programming for DA1458x chips	
<b>NEW AND UPDATED FEATURES</b>	
305_01	Shows only devices with SPOTA service
305_02	Enables SUOTA notifications
305_03	Adds write functionality to Terminal window
305_04	Supports bundles of CLI commands
305_05	Changes the layout so that groups of similar tools occupy the whole screen
305_06	Allows string/integer fields for header/NVDS of SPI/EEPROM
305_07	Adds Support for DA14581
305_08	Improves way to write big chunks of data to SPI/EEPROM
<b>FIXES / IMPROVEMENTS</b>	
891/01	Fixes "null port is not a valid FTDI device UART port" CLI error
891/02	Fixes memory issues with Power Profiler csv exporting when period is long
891/03	Fixes issue with Power Profiler missing some samples
<b>OPEN ISSUES &amp; LIMITATIONS</b>	

### 3.31 Version 3.4

#	Major Changes from last Release
<b>OVERVIEW</b>	
This release fixes a bug related to ignoring zero bytes included at the end of a hex file	
<b>NEW AND UPDATED FEATURES</b>	
<b>FIXES / IMPROVEMENTS</b>	
856/01	Fixes a bug related to ignoring zero bytes included at the end of a hex file
<b>OPEN ISSUES &amp; LIMITATIONS</b>	



### 3.32 Version 3.3

#	Major Changes from last Release
<b>OVERVIEW</b>	
This release fixes a bug with CLI command ignoring UART RX/TX port when deciding the appropriate baud rate	
<b>NEW AND UPDATED FEATURES</b>	
<b>FIXES / IMPROVEMENTS</b>	
854/01	Fixes a bug with CLI command ignoring UART RX/TX port when deciding the appropriate baud rate
<b>OPEN ISSUES &amp; LIMITATIONS</b>	

### 3.33 Version 3.2

#	Major Changes from last Release
<b>OVERVIEW</b>	
This release adds Max Data Rate Monitor tool and SUOTA tool for DA1458x chips	
<b>NEW AND UPDATED FEATURES</b>	
302_01	Adds Max Data Rate Monitor tool, used for monitoring the overall receive and transmit rate over Bluetooth
302_02	Supports SUOTA service in OTA services tool.
302_03	UART Terminal that reads data from UART has been separated from the Booter tool
302_04	Supports writing large files (>32 KB) in SPI / EEPROM by writing them in blocks of 16 KB
<b>FIXES / IMPROVEMENTS</b>	
<b>OPEN ISSUES &amp; LIMITATIONS</b>	

### 3.34 Version 3.1

#	Major Changes from last Release
<b>OVERVIEW</b>	
This release supports JTAG connections, adds 'Memory Header/NVDS Programmer' tool, provides enhanced CLI functionality and implements improvements In Power Profiler and Sleep Mode Advisor for DA1458x chips	
<b>NEW AND UPDATED FEATURES</b>	
301_01	Enables users configure their projects to work over a JTAG connection
301_02	Supports downloading firmware over a JTAG connection
301_03	Supports OTP Programming functionality over a JTAG connection
301_04	Supports SPI Flash Programming functionality over a JTAG connection
301_05	Supports EEPROM Programming functionality over a JTAG connection
301_06	Enhances CLI commands to work over a JTAG connection
301_07	Supports deleting SPI Flash memory sectors starting from a user-defined memory offset.
301_08	Adds 'Memory Header/NVDS Programmer' tool that allows users describe their own header and/or NVDS formats and write them to SPI Flash or EEPROM Memory.
301_09	Adds CLI commands for reading/writing SPI Flash memory
301_10	Adds CLI commands for reading/writing EEPROM memory
301_11	Adds a CLI write command so that users can write specific OTP/SPI/EPPROM fields
301_12	Expedites CLI commands by having the option to skip validations and all checks associated with them
301_13	Unifies read/write CLI commands with uart booter CLI command so that firmware downloading and read/write action is done in one execution
301_14	Saves cursors together with measurements when exporting Power Profiler results
301_15	Power Profiler automatically calculates peak current / avg. current / charge (uC) for the period between two cursors
301_16	Power Profiler automatically calculates Connection Interval Time and Charge
301_17	Better controls sliding of time axis on Power Profiler
301_18	Added Power Profiler configuration option to control the upper threshold under which small power measurements are considered zeroes. Related to S/W cursors.
301_19	Provides configuration option to disable S/W cursors in Power Profiler
301_20	Updates Sleep Mode Advisor calculations so that they take into account the connection interval charge that will be calculated automatically by Power Profiler
301_21	Replaces old COM port communication framework with a new one
301_22	Overcomes location Id = 0 limitation
301_23	Uses smaller toolbar buttons
<b>FIXES / IMPROVEMENTS</b>	
814/01	Uses JRE 7.0.51
814/02	Fixes some corner cases not handled correctly by OTP Programmer
<b>OPEN ISSUES &amp; LIMITATIONS</b>	

