NXP SDHC Stack Product Brief

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1. Software Product Overview

SDHC (Secure Digital High Capacity) Stack is implemented by NXP in order to provide API for accessing SD bus interface via S32 SDK/RTD uSDHC driver and for accomplishing uSDHC driver and FatFs integration. SDHC delivers solution that can access SD/SDIO/MMC from any vendors.

FatFs is a generic FAT/exFAT file-system module for small embedded systems. The FatFs module is written in compliance with ANSI C (C89) and completely separated fromthe disk I/O layer. Therefore, it is independent of the platform.

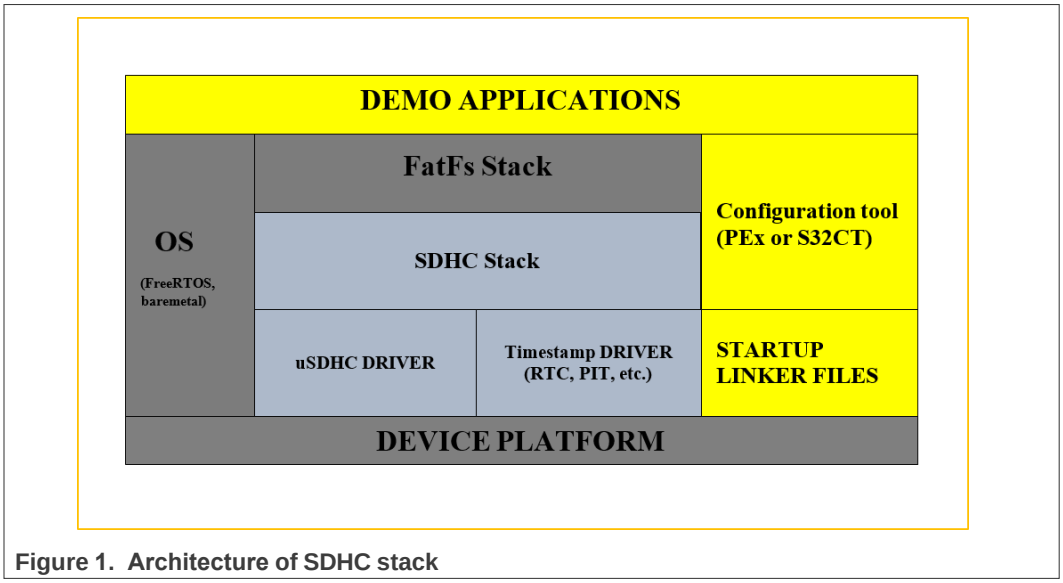

Figure 1. Architecture of SDHC stack

2. Software Content

SDHC stack provides the following application programming interface (API):

- **SDHC API:** The SDHC APIs layer (usdhc_impl) implements initialization of low leveluSDHC driver, callbacks and card detection.

- **FATFS API:** The FATFS APIs layer (usdhc_fatfs_impl) implements file system APIs. This layer is independent on SDHC Stack. It uses Disk I/O interface to communicatewith card. FATFS provides various file-system functions for user application.

3. Supported Targets

The following table shows the supported platforms for SDHC stack.

Table 1. Supported platforms, toolchains, etc.

Product	Devices	Toolchains	IDEs	Supported NXPSoftware	OS
SDHC stack for MPC574XG	MPC574XG	GNU C, GHS, DIAB	S32 Design Studio	SDK drivers for MPC57XX family	FreeRTOS
SDHC stack for S32G274A	S32G274A	GNU C	S32 Design Studio	RTD for S32G	FreeRTOS
SDHC stack for S32V23x	S32V23x	GNU C, GHS, DIAB	S32 Design Studio	SDK drivers for S32V23X family	FreeRTOS
SDHC stack for S32R45	S32R45	GNU C, GHS, DIAB	S32 Design Studio	RTD for S32R45	FreeRTOS
SDHC stack for S32G399A	S32G399A	GNU C, GHS, DIAB	S32 Design Studio	RTD for S32G	FreeRTOS

4. Quality, Standards Compliance and Testing Approach

SDHC Stack is developed according to NXP Software Development Processes that areAutomotive-SPICE, IATF 16949 and ISO9001 compliant.

5. Document Information

Table 2. Revision History

Revision	Date	Description
Rev 1.0	07/07/2021	Initial version
Rev 2.0	07/02/2023	Update

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