11n wireless module

BC-PCBA01

User Manual

BOCCO main board specification

Summary

BOCCO

- BOCCO is a wi-fi connected robot designed to keep you connected to your loved ones while you are away from home.
- Send a voice message from the BOCCO app, and he'll play it back at home. Speak into BOCCO, and he'll send a message to other family members' smartphones. You can also send a text message from the app which BOCCO will read out loud.

BOCCO main board (this board)

- BOCCO main board is key parts of BOCCO. This board have Mediatek MT7620 (router-on-a-chip includes an 802.11n MAC and baseband, a 2.4 GHz radio and FEM, a 580 MHz MIPS® 24K™ CPU core) and linux system.
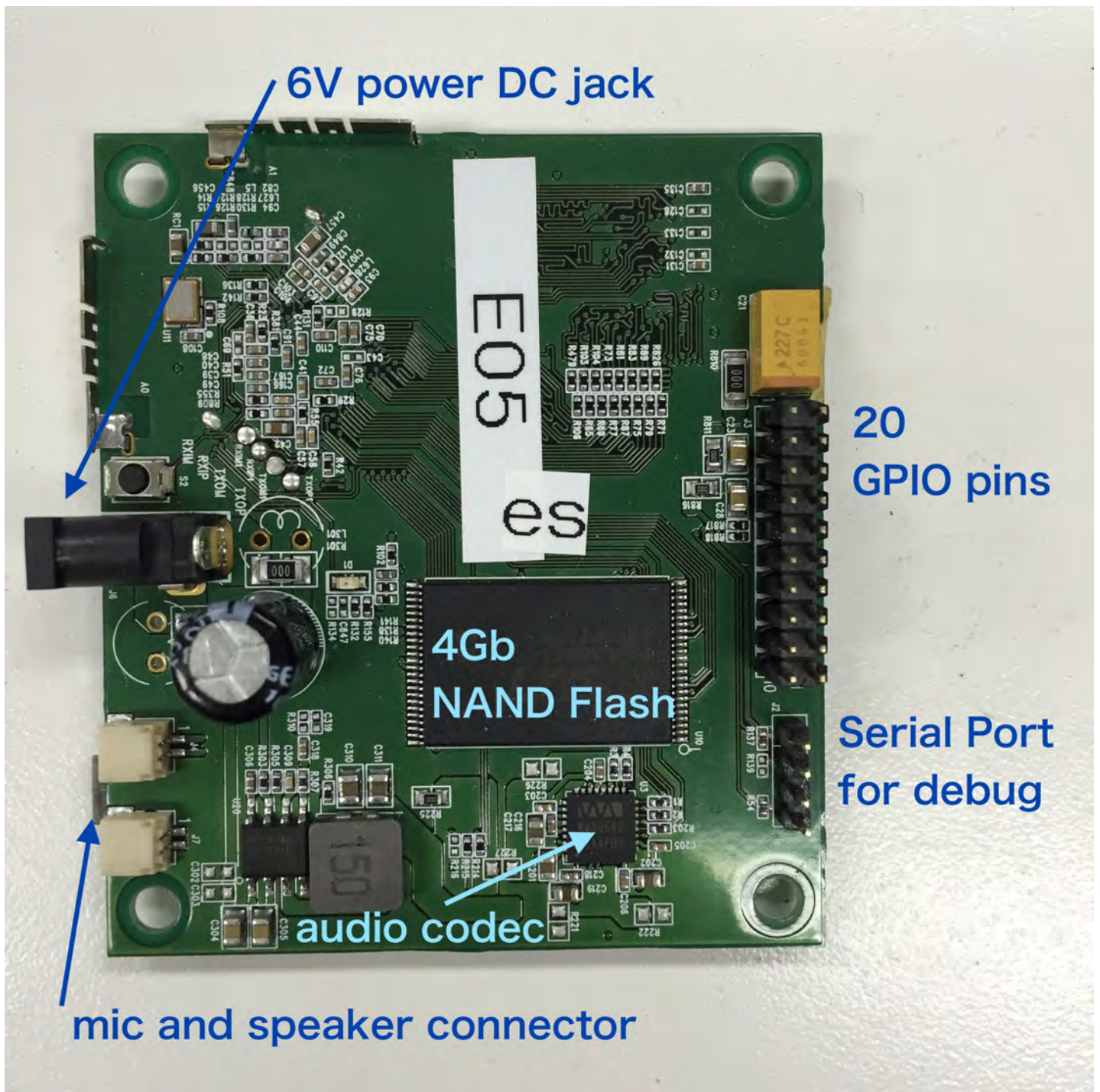
software instalation

- This board have SPI EEPROM and NAND Flash. For SPI EEPROM software image is flashed before PCBA. For NAND Flash, application is installed via Web after assembry.

Board specification

- 6V power DC jack

  - It has DC Jack and connect 6V DC Power.

