Smart Voice Gateway SS190

Smart Product Solutions > Voice Products > China online Voice >

Domestic Voice Speaker Solution

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Contents

As the core component of SS190 AI Voice Gateway, users can not only have the function of an intelligent speaker by using the RK3308-SS190, but also an intelligent voice gateway that integrates the functions of multiple gateways after matching related components based on SS190 PCB. Among them, the multi-gateway contents include wi-fi, infrared, and Zigbee gateway functions. In the home can be used as a multi - gateway alternative products. In the home can be used as a multi - gateway alternative product.

1 Overview

With different transport protocols, it can be connected to home. By virtue of its features of low cost, beautiful appearance, and easy operation, this product has been widely used in the family and is of great significance to the family's inventory of electrical appliances.

1.1 Product appearance

[image-20200319103845967](/Users/iven512/Library/Application Support/typora-user-images/image-20200319103845967.png)

1.2 Functional features

- IR gateway +Zigbee gateway +AI speaker, 3 in 1 form product

- 5 m long-range pickup, built-in "xiao zhi guan jia"

- Integrated Zigbee 3.0 gateway, supports more than 100 sub-devices

- Integrated IR gateway, supports most infrared devices

- IoT voice skills, smart control Powered by Tuya

- Support QQ music, audiobooks, encyclopedia, q&a, and other rich content

- An APP implements the distribution network of speakers and IoT devices, supporting custom scenarios and automation

- Support wake-up word customization, voice skills customization, APP customization, packaging material customization, and other value-added services

- Support for telephone (operator version, such as China unicom, Telecom)

2 Product model

2.1 Product diagram

2.2 Product hardware configuration

- Quad-core A35 main control, 1.3ghz main frequency, 128MB flash, 128MB DDR3

- 2.4g wi-fi supports IEEE 802.11b/G /n protocol, and BT4.2 supports A2DP music playback

- Zigbee 3.0 gateway function, actual mount more than 100 devices, linear distance more than 100 meters

- Infrared control and infrared learning function, built-in 7 large power Angle infrared transmitting tube, 360 degree space coverage, effective control distance of about 10 meters

- 5 buttons, volume +, volume -, play/pause, disable mic, and button to wake up. Red and blue indicator light

- 4 silicon - wheat arrays

- 2.0 inch, 3W, 4 OHM full frequency horn

- 5V2A, Micro USB interface power supply

2.3 Product specification

Product model	RK3308-SS190
Power Input	5V ⎓ 2A
Maximum Power	10W MAX
Interface Type	Micro USB (Data transfer is not supported)
Working Temperature	0℃-40℃
Working Humidity	4%-90%RH
Mic	4 Mic SNR 65dBA
Speaker	2 inch, 3W MAX
Wireless protocol	Wi-Fi, BT4.2, IR (control + learning), Zigbee 3.0
Product size	85*85*138mm
APP	Android 4.0/IOS 8.0 and above

2.4 RF parameters

2.4.1 Wi-Fi

Standards	IEEE802.11 b/g/n
Rate	150Mbps

Standards	IEEE802.11 b/g/n
Antenna	1T1R
Frequency	2.4G:2.400~2.4835GHz

2.4.2 IR

Carrier Frequency	38KHZ
Transmitting Tubes	7
Receiving Tubes	1
IR Control Range	≤8m, Affected by the environment
IR Coverage	Hemisphere 360 degrees

2.4.3 Zigbee

Frequency	2.400~2.484GHz
Standards	IEEE 802.15.4
Rate	250Kbps
Antenna	On-board antenna
Range	>100m

TX Continuous transmission performance

Item	Min	Typical	Max	Unit
Power Output Max	-	+19	-	dBm

Item	Min	Typical	Max	Unit
Power Output Min	-	-30	-	dBm
Output Power Adjustment Step	-	0.5	1	dB
Frequency Error	-15	-	+15	ppm
Output Frequency Rejection		-31		dBc

RX Reception sensitivity

Item	Min	Typical	Max	Unit
PER<10%, RX sensitivity, 250Kbps@OQP	-102	-100	-99	dBm

3 Function introduction

3.1 Indicator light description

Red and blue lights alternate	Wi-fi configuration status
Blue light stays on for 2 seconds	Command operation successful
Normally on a red light	Disable microphone
Blue light breathes slowly	Listening/connector subdevice
Red light breathes slowly	Wi-fi anomalies

3.2 Speech skills

Wake word	Support wake word customization, multi - wake word
Quick instructions	Support common household appliance shortcut instruction
Voiceprint recognition	N/A
Several rounds of talks	support
ASR	Speech, compatible with other algorithm companies
NLP	Relying on the ability of Tuya voice platform
TTS	Speech
Music playback	Docking library, QQ
IoT control	Relying on Tuya IoT platform capability, support IR control, Zigbee (optional)
Life assistant	Based on the basic content of Speech and Tencent Dingdang

Wake word	Support wake word customization, multi - wake word
Audiobooks	Based on the basic content of Speech and Tencent Dingdang

3.2.1 IoT devices voice control

Device Connection	Category
IR (standard)	Set-top box, TV, air conditioner, network box, fan, DVD, etc
Wi-Fi (standard)	Security, sensor, socket, switch, light bulb, sweeper, air cleaner, door lock, camera, air conditioner, refrigerator, small appliances, kitchen appliances, etc
Zigbee (optional)	Socket, switch, light bulb, sweeper, air cleaner, door lock, camera, air conditioner, refrigerator, small household appliances, kitchen appliances, thermostat, sensor, alarm, door magnet, emergency button, etc
Sigmesh (optional)	Socket, switch, light bulb, sweeper, air cleaner, door lock, camera, air conditioner, refrigerator, small household appliances, kitchen appliances, thermostat, sensor, alarm, door magnet, emergency button, etc

4 Product use

4.1 Configure the network

- Download the qr code on the instruction manual or outside the box, download the Tuya Smart app.
- Connect the power to the AI Voice Gateway through the power adapter and wait for the boot.
- After then AI Voice Gateway is turned on, connect the device to Wi-Fi according to the prompts of the voice gateway and APP.

4.2 Wakeup AI voice gateway

After the success of the distribution network, you can wake up the voice gateway to say your instructions through the "xiaozhiguanjia".

[image-20200319111927535](/Users/iven512/Library/Application   Support/typora-user-images/image-20200319111927535.png)

4.3 Bluetooth speaker function

- After waking up, switch to bluetooth mode by voice.
- Enter the cell phone bluetooth device menu, and then bluetooth device list, search for "SS19 Speaker" device.
- After selecting the connection, music on the phone can be played through the AI Voice Gateway.

5 Packing list

PCBA *1