FEBRUARY 8, 2016 V1.0

DA14580

Software Release Notes for Dialog Serial Port Service application

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1.0 Introduction

1.1 Scope

This document authorizes the official software release of the DA14580 Serial Port Service reference application from Dialog Semiconductor.

1.2 Terms and abbreviations

BTLE BlueTooth Low Energy
SPS Serial Port Service

1.3 Release Data

PROJECT	BTLE Dialog Serial Port Service Reference Design
RELEASE DATE	08 Feb 2016
VERSION NR.	v.5.150.2 (based on SDK version 5.0.3.177)
RELEASE TYPE[1]	Official Release (Appendix I)
RELEASE MASTER	Konstantinos Dagres

1.4 References

1.5 History

VERSION	RELEASE MASTER	DATE
3.150.2	Konstantinos Dagres	14 Jan 2015
5.150.2	Konstantinos Dagres	08 Feb 2015

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

2.0 Release Description

2.1 Major Changes

#	DESCRIPTION
FEATURES	
1	Application migrated in SDK 5.0.3 code base.
BUG FIXES	
1	Fixed rare disconnection issue observed with 3.150.2 version.

2.2 Known Issues or Limitations

#	DESCRIPTION
1	S/W flow control method can be used with Extended Sleep mode only if the device connected on UART interface does send Xon/Xoff flow control bytes during sleep period, DA14580 flows off UART data traffic but control bytes can be sent during the flow off period. The flow off signal will be lost in this case.
2	Binary files cannot be transferred with s/w flow control method.
3	Data loss is possible to happen in case of disconnection during data transfer. BLE Tx Buffers are flashed at disconnection and Tx pending data will be lost.
ROM PATCHES	
1	**Kernel timer issue.** Root cause is a fault mixed 16bit/32bit arithmetic. Patched function: cmp_abs_time(). Function **app_timer_set**() must be used as wrapper of the ke_timer_set(). It ensures that the delay parameter of the call to ke_timer_set() is within limits.
2	**Rejection of Peer request issue.** SW implementation was rejecting any peer device request (read/write) when server had sent indication and was waiting for confirmation. Patched Function: l2cc_pdu_recv_ind_handler(). Changes applied also in the profiles (cscp, glp, rscp, prf_utils).
3	**Security manager issue** Reserved bits checked in Pairing PDU leads to PTS test TC_BV_04_C Failure. Patched Functions: smpc_send_pairing_req_ind(), smpc_check_pairing_feat(), smpc_pairing_cfm_handler(). smpc_pairing_cfm_handler() patch was updated to fix hard fault when SMPC_PAIRING_CFM is received after the passkey entry procedure has timed out.
4	**Channel Map update** When operating as a slave and the Slave Latency of an established connection is not 0 then upon reception of an LL_CHANNEL_MAP_UPD or LL_CONN_PARAMS_UPD message with a connInstant value set at a “latency anchor point”, the connection is dropped immediately at the next wake-up. If the connInstant is set at a “connection anchor point” that the 580 has scheduled to wake-up to serve it then no problem occurs. The patched functions are: llc_con_update_req_ind() and llc_ch_map_req_ind().
5	**Enable broadcast mode for connected peripheral, Support Multiple “Service Data” structures in AD** BLE 4.0 specification permits a peripheral to be connected to a central and perform non-connectable advertising at the same time (this is required by CPP tests in PTS). The stack did not allow this. BLE 4.0 specification permits multiple instances of “Service Data” structures in AD. The stack allowed only 1 instance of this AD type. The patched function is gapm_adv_op_sanity()
6	**Prohibit a peripheral device from sending llcp_start_enc_rsp and data packets in the same connection event** The patched function is llc_start_enc_rsp_ind()
7	**FIX wrong LLC state set** The patched function is llc_llcp_tx_cfm_handler()
Documentation	
1	Software documentation for Dialog Serial Port Service application is available on Dialog customer support portal The document reference number is UM-B-038.

2.3 Comments

The Dialog Serial Port Service application software runs on all Dialog’s Development Kit designs (Expert-Basic – Pro). Due to the lack of any flow control method on the current Segger J-Link driver, on the DK-Basic an external Serial to USB converter must be used. If the user wants to boot DA14580 from SPI flash then the UART signal pin assignment must be modified because there is a conflict with the SPI flash signals.

The release file contains only the Dialog Serial Port Service software. The customer must refer to SDK 3.0.6 release or later for the supplementary applications i.e. production test, etc

2.4 MAJOR Release Files

File Name	Description
DA1458x_DSPS_v_5.150.2.zip	RELEASE FILE
DA14580_Software_Release_Notes_DSPS_v_5.150.2.doc	RELEASE NOTES

3.0 Release History

3.1 Version 3.150.2

#	DESCRIPTION
FEATURES	
1	Initial Version
BUG FIXES	

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. 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. The branch number for Dialog Serial Port Service reference design is 150.
#MINOR: Odd numbers indicate Engineering (or Patch) versions, even numbers indicate Full release versions. Each release increases this number by one. After the 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.