- MT7620

  - MT7620 includes Wi-Fi module and MIPS CPU. On the chip, linux (OpenWRT) works.
  - For linux system, 2Gb SDRAM, 4Gb NAND Flash and 64Mb SPI Flash are on board.

- mic and speacker connector

  - It has connectors to connect mic and connector.
  - It has an audio codec module and an audio amp. The board can record voice message and play the sounds.

- micro USB interface

- It has USB interface for debug.

- 20 pins

  - It has 20 pin interface. Pins include UART, SPI, GPIO, and VCC / GND.

6V power DC jack

4Gb NAND Flash
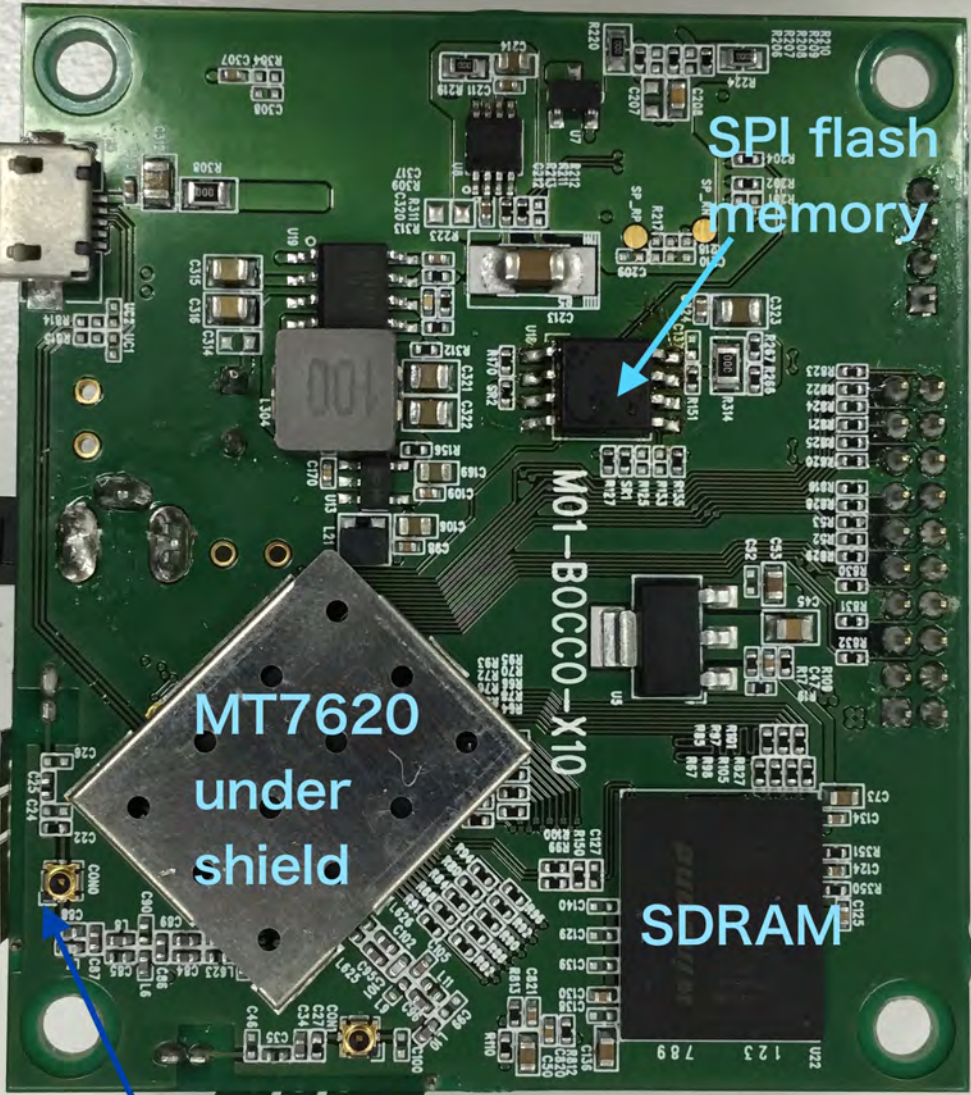
20 GPIO pins

Serial Port for debug

audio codec

mic and speaker connector

USB port for debug

SPI flash memory

MT7620 under shield

SDRAM

Wi-Fi antenna

	Pin			Pin	
6V-raw	1	O O	20	GND-6
6V-raw		O O		GND-35
5V		O O		SPI CS
3.3V		O O		UART1 main rx sub tx
DIO-A		O O		UART1 main tx sub rx
DIO-B		O O		**I2C SCL
SPI CLK		O O		**I2C SDA
*SPI MOSI		O O		DIO-A2
*SPI MISO		O O		DIO-B2
Amp gain res. A	10	O O	11	Amp gain res. B

