

## **Circuit Description**

USB interface is USB Mini-B connector.

Adaptor charger detect is the module which can judge the device is USB device or power adaptor.

USB to USART is the converter of USB to USART.

Battery gauge is the module to measure the capacity of the battery, and the voltage of the battery. It can also be used to measure the charging current and discharge current.

Charging management is the module included charging current management, temperature protection, charging/ discharging path management, bad battery detection.

DC-DC management is the module that converted the voltage of the battery to 3.3V to supply power to WIFI, MCU and RFID module, LCD module and other circuit.

WIFI module is designed to get the data from the MCU STM32F103RG via UART port, and transmit it to the network server through wireless router.

Beep sound when the reader initial, and each time when the key have been pressed, or card plug in the slot of the reader and so on.

LED\_KEY\_EXAPAND module includes the LEDs and Buttons. That is easy for the customer to operate the reader.

RFID module has been designed for the reading tag, it is compliance with ISO15693.

DC-DC\_(28.4V) is the step-up DC-DC converter which have been used for supplying the power to LCD CARD.

LCD Power management is the divided voltage network that supply different voltage to the LCD card to drive the LCD to refresh the content of screen.

Connector PCB is that offer the power to LCD CARD, and I2C BUS to communicate with LCD CARD.

TF card module is that store tag information that read by RFID module.