

User Manual

DA16200 SDK Porting Guide

UM-WI-045

Abstract

This document describes changes in SDK structure and IAR projects in DA16200 SDK v2.3.4.0 to make porting for the user easier compared to the previous version.

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1 References

- [1] DA16200, EVK User Manual, User Manual, Dialog Semiconductor
- [2] DA16200, Example Application Manual, User Manual, Dialog Semiconductor

2 Introduction

This document describes changes in SDK structure and IAR projects in DA16200 SDK v2.3.4.0 to make porting for the user easier compared to the previous version.

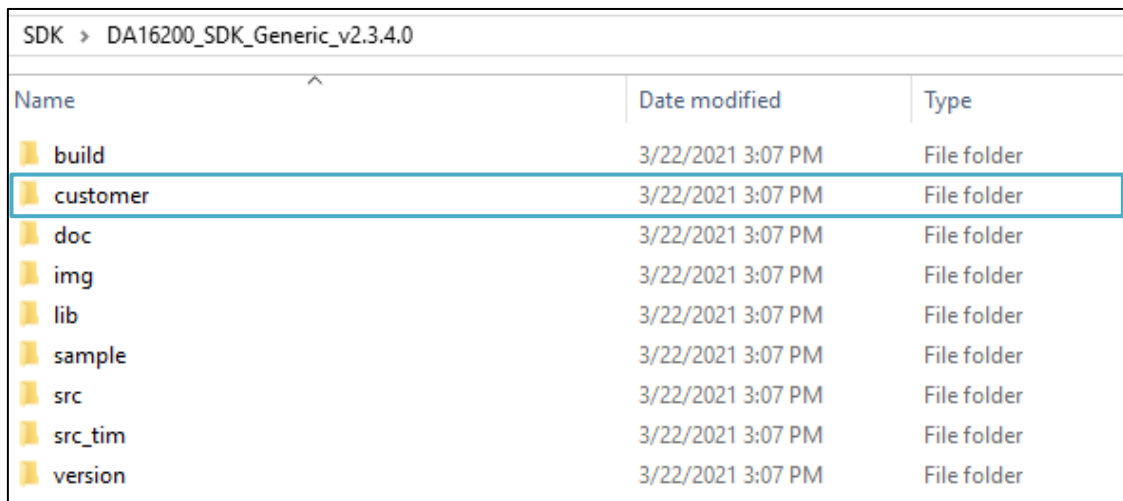
3 SDK Structure

The DA16200 SDK v2.3.4.0 has eight folders:

- **build**: build scripts, temporary build artifacts, or environment files
- **customer**: IAR project files and applications for customer
- **doc**: user documents (user guides, programmer guides, etc)
- **img**: to which the images built / pre-compiled are copied
- **lib**: to which the pre-compiled lib files (.a) are saved
- **sample**: to demonstrate common use cases of what the DA16200 SDK provides
- **src**: core source codes
- **src_tim**: source codes for TIM
- **version**: version files to include when Image created

3.1 Changes in SDK Structure

DA16200 Generic SDK v2.3.4.0 adds the new customer folder for customer code to be developed independently of the SDK core code.



Name	Date modified	Type
build	3/22/2021 3:07 PM	File folder
customer	3/22/2021 3:07 PM	File folder
doc	3/22/2021 3:07 PM	File folder
img	3/22/2021 3:07 PM	File folder
lib	3/22/2021 3:07 PM	File folder
sample	3/22/2021 3:07 PM	File folder
src	3/22/2021 3:07 PM	File folder
src_tim	3/22/2021 3:07 PM	File folder
version	3/22/2021 3:07 PM	File folder

Figure 1: SDK Structure in v2.3.4.0

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3.2 Customer Folder

The user application codes of v2.3.4.0 are combined in new customer folder that is composed of three sub-folders:

- **apps**: user application code and header files
- **main**: start code and configuration header files
- **project**: customer SDK project files

SDK > DA16200_SDK_Generic_v2.3.4.0 > customer		
Name	Date modified	Type
apps	3/22/2021 3:07 PM	File folder
main	3/22/2021 3:07 PM	File folder
project	3/22/2021 3:07 PM	File folder

Figure 2: New Customer Folder in v2.3.4.0

3.3 User Application Codes

The user application codes of v2.3.3.0 are distributed in several folders.

SDK > DA16200_SDK_Generic_v2.3.3.0 > src > application		
Name	Date modified	Type
dpm	1/28/2021 5:50 PM	File folder
inc	1/28/2021 5:50 PM	File folder
system_apps	1/28/2021 5:50 PM	File folder
user_command	1/28/2021 5:50 PM	File folder
user_http	1/28/2021 5:50 PM	File folder

SDK > DA16200_SDK_Generic_v2.3.3.0 > src > customer > customer_code > src		
Name	Date modified	Type
hello_world.c	12/15/2020 9:18 PM	C File

Figure 3: User Application Code in v2.3.3.0

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The user application codes of v2.3.4.0 are combined in \customer\apps\src folder.