### 3.35 Version 3.0

#	Major Changes from last Release
<b>OVERVIEW</b>	
This release adds Software Patch over the Air (SPotA) tool, Sleep Mode Advisor tool, EEPROM Programmer tool, and improves most of the other tools for DA1458x chips	
<b>NEW AND UPDATED FEATURES</b>	
300_01	Does not block command-line calls until user confirms validation checks when property DISABLEVALIDATIONS has been set to true in the properties.txt file.
300_02	Improved workflow related to pressing the reset button
300_03	Improved handling of non-acceptable values for header fields having only a specific set of acceptable values
300_04	Uses new firmware when connecting via the SPI or EEPROM Programmers
300_05	SPotA supports 128-bit UUIDs
300_06	Handles the case that DA14580-01 boards complete the firmware downloading procedure without needing to press the reset button when there is no firmware downloaded already.
300_07	Improves the UI of the Sleep Mode Advisor
300_08	Improves the UI of SPotA
300_09	Adds Software Patch over the Air (SPotA) tool
300_10	Adds Sleep Mode Advisor tool
300_11	Adds new command 'export_stats' to command line implementation of Power Profiler
300_12	Power Profiler calculates current consumed during idle periods
300_13	Uses new firmware when connecting via the SPI or EEPROM Programmers
300_14	Adds support for importing and exporting .bin files to OTP Image, OTP Header and NVDS tools
300_15	Displays contents of bin files when importing into OTP Image, SPI Flash Programmer and EEPROM Programmer tools
300_16	Adds command-line implementation for Power Profiler
300_17	In UART Booter, to avoid timeouts due to bandwidth taken by SPI port when Power Profiler is running, Power Profiler stops and then starts again when downloading a file
300_18	Installer categorizes Dialog applications under a separate Start -> All Programs folder
300_19	Adds new EEPROM Programmer tool
300_20	Uses new .bin file when connecting to SPI Flash programmer
300_21	Enables SPI Flash Programmer for DA14580-00 too
300_22	Supports burning in SPI Flash and EEPROM as bootable or non-bootable
300_23	Extends the command-line interface to support hex files having base address 0x20000000
300_24	Better organizes how installed components are grouped under the Windows Start -> All Programs area
300_25	Supports spaces in the project name
300_26	Adds new 'SPI Flash programmer' tool for DA14580-01 boards
300_27	Power profiler displays the Charge over time graph too
300_28	Power Profiler configuration dialog has been enhanced so that user can better control the quality of the plot due to downsampling through the 'Max Number of Samples To Draw' parameter
300_29	On Power Profiler, manual scaling is done on the y-axis only
300_30	Power Profiler remembers which of the 'Threshold (mA)' or 'TimeInterval (ms)' textbox had the focus before chart stealing it and brings the focus back to the appropriate textbox when the mouse leaves the chart.
300_31	Better handles the case that more than one UART ports are given location ID = 0 by the operating system while in UART/SPI mode
<b>FIXES / IMPROVEMENTS</b>	
695/01	Fixes exception occurring when running 'read_custom_code' command and providing a hex or bin file as input
695/02	In OTP programmer, when downloading firmware, data is read again and UI is refreshed appropriately
695/03	Fixes a Power Profile issue resulting in not always showing the S/W cursor when importing a csv file
695/04	Fixes permissions of uninstaller

695/05	Fixes shortcuts created by installer
695/06	Fixes Power Profile graphical output when receiving negative current values
695/07	Fixes issue causing incorrect downloading of firmware .bin files having 0x00 bytes at the end of the file
695/08	Fixes issue with command-line tool not accepting files with .ihex extension
695/09	Fixes issues with command-line and UI tools not accepting files with extension in uppercase
<b>OPEN ISSUES &amp; LIMITATIONS</b>	

### 3.36 Version 2.2

#	Major Changes from last Release
<b>OVERVIEW</b>	
This release supports DA14580-01	
<b>NEW AND UPDATED FEATURES</b>	
202_01	Supports DA14580-01
202_02	Allows user to select for each project the board type to connect to
202_03	Enhances command-line interface (CLI) with ability to read and write NVDS memory block
202_04	Allows managing OTP Programmer and UART Booter through Windows COM ports (does not require any more the existence of a FTDI-enabled board)
202_05	Makes this revision history document available through the SmartSnippets application
202_06	Improves layout of OTP Header fields
202_07	Improves Power Profiler's time auto-scaling
202_08	When loading .hex files, it creates a warning but allows burning an OTP image having zero bytes for addresses greater than 0x47F00
<b>FIXES / IMPROVEMENTS</b>	
518/01	Fixes writing of NVDS fields that are 1 or 2 bytes long
<b>OPEN ISSUES &amp; LIMITATIONS</b>	

