X-CUBE-VS4A

ST framework for connecting to Alexa Voice Service, software expansion for STM32Cube

Data brief

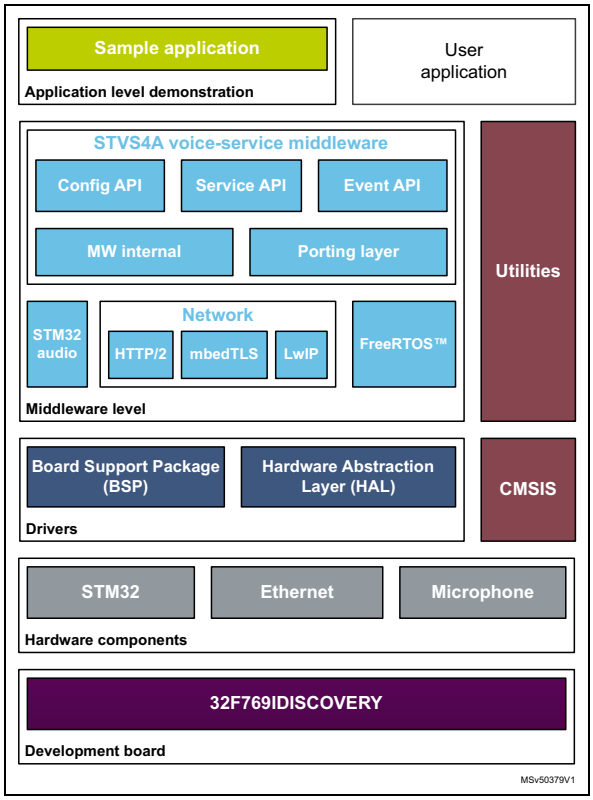
Features

- STMicroelectronics framework for the Alexa Voice Service (AVS)
- Creation of AVS-oriented STM32 applications
- Ready-to-run smart-speaker firmware example
- TCP/IP connectivity
- AVS-protocol encapsulation
- Replaceable basic audio acquisition
- Example of a limited audio player

Description

The X-CUBE-VS4A Expansion Package consists of a set of libraries and application examples for STM32F7 Series microcontrollers acting as Alexa-enabled devices.

It runs on the 32F769IDISCOVERY board, which provides a native Ethernet interface.



Ordering information

X-CUBE-VS4A is available for free download from the *www.st.com* website.

License

X-CUBE-VS4A is delivered under the *Mix Ultimate Liberty+OSS+3rd-party V1* license.

The software components provided in this package come with different license schemes as shown in *Table 1*.

For more details, refer to the license agreement of each component.

Table 1. Software component license agreements

Software component	Owner	License
Cortex®-M CMSIS	Arm®	Open source BSD
FatFS	ChaN	FatFS license (BSD-like license scheme)
FreeRTOS™	2016 Real Time Engineers Ltd	Modified GNU GPL(1)
HAL STM32F7	STMicroelectronics	Open source BSD
HTTP/2	Oryx	Ultimate Liberty (binary release)
Jansson	Petri Lehtinen	MIT
LwIP	2001-2004 Swedish Institute of Computer Science	Open source BSD
mbedTLS	Arm®	Apache® License - Version 2.0
SpiritDSP MP3 decoder	SPIRIT DSP	Image (binary release)
SpiritDSP MP3 wrapper	STMicroelectronics	Ultimate Liberty (source release)
32F769IDISCOVERY BSP drivers	STMicroelectronics	Open source BSD
STVS4A voice-service middleware	STMicroelectronics	Ultimate Liberty (source release)
Project examples	STMicroelectronics	Ultimate Liberty (source release)

1. The FreeRTOS™ source code is licensed by a modified GNU General Public License, the modification taking the form of an exception. The exception permits the source code of applications that use FreeRTOS™ and are distributed as executables to remain closed source, thus permitting the use of FreeRTOS™ in commercial applications without necessitating that the whole application to be open sourced.

The X-CUBE-VS4A Expansion Package runs on STM32 32-bit microcontrollers, based on the Arm®(a) Cortex®-M processor.

arm

a. Arm is a registered trademark of Arm Limited (or its subsidiaries) in the US and/or elsewhere.

Revision history

Table 2. Document revision history

Date	Revision	Changes
21-Mar-2018	1	Initial release.
5-Jun-2018	2	Updated data brief title. Updated STM32Cube Expansion Package reference to X-CUBE-VS4A. Updated voice-service middleware name to STVS4A. Updated *Table 1: Software component license agreements*.