SDK > DA16200_SDK_Generic_v2.3.4.0 > customer > apps > src		
Name	Date modified	Type
hello_world.c	3/10/2021 7:10 PM	C File
user_apps.c	3/10/2021 7:10 PM	C File
user_atcmd.c	3/10/2021 7:10 PM	C File
user_command.c	3/10/2021 7:10 PM	C File
user_dpm.c	3/10/2021 7:10 PM	C File
user_gpio_handle.c	3/10/2021 7:10 PM	C File
user_http_client.c	3/10/2021 7:10 PM	C File
user_http_server.c	3/10/2021 7:10 PM	C File
user_nvram_cmd_table.c	3/10/2021 7:10 PM	C File
user_softap_provision.c	3/10/2021 7:10 PM	C File
user_uart.c	3/10/2021 7:10 PM	C File

Figure 4: User Application Code in v2.3.4.0

4 IAR Project

4.1 IAR Workspace File

The IAR IDE workspace file in v2.3.3.0 is \build\DA16xxx.eww.

SDK > DA16200_SDK_Generic_v2.3.3.0 > build		
Name	Date modified	Type
asic	1/28/2021 5:50 PM	File folder
ldscripts	2/16/2021 12:58 PM	File folder
macros	2/16/2021 12:58 PM	File folder
roms	1/28/2021 5:50 PM	File folder
SBOOT	1/28/2021 5:50 PM	File folder
settings	1/28/2021 5:50 PM	File folder
util	3/15/2021 4:30 PM	File folder
atcmd.dep	3/22/2021 5:38 PM	DEP File
atcmd.ewp	12/15/2020 9:19 PM	EWP File
coap.dep	3/22/2021 5:38 PM	DEP File
coap.ewp	12/15/2020 9:20 PM	EWP File
common_host.dep	3/22/2021 5:38 PM	DEP File
common_host.ewp	12/15/2020 9:18 PM	EWP File
customer_app.dep	3/22/2021 5:38 PM	DEP File
customer_app.ewp	12/15/2020 9:18 PM	EWP File
DA16xxx.eww	12/15/2020 9:20 PM	IAR IDE Workspace

Figure 5: IAR IDE Workspace File in v2.3.3.0

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The IAR IDE workspace file in v2.3.4.0 is \customer\project\DA16xxx.eww.

SDK > DA16200_SDK_Generic_v2.3.4.0 > customer > project		
Name	Date modified	Type
asic	3/22/2021 3:07 PM	File folder
settings	3/22/2021 3:07 PM	File folder
atcmd.dep	3/19/2021 4:18 PM	DEP File
atcmd.ewp	3/10/2021 7:10 PM	EWP File
coap.dep	3/19/2021 4:18 PM	DEP File
coap.ewp	3/10/2021 7:10 PM	EWP File
common_host.dep	3/19/2021 4:18 PM	DEP File
common_host.ewp	3/10/2021 7:10 PM	EWP File
customer_app.dep	3/19/2021 4:18 PM	DEP File
customer_app.ewp	3/10/2021 7:10 PM	EWP File
DA16xxx.eww	3/10/2021 8:41 PM	IAR IDE Workspace
http.dep	3/19/2021 4:18 PM	DEP File
http.ewp	3/10/2021 7:10 PM	EWP File
iperf.dep	3/19/2021 4:18 PM	DEP File
iperf.ewp	3/10/2021 7:10 PM	EWP File
main.dep	3/19/2021 4:18 PM	DEP File
main.ewd	3/10/2021 7:10 PM	EWD File
main.ewp	3/10/2021 7:10 PM	EWP File

Figure 6: IAR IDE Workspace File in v2.3.4.0

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4.2 IAR Project Structure

The DA16200 SDK v2.3.4.0 has 11 projects:

- **common_host**: Host interface initialize functions project
- **sys_common**: system common project
- **atcmd**: AT commands project
- **http**: HTTP client and server project
- **ota**: Over the air firmware update project
- **mqtt**: MQTT subscriber and publisher project
- **coap**: CoAP client and server project
- **Iperf**: NetX/NetX Duo IPerf project
- **src_tim**: PTIM project
- **customer_app**: customer application project
- **main**: main project



Figure 7: IAR Project Structure in v2.3.3.0



Figure 8: IAR Project Structure in v2.3.4.0

4.3 Change in IAR Project

4.3.1 User Application Code

The user application codes move to customer_app project from main project.

