

MEK-D8945AL LoRa EVK

User Manual

1. Description

MEK-D8945AL is a LoRaWAN™ evaluation kit based on Maxiit's LoRa module DL7812/DL7612 and FT232 chipset. It integrated with the newest version LoRa protocol LoRaWAN 1.1 and LoRaWAN 1.0.2 , support AT command control and secondary development on MCU. Support USB to Serial port, drive-free, adds LoRa connectivity to any windows, Linux or IOS operating systems. It lets IoT (Internet of Things) integrators, network testers, and hobbyists get connected to LoRa® networks faster, diagnose network issues more easily, and build new and exciting connected devices.

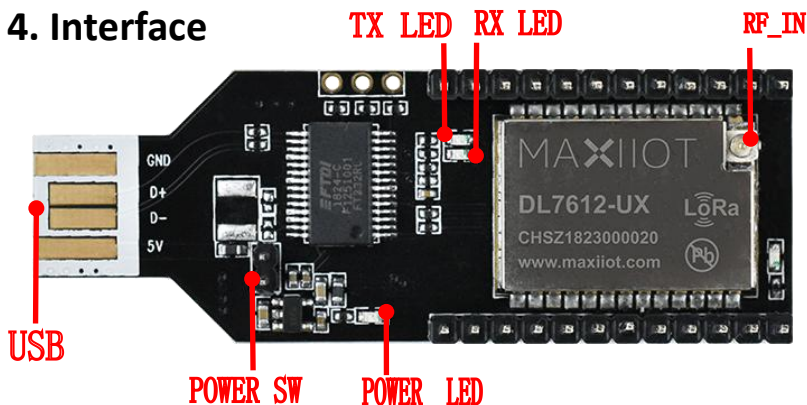
2. Features

- USB – USB 2.0 port, Plug and Play
- Compliance to LoRaWAN™, Support lorawan1.0.2, 1.0.3 or 1.1 protocol ,Class A/B/C
- Support AT command control and secondary development on MCU
- Use more stable SWD debug interface, SPI, GPIO interface reserved
- LoRa Connectivity
 - Maxiit DL7612 – Support EU868MHz/US915MHz/AS923MHz
 - Maxiit DL7812 – Support EU433MHz/CN470MHz
 - Receiver Sensitivity – down to -139 dBm
 - TX Power – adjustable up to +18.6 dBm
 - Range – Effective communication range 3~5 km
 - Power consumption:TBD
- Misc – 3x user LEDs (Tx LED , Rx LED , Power LED)
- Dimensions – 64mm*23mm*12mm(with Pin Header)
- Support Windows, Linux , and IOS operating systems

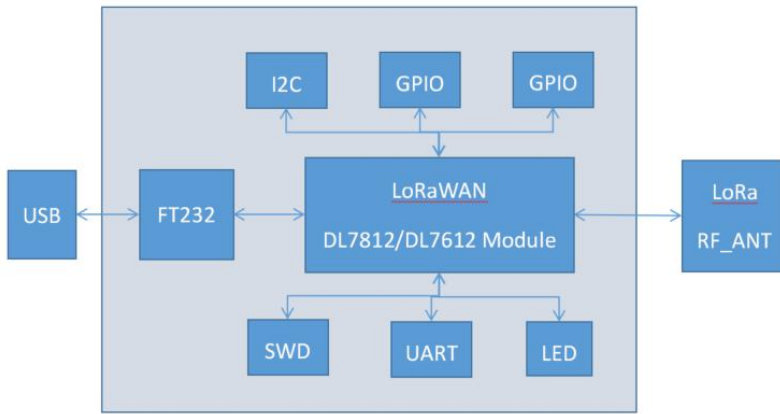
3. Specification

Item	Description	Remark
Module	DL7812/DL7612	
Working environment	Indoor , outdoor	
LoRaWAN™ version	LoRaWAN V1.0.2、 V1.1	
LoRa activation method	ABP/OTAA	
Interface	USB\I2C\GPIO\SPI	
Dimensions	64*23*12mm(with pin header)	
Power consumption	TBD	
Working temperature	-40~+85	