### 3.37 Version 2.1

#	Major Changes from last Release
<b>OVERVIEW</b>	
This release fixes some issues found in previous version	
<b>NEW AND UPDATED FEATURES</b>	
201_01	Does not block header burning when DMA length is smaller than the image file currently loaded in OTP Image tab
<b>FIXES / IMPROVEMENTS</b>	
469/01	Fixes an issue with downloading firmware files whose addresses go beyond 0x80000
469/02	Fixes some false 'missing FTDI devices' messages showing up on the UI logs
469/03	Fixes DMA length validations so that they are made in words and not in bytes
469/04	Fixes an issue with infinitely scanning for COM ports when USB location ID equals to 0 and there are multiple FTDI boards attached to the system
469/05	Hides the second console window when running in UI mode
<b>OPEN ISSUES &amp; LIMITATIONS</b>	

### 3.38 Version 2.0

#	Major Changes from last Release
<b>OVERVIEW</b>	
This release supports DA14580-00 and adds OTP NVDS and Command-Line Interface (CLI) functionality	
<b>NEW AND UPDATED FEATURES</b>	
200_01	Supports DA14580-00
200_02	Makes Power Profiler more stable
200_03	Adds command-line interface (CLI) to control UART Booter, OTP Image and OTP Header tools through the console
200_04	Adds OTP NVDS tool
200_05	Modifies some OTP Header descriptions
200_06	When using an imported header file to write the OTP Header, it skips line-to-line CRC validation if CRC field in the file is 0x00
<b>FIXES / IMPROVEMENTS</b>	
459/01	Fixes a bug that was resulting in not writing the OTP memory the field that is in edit mode
<b>OPEN ISSUES &amp; LIMITATIONS</b>	



### 3.39 Version 1.1

#	Major Changes from last Release
<b>OVERVIEW</b>	
This release improves Power Profiler	
<b>NEW AND UPDATED FEATURES</b>	
101_01	Treats OTP Header 'Device Unique ID' field as string
101_02	On Power Profiler, allows user to switch LOD on and off
101_03	On Power Profiler, adds ability to set the amount of time before triggering and plotting
101_04	On Power Profiler, changes clicking behaviour of measurement tool
101_05	On Power Profiler, adds configuration form field for the offset of the SW cursor
101_06	On Power Profiler, allows saving plot area into a file
101_07	On UART Booter, adds 'Clear' button to clean up terminal
<b>FIXES / IMPROVEMENTS</b>	
422/01	Makes Power Profiler more stable
422/02	On Power Profiler, if offset is applied, it fixes the issue of zero samples are never zero
422/03	Fixes an issue resulting in Project Selector not listing COM ports with location ID equal to 0
422/04	Fixes an error resulting in not correctly recognizing which COM port belongs to which board/project when more than one boards are connected to the system
422/05	On Power Profiler, fixes an issue with csv export file chooser not showing folders
422/06	Fixes issue happening when switching to another project and resulting in UART Booter default folder not getting updated
<b>OPEN ISSUES &amp; LIMITATIONS</b>	

### 3.40 Version 1.0

<b>OVERVIEW</b>	
This release introduces basic Toolbox functionality	
<b>NEW FEATURES</b>	
100_01	Framework main application
100_02	Power Profiler (basic version)
100_03	OTP Image (basic version)
100_04	OTP Header (basic version)
100_05	UART Booter (basic version)
100_06	Board Setup (basic version)
100_07	Project Selector (basic version)

## Appendix I: Versioning Rules

Each software version number string consists of 4 numbers. MAJOR.BRANCH.MINOR.BUILD

### Versioning rules:

**#MAJOR:** It is increased by 1 only if the project undergoes a major modification, e.g. major ROM changes. It practically changes only when the project sources undergo major restructuring affecting most of the repository. It is initialized at 1.

**#BRANCH:** Should be used in the case of concurrent projects that for special reasons need to be spun off the major repository. It corresponds to different versions of the repository code that have to be supported concurrently. In this case each branch number corresponds to a different GIT branch. The basic project has BRANCH ID 0.

**#MINOR:** Odd numbers indicate Engineering (or Patch or Binary) versions, even numbers indicate Full release versions or Release Candidates of Full versions. Each Full release increases this number by one. After the Full release, the number is increased by 1 again. Therefore, Project releases correspond to release numbers like 2.0.1.xxxx, 2.0.2.xxxx etc. The #MINOR number is initialized at 1.

**#BUILD:** The # BUILD number increases by 1 at every repository update and thus indicates the total number of changes since repository initialization. The BUILD number is initialized at 1.

**Note:** Before SmartSnippets Toolbox 5.0.x, each software version number string consisted of 2 numbers: MAJOR.MINOR. It has been updated to match generic SW versioning rules of Dialog.