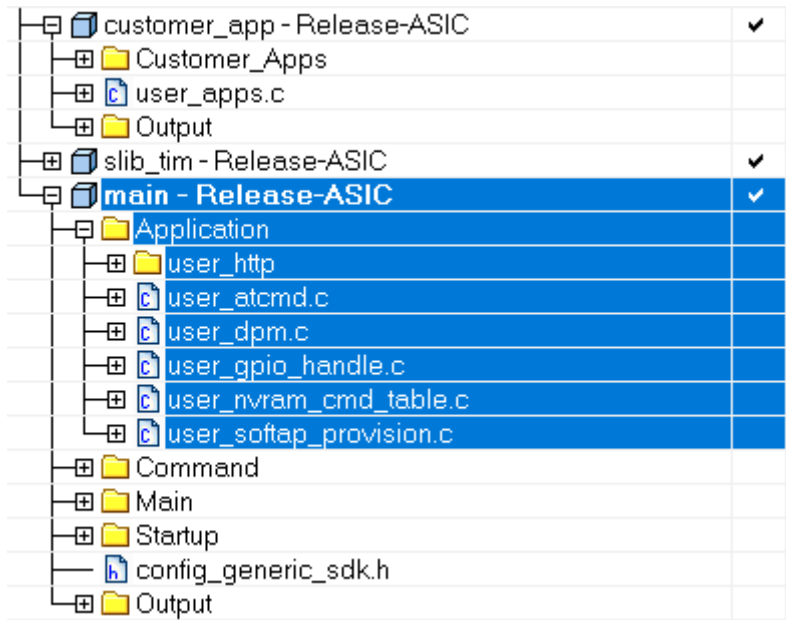


Figure 9: User Application Code in v2.3.3.0

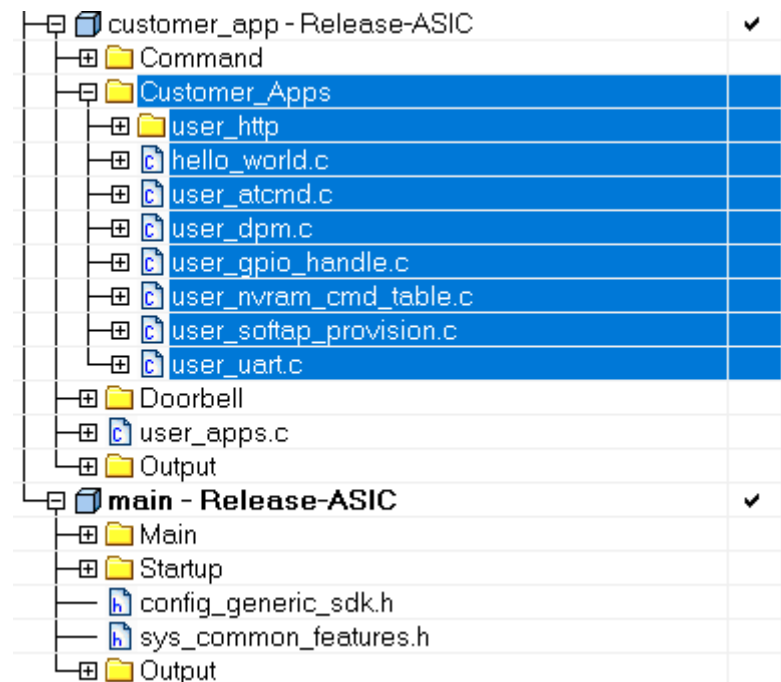
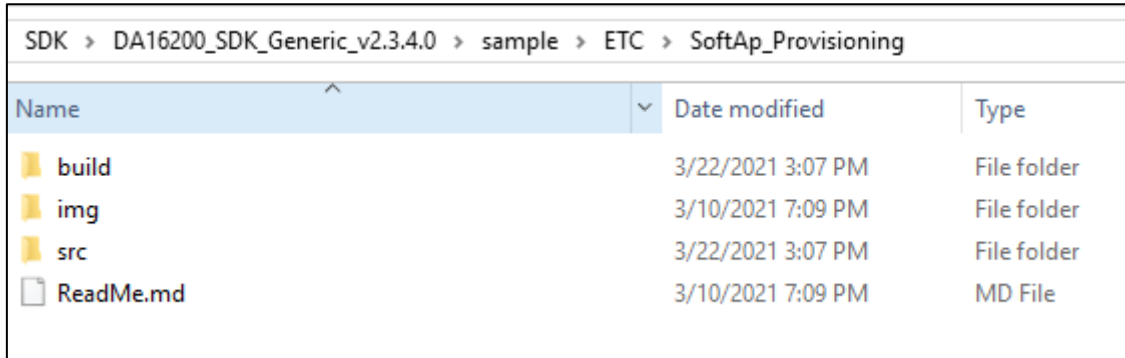


Figure 10: User Application Code in v2.3.4.0

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4.3.2 Provision Project

The provision project moves to the sample project of \sample\ETC\SoftAp_Provisioning.



SDK > DA16200_SDK_Generic_v2.3.4.0 > sample > ETC > SoftAp_Provisioning		
Name	Date modified	Type
build	3/22/2021 3:07 PM	File folder
img	3/10/2021 7:09 PM	File folder
src	3/22/2021 3:07 PM	File folder
ReadMe.md	3/10/2021 7:09 PM	MD File

Figure 11: Provision Project Location in v2.3.4.0

Revision History

Revision	Date	Description
1.0	30-Mar-2020	First Release

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Status Definitions

Status	Definition
DRAFT	The content of this document is under review and subject to formal approval, which may result in modifications or additions.
APPROVED or unmarked	The content of this document has been approved for publication.

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