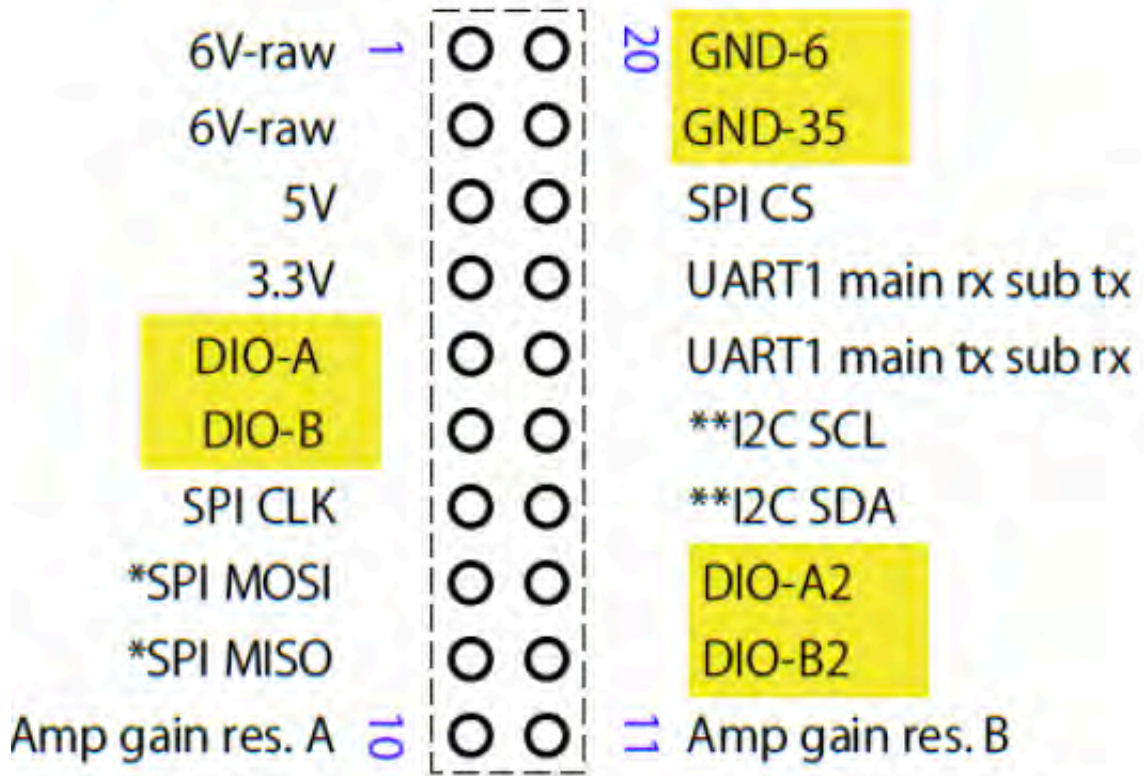## FCC Statement:

Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

● Reorient or relocate the receiving antenna.
● Increase the separation between the equipment and receiver.
● Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
● Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

For product available in the USA/Canada market, only channel 1~11 can be operated. Selection of other channels is not possible.

This device and its antenna(s) must not be co-located with any other transmitters except in accordance with FCC multi-transmitter product procedures.
Refering to the multi-transmitter policy, multiple-transmitter(s) and module(s) can be operated simultaneously without C2P.

IMPORTANT NOTE:

This module is intended for OEM integrator. The OEM integrator is responsible for the compliance to all the rules that apply to the product into which this certified RF module is integrated.

Additional testing and certification may be necessary when multiple modules are used.

20cm minimum distance has to be able to be maintained between the antenna and the users for the host this module is integrated into. Under such configuration, the FCC radiation exposure limits set forth for an population/uncontrolled environment can be satisfied.

Any changes or modifications not expressly approved by the manufacturer could void the user's authority to operate this equipment.

USERS MANUAL OF THE END PRODUCT:

In the users manual of the end product, the end user has to be informed to keep at least 20cm separation with the antenna while this end product is installed and operated. The end user has to be informed that the FCC radio-frequency exposure guidelines for an uncontrolled environment can be satisfied. The end user has to also be informed that any changes or modifications not expressly approved by the manufacturer could void the user's authority to operate this equipment. If the size of the end product is smaller than 8x10cm, then additional FCC part 15.19 statement is required to be available in the users manual: This device complies with Part 15 of FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference and (2) this device must accept any interference received, including interference that may cause undesired operation.

LABEL OF THE END PRODUCT:

The final end product must be labeled in a visible area with the following " Contains TX FCC ID: SJ9BC-PCBA01 ". If the size of the end product is larger than 8x10cm, then the following FCC part 15.19 statement has to also be available on the label: This device complies with Part 15 of FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference and (2) this device must accept any interference received, including interference that may cause undesired operation.

Antenna List

Ant.	Brand	W.Y P/No.	Type	Connector	Gain (dBi)	
					2.4GHz	**5GHz**
Ant1	PSA	M30-01137-000	PIFA	Murata	0.6	N/A
Ant2	PSA	M30-01137-000	PIFA	Murata	2.25	N/A