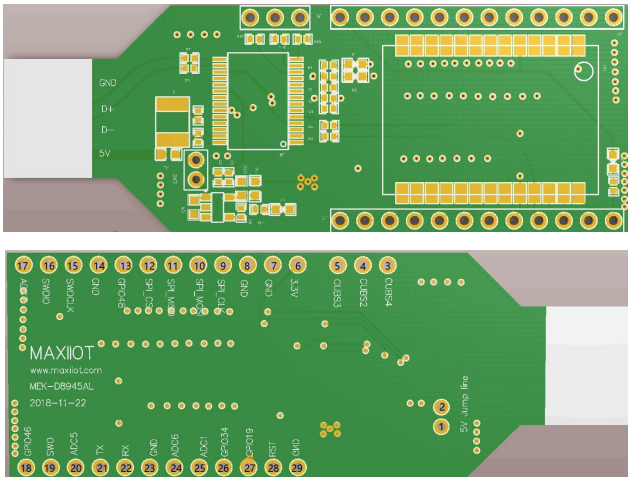
4. Interface



5. Function Block Diagram



6. Pin Arrangement Diagram

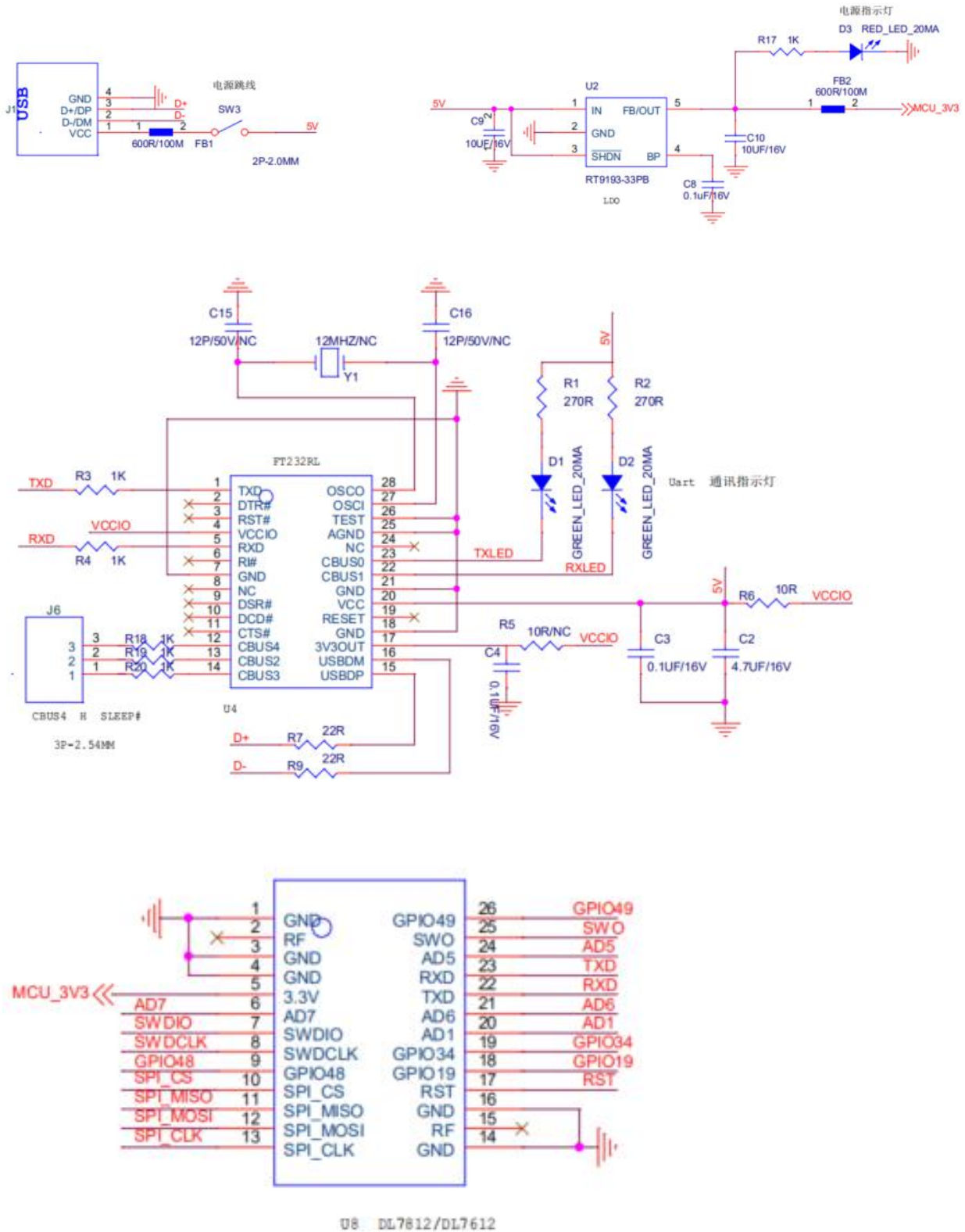


7. Pin Description

No.	Description	Remark
1	5V Jump line	POWER SW
2	5V Jump line	POWER SW
3	CUBS4	
4	CUBS2	
5	CUBS3	
