

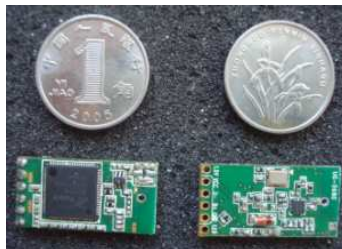
PRODUCT SPECIFICATION

802.11b/g, 54Mbps Wireless LAN

USB interface module

UG5681-X-XX

Version 2.0



Change History:

Revision	Date	Author	Change List

Author:	Approved by:
Editor:	Project Leader:

PRODUCT FEATURES

Introduction

This documentation describes the marketing requirement specification of the 802.11/b/g USB interface mini card module UG5681.

Scope

The 802.11/b/g USB interface mini card module UG5681 is designed to users a secure cost-effective high-speed wireless LAN access anywhere at any time. With seamless roaming, fully interoperability and advanced security with WEP standard, it allow user to switch to different vendors' Access Points through the wireless networks and to prevent from eavesdropping.

The wireless LAN is compliant to IEEE 802.11b and IEEE 802.11g standard. The data rate of 802.11g is up to 54Mbps and fallback rates of 48, 36, 24, 18, 12, 9, 6Mbps. The data rates of 802.11b is up to 11Mbps and fallback rates of 5.5, 2, 1 Mbps. It also provides friendly UI, which include fully interoperability and advanced security with entering WEP key. It can allow user to switch to different vendors' AP.

Function

- Compatible with IEEE 802.11b/g standard.
- Support 64/128 bits WEP, WPA/WPA2, WPA-PSK/WPA2-PSK and IEEE 802.1X standard for security.
- Allow auto fallback data rate for optimized reliability, throughput and transmission range.
- Support Ad-hoc mode (peer to peer) and Infrastructure mