DA14580 Codeless Software Release Notes for version 5.380.5.4.0

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1.0 Introduction

1.1 Scope

This document describes the release of the DA14580 Codeless reference design software from Dialog Semiconductor.

1.2 Terms and abbreviations

BLE   Bluetooth Low Energy

SDK   Software Development Kit

SUOTA Software Update over The Air

UART   Universal asynchronous receiver transmitter

1.3 Release Data

PROJECT	DA14580 Codeless
RELEASE DATE	13 Sept 2018
VERSION NR.	5.380.5.4.0 (based on SDK version 5.0.5)
RELEASE TYPE[1]	FULL (GA)
RELEASE MASTER	Aris Stathakis

1.4 License

1.5 History

VERSION	RELEASE MASTER	DATE
5.380.5.4.0	Aris Stathakis	13 Sept 2018

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[1] Releases can be of the following types: FULL (GA), FULL (LA), RELEASE CANDIDATE, ENGINEERING, PATCH or BINARY

2.0 Release Description

2.1 Major Changes

#	DESCRIPTION
OVERVIEW	

This is a release of the DA14580 based Codeless reference design. Codeless AT Commands platform for DA14580 allows control over a local UART connected device as well as a remote device via BLE with a comprehensive set of AT commands enabling a developer to make a fast peripheral or central application (or both).

 Three AT command sources exist:
 - Local command source: Currently only UART 57600N1 is supported.
 - Remote command source: BLE connected peer, implementing codeless service.
 - Command sequencer: Command scripts can be executed by the command sequencer.

Set of supported AT commands:

- AT
- ATI
- ATE
- ATZ
- ATF
- ATR
- AT+TMRSTART
- AT+TMRSTOP
- AT+CURSOR
- AT+RANDOM
- AT+BATT
- AT+BDADDR
- AT+SLEEP
- AT+IOCFG
- AT+IO
- AT+ADC
- AT+I2CSCAN
- AT+I2CCFG
- AT+I2CREAD
- AT+I2CWRITE
- AT+PRINT
- AT+MEM
- AT+PIN
- AT+CMDSTORE
- AT+CMDPLAY
- AT+ADVSTOP
- AT+ADVSTART
- AT+ADVDATA
- AT+ADVRESP
- AT+CENTRAL
- AT+PERIPHERAL
- AT+GAPSTATUS
- AT+GAPSCAN
- AT+GAPCONNECT
- AT+GAPDISCONNECT

 A more detailed overview of Codeless command set and capabilities can be found at the Codeless tutorial webpage at Dialog support site
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NEW FEATURES	
1	Port Codeless application to da14580 implementing the same feature set as da14585.
2	Queuing of UART message to support parallel command paths (local, remote and sequencer).
3	Create generic AT command parser, new local command sources can be easily added.
4	AT commands jump table.
5	Error reporting mechanism and ATF command to turn on/off.
6	ATR command to trigger platform reset.
7	Python lib for interacting with codeless devices over UART and BLE.
8	Add 580 support for AT+PIN - align with 585.
FIXES / IMPROVEMENTS	
1	Delayed wake up process has been changed. UART buffers are flushed before command parsing is started. Extra logic has been added to parser in order to have predictable command parsing after wake up.
2	Handling of failed I2C read operations. An error is returned if i2c read operation is not successful
3	On startup codeless device is peripheral role and starts advertising.
4	Change command interpreter logic to detect for incoming reply to support parallel command paths.
5	Fix sleep activate timer cancelation.
6	Port to latest SDK version.
7	Restructure project source (common src files for 580/585).
8	Add project readme.
9	AT+IOCFG command has an extra optional argument that can set a GPIO output pin immediately after configuration. i.e AT+IOCFG=10,4,1 will set GPIO P1_0 as output and high.
10	Restructure project for smaller binary size.
Documentation	
	Codeless tutorial, https://support.dialog-semiconductor.com/resource/codeless-tutorial-html, Dialog Semiconductor.

2.2   Issues or Limitations

#	OPEN ISSUES & LIMITATIONS
1	ahtoi undefined behavior: when arguments are passed that a numerical value is needed the input is not checked or sanitized. If i.e instead of a decimal value a string is passed such as the case for command AT+MEM=aaaaaa then this will be translated to AT+MEM=0

2	Active role changing: After te following sequence,
	   - Connect as peripheral/central
	   - Disconnect
	   - Change role
	   - Connect as central/peripheral
	
	Device will generate a hardfault when sending data.

3	I2C 10 bit addressing is not supported.
4	Max command slots is 99 (2 digits).

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2.3 Changes in SDK code

#	CHANGES
1	Update licensing.txt
2	Add callback app_on_pairing_failed in app_callbacks structure.
3	Call app_on_pairing_failed when GAPC_PAIRING_FAILED arrives.
4	Add svc1_long_val_att_info_rsp and svc1_rest_att_info_rsp in custom server 1.
5	Add USER_APP_CMD_RECEIVED in enumeration of messages for CUSTS1.

2.4 MAJOR Release Files

#	File Name	Description
1	CodeLess_v_5.380.5.4.0.zip	RELEASE FILE
2	DA1458x-Codeless-SW-Release-Notes-v_5.380.5.4.0.pdf	RELEASE NOTES
3	codeless_580_v5.380.5.4.0.hex	RELEASE FILE

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3.0   Release History

3.1   DA14580 Codeless Beta_1 AT Command

This was a beta version porting a deprecated set of Codeless functionality from DA14585 1.0.1.001 to DA14580.

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.xxx, 2.0.2.xxx. 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.