6	+3.3V	
7	GND	
8	GND	
9	SPI_CLK	
10	SPI_MOSI	
11	SPI_MISO	
12	SPI_CS	
13	GPIO48	
14	GND	
15	SWDCLK	
16	SWDIO	
17	GPIO46	
18	NC	
19	SWO	
20	ADC5	
21	TX_UART	

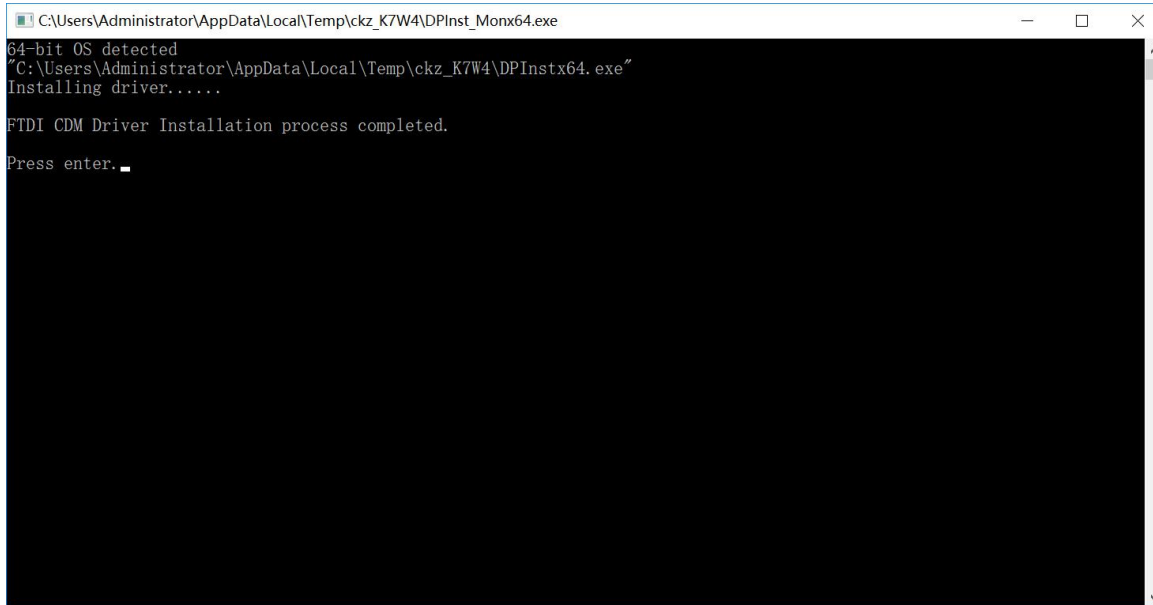
22	RX_UART
23	GND
24	ADC6
25	ADC1
26	GPIO34
27	GPIO19
28	RST
29	GND

8. Reference Circuit

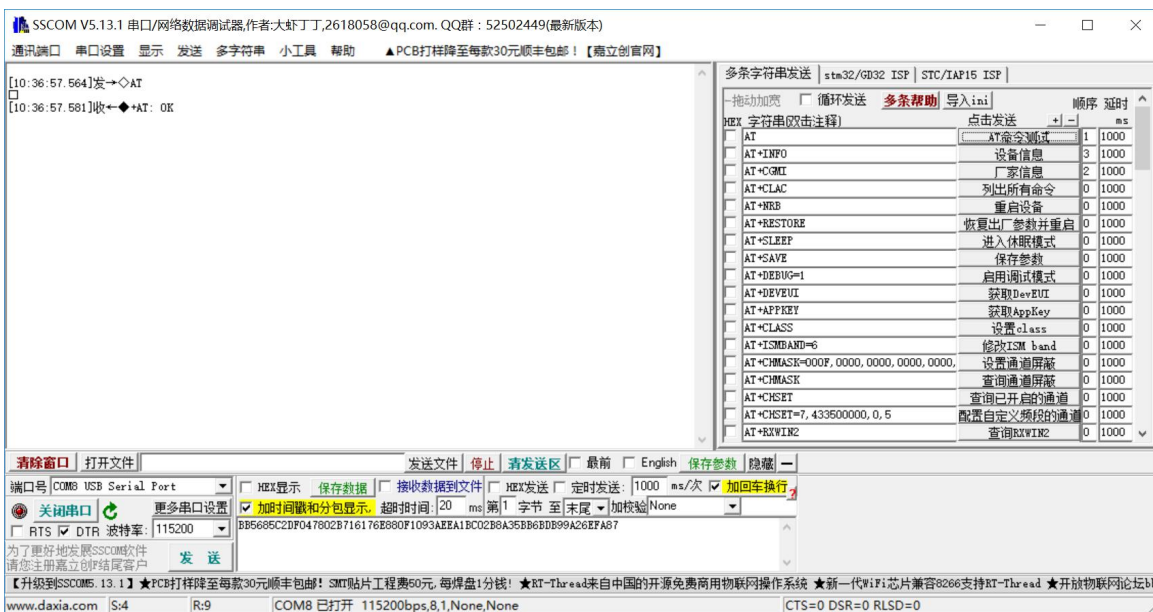


9. Operation Guide

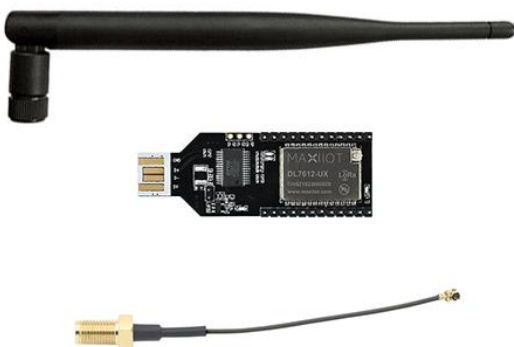
- Connect the EVK with Pigtail cable and rubber antenna. Plug in computer and install FT232RL driver. Power LED indicator flashing.



- Open the serial debugging tool for AT Command operation (Pls take reference to document 《 DL761X&DL781X-AT-CMD-V1.7 》 ,Baud Rate:115200; Byte Size:8 ; Prairy:None ; Data Flow Control:None



10. Package



Package contents

- 1* EVK (Support secondary development)
- 1* LoRa rubber antenna
- 1* ipex/ufl to SMA RF pigtail cable