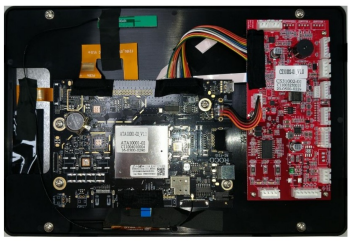

CoreStar F215U Function Board User Manual

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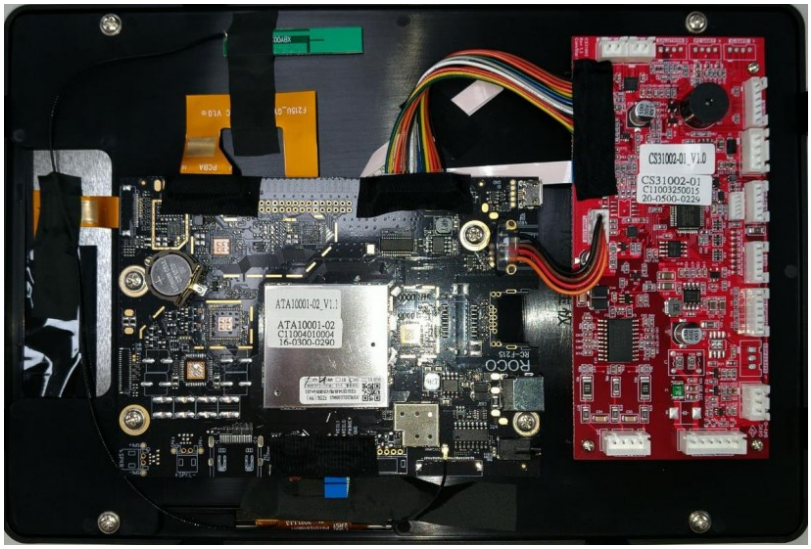

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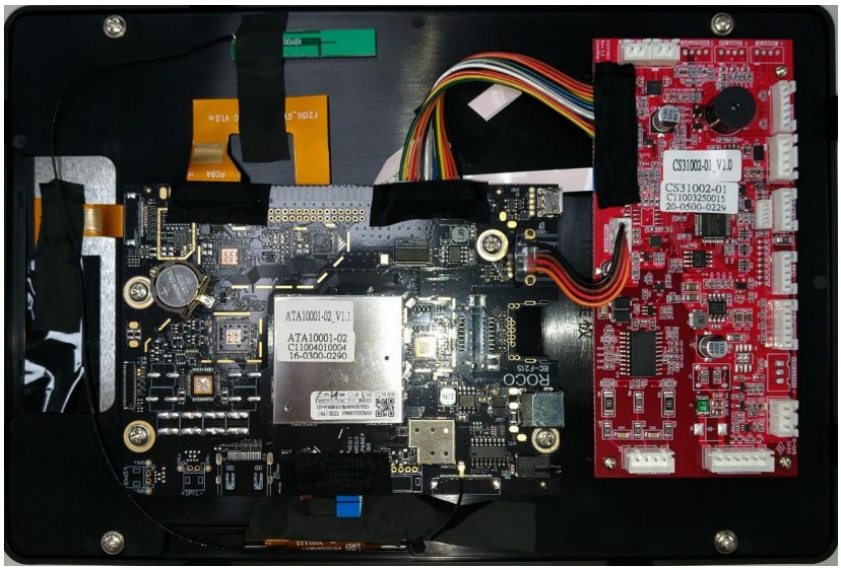
Hardware overview

Main Board PCB Physical Specifications



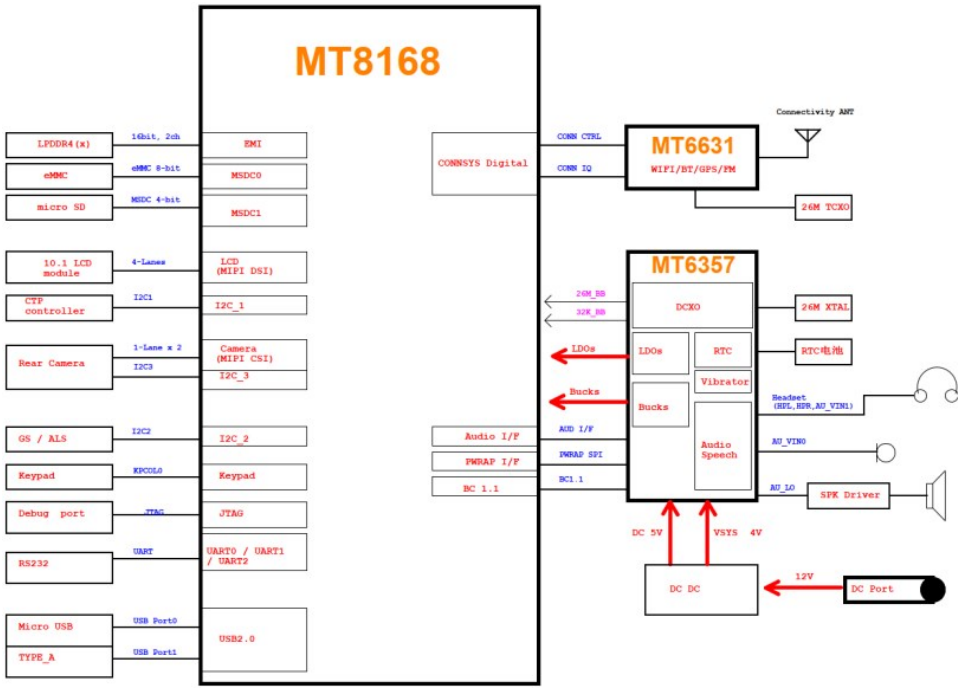
Connector Definitions

Pin No.	Description	Pin No.	Description	Pin No.	Description	Pin No.	Description
1~4	+12V	5~7 10 13	GND	8	+5V	9	+3.3V
Pin No.	**Description**	**Pin No.**	**Description**	**Pin No.**	**Description**	**Pin No.**	**Description**
11	UART Rx	12	UART Tx	14	RS232 Tx	15	RS232 Rx

J2301/**J17** System Key and Headphone connector
CON2501 12V DC Power input
AJ1/**BJ1** Speaker connector
J15 External Line-in socket connector
J2 FAN control connector
J6 External USB socket connector
J10 Keyboard connector
J11 Hand Rail key connector
J5 5Khz Heart rate receiver module connector
J14 Wired heart rate sensor connector
J7 USB bridge connector

Operational description

System block diagram



Processor: MediaTek MT8168, Quad-core ARM® 2.0GHz Cortex-A53 MPCore
Memory: 2GB LPDDR4
Connectivity: 2.4 GHz and 5.0 GHz IEEE 802.11a/b/g/n/ac wireless LAN Supports Bluetooth 5 dual mode 2 × USB 2.0 ports
GPIO: UART * 2 RS232 * 1
Video & sound: HDMI ports * 1(up to FHD supported) 4-lane MIPI DSI display port stereo audio port
Multimedia: Mali-G52 3EE MC1
H.264 decoder: Main/high profile 1080p @60fps/40Mbps
H.264 encoder: High profile 1080p @ 60fps OpenGL ES 3.2/2.0/1.1 OpenCL 2.0 full profile
Input power: The 12V DC power will powered the console and whole system included the RF system.
lifetime: The Model will remain in production until at least January 2026.

Operating frequency : 2142-2472MHz / 5150~5250Mhz support IEEE 802.11b/g/n/a/ac (Frequency Bandwidth : 20MHz / 40MHz/80MHz).

PCB antenna 0.69dbi (2.4GHz) , 1.24dBi(5GHz)

Modulation
BT/BLE GFSK / DSSS
Wi-Fi DBPSK/DQPSK/CCK(DSSS)
System BT can search the A2DP devices manually and connecting to one of them.
User can search Wi-Fi AP manually via system setting menu and connecting to one of them.

FCC WARING 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 or more 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 of the device.

- **FCC RF Radiation Exposure Statement:**
  This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.
- **FCC RF Radiation Exposure Statement:**
  This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Operations in the 5.15-5.25GHz band are restricted to indoor usage only. This device meets all the other requirements specified in Part 15E, Section 15.407 of the FCC Rules. The end product shall has the words “Contains Transmitter Module FCC ID:2ANCG-FU215.

OEM statement
The Original Equipment Manufacturer (OEM) must ensure that the OEM modular transmitter must be labeled with its own FCC ID number. This includes a clearly visible label on the outside of the final product enclosure that displays the contents shown below. If the FCC ID is not visible when the equipment is installed inside another device, then the outside of the device into which the equipment is installed must also display a label referring to the enclosed equipment. The end product with this module may subject to perform FCC part 15B unintentional emission test requirement and be properly authorized while installation to host(s), and platform, and integrator are obligated to have its manual or instruction with the related compliance warning to end users. This device is intended for OEM integrator only The end product with this module may be subject to re-evaluate RF exposure as per 47CFR § 2.1091, and §2.1093 if antenna or usage, including co-located usage of other transmitters, of the subsequent installation are changed.

This radio transmitter has been approved by FCC/Innovation, Science and Economic Development Canada to operate with the antenna types listed below, with the maximum permissible gain indicated. Antenna types not included in this list that Have a gain greater than the maximum gain indicated for any type listed are strictly prohibited for use with this device. Antennas gain: 0.69dBi (2.4G) ,1.24dBi(5G)

Documents / Resources

	CoreStar F215U Function Board [pdf] User Manual F215U Function Board, F215U, Function Board, Board

References

- Welcome to the Health Canada Web site | Bienvenue au site Web de Santé Canada

Manuals+.