STEVAL-VOICE-UI

Data brief

Voice user interface evaluation kit

Features

- STM32H753VIT6E high-performance MCU with 2 MB embedded Flash, 1 Mb embedded SRAM and in cost-effective LQFP package
- 2.4 GHz Wi-Fi subsystem with Murata 1DX module used in bypass mode coupled to ISSI IS25LP016D 2 MBytes NOR Flash memory
- 3 x MP23DB01HP MEMS microphones with 36 and 30 mm spacing
- FDA903D class D digital input automotive audio amplifier
- 8 Ohm loudspeaker
- 4 RGB LEDs and 4 simple LEDs
- Joystick, reset and user push buttons
- High modularity with mother/daughter board
- Small 36x65 mm² footprint with simple and cost-effective PCB design

Description

The STEVAL-VOICE-UI Amazon™ qualified evaluation kit is designed to allow evaluation of a cost-effective way to integrate AVS for AWS IoT Services® into smart devices, so they can implement state-of-art, hands-free voice control based on natural language comprehension.

Users will therefore enjoy a heightened experience with target IoT end products, with the ability to talk to Amazon Alexa® and control smart home devices, get assistance, listen to the news, check the weather forecast, play music, etc.

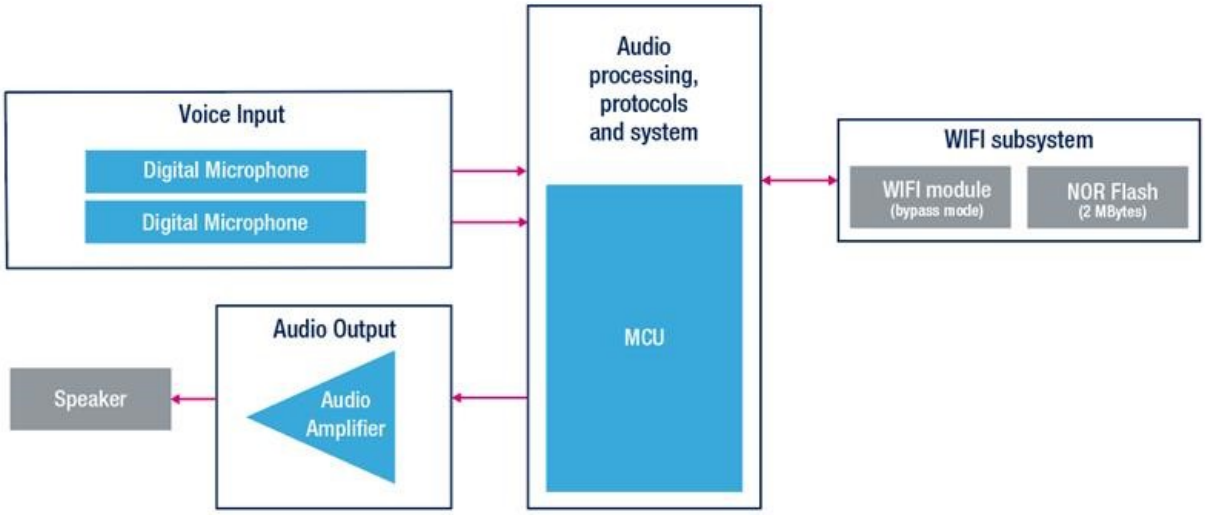
The software package implements audio front-end, Amazon wake word, audio playback and Amazon Alexa communication protocol software. The SDK runs on internal memories only, offering maximum integration and cost-effective solutions.

The STEVAL-VOICE-UI is built with a modular approach for easy prototyping and debugging purposes as well as easy adaptation to specific microphone spacings, user interface and audio output requirements.

Product summary	
Voice user interface evaluation kit	STEVAL-VOICE-UI
High-performance ARM Cortex-M7 MCU with DP-FPU	STM32H753VIT6E
MEMS Multi performance mode digital microphone with same sensitivity value for each operative mode	MP23DB01HP
1 x 45 W class D digital input automotive power amplifier	FDA903D
Applications	IoT for Smart Home and City IoT for Smart Things

1 Block diagram

Figure 1. **STEVAL-VOICE-UI functional block diagram**



Revision history

Table 1. Document revision history

Date	Version	Changes
09-Nov-2020	1	Initial release.