

embed WiFi Target: UNO 91H

RDA

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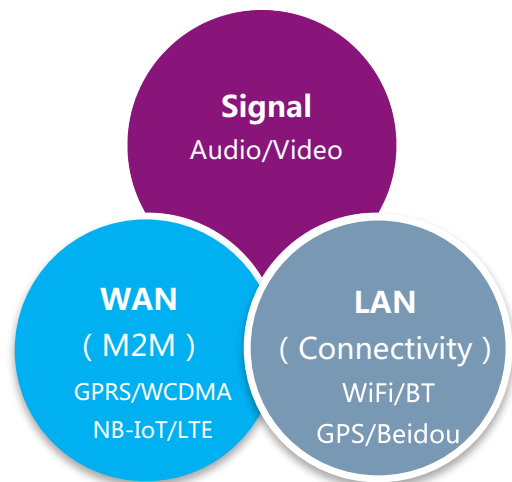
Introduction

Introduction



- Design
- Innovation
- Products
- Marketing

Introduction



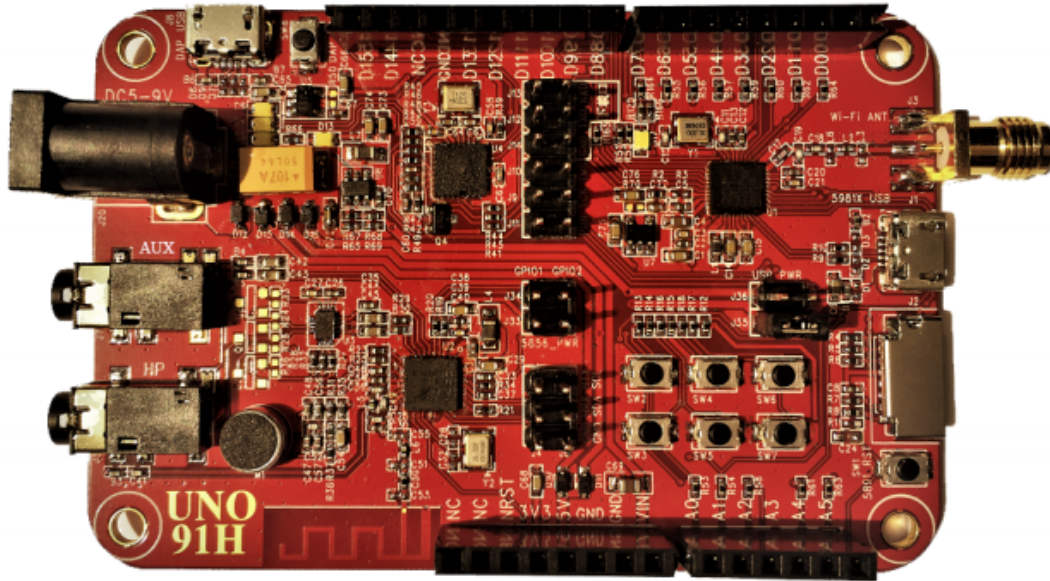
Technologies:

- RF, PA, PMU
- 2G/3G/4G Modem
- Wi-Fi, BLE
- Audio, ISP
- GPS
- Security



UNO 91H Board

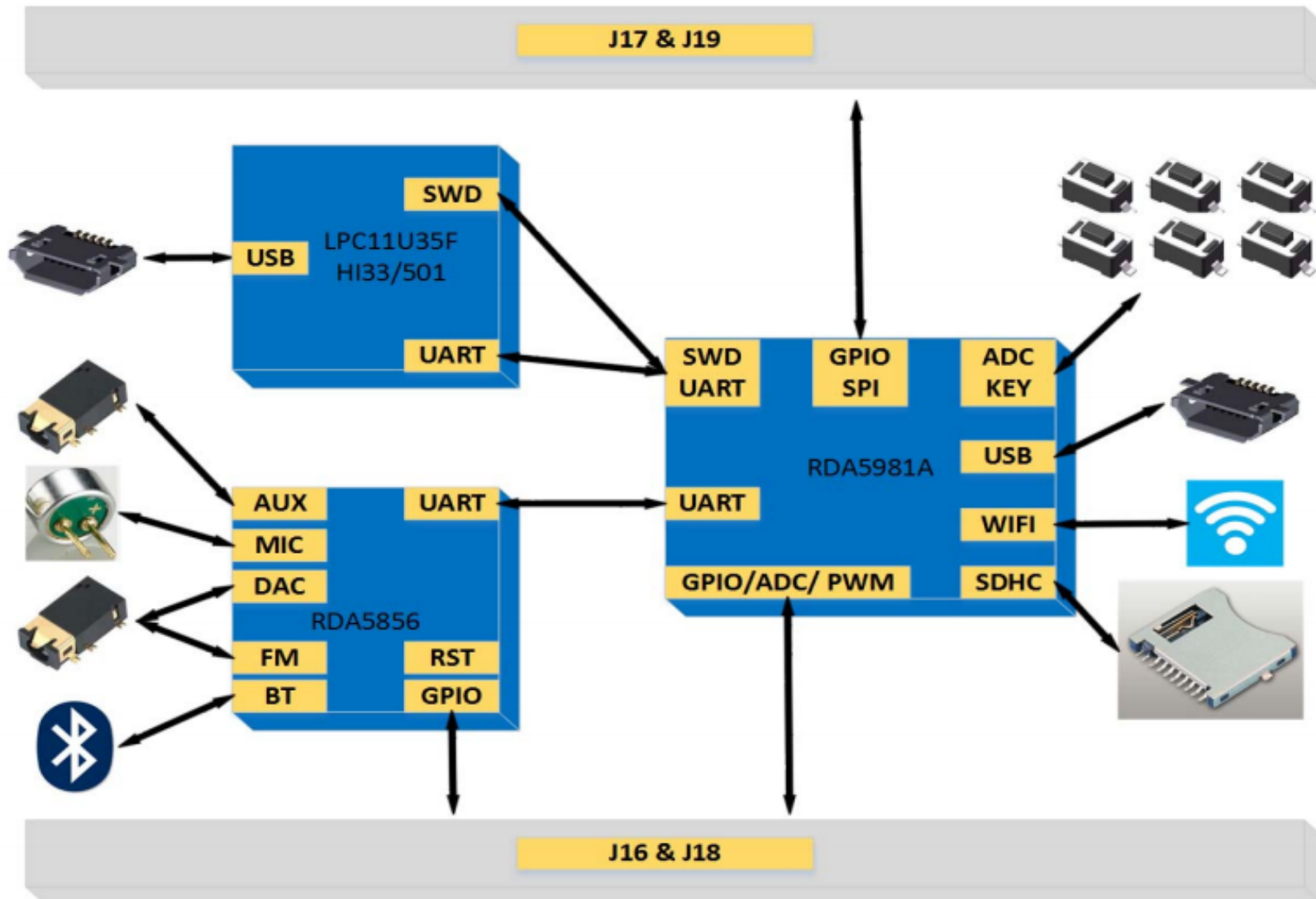
UNO 91H Board



Details:

- DC 5V/USB
- 3.3V IO
- Wi-Fi/Bluetooth
- Codec/MIC/HP
- SD Card
- Key Pad
- DAP

UNO 91H Board



Wi-Fi Features:

- CMOS single chip fully-integrated radio/PHY/MAC
- Internal PA, LNA
- 2.4GHz IEEE 802.11b/g/n
- 20/40MHz bandwidth
- Support WEP/WPA/WPA2
- Support WPS/WMM/A-MPDU
- Dynamic TX power saving



MCU Features:

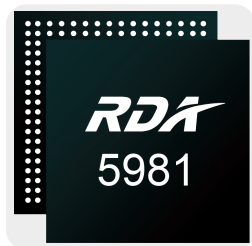
- ARM cortex-M4F, @160MHz
- Up to 288K-Byte internal SRAM for user
- Up to 32M-bit internal Flash
- 160K-Byte SRAM for Wi-Fi stack, Flash cache
- UART/USB/SDMMC/SPI/I2C/I2S/ADC/PWM
- Watchdog and low power timer
- Support Timer/GPIO wakeup
- Hardware crypto accelerator AES RSA
- CRC accelerator and TRNG



RDA5981x

Advantages:

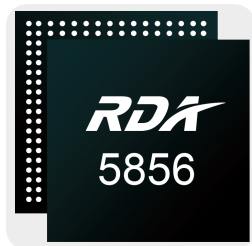
- Small size: compact 5x5mm² QFN-40
- Highly-integrated: internal PMU/LDO/PA/LNA
- Multi-choice: RDA5981A/B/C
- Strong performance
- Large memory
- Rich peripherals
- Hardware accelerators
- Security



RDA5856QE32

Features:

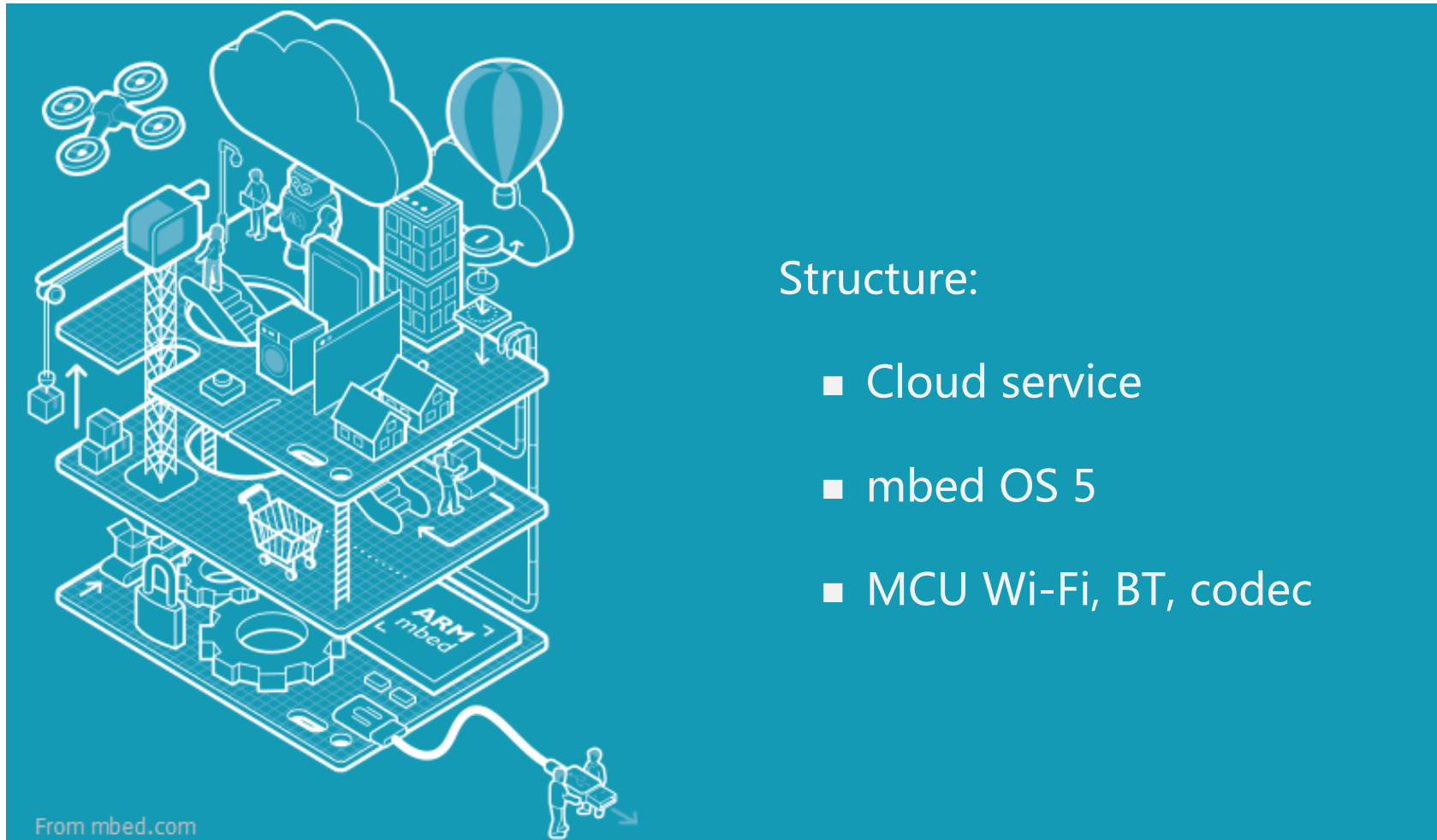
- Bluetooth v4.2, support BR/EDR and BLE
- Integrated broadcast FM tuner
- VoC DSP core @104MHz
- 16 bits voice ADC
- 16 bits stereo DAC
- Support mp3/sbc/wma/aac/m4a/wav/ts/amr
- AT commands





Application

Application



Structure:

- Cloud service
- mbed OS 5
- MCU Wi-Fi, BT, codec

mbed OS 5



■ Cloud



■ Client



■ Connectivity



■ Security



mbed OS 5



Code repositories:

- Support git, hg
- Open Source (Apache-2.0)
- Code structure: RTOS/cmsis/hal/target/feature



Development tools:

- Compiler: armcc, arm-gcc, iccarm
- IDE: Online IDE, Keil, IAR EW, GNU ARM Eclipse
- Python tool: mbed-cli, greentea, htrun
- Configure file: json
- DAP: SWD/VFS/serial



Example



Wi-Fi Audio AI:

- DuerOS

cloud server, client API with TLS

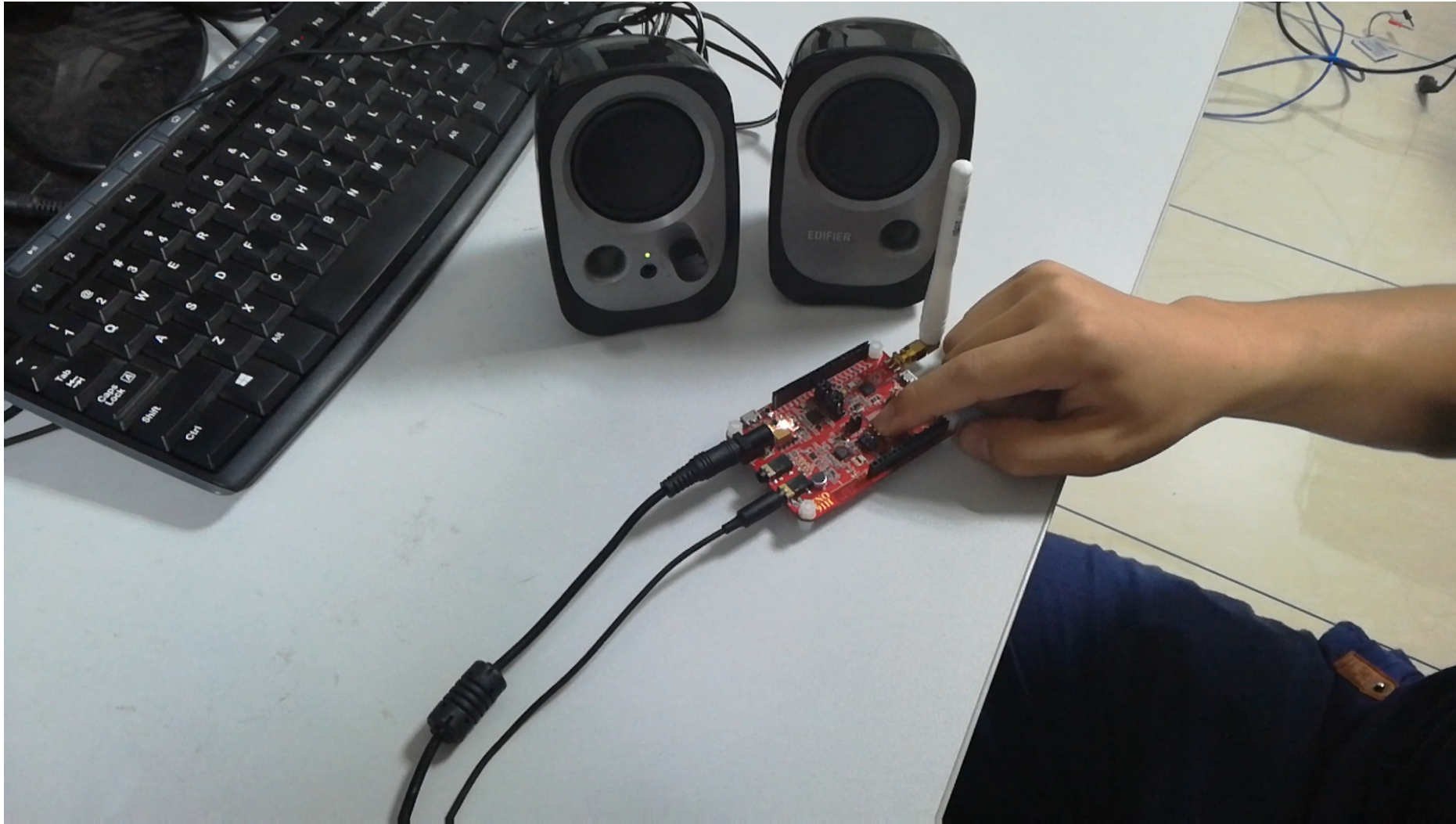
- mbed OS 5:

TCP/IP socket, mbed-tls

- RDA5981/5856:

Wi-Fi, BT, codec, MIC, HP, storage, key pad

Example





Thanks



Visit tech community <http://bbs.rdamicro.com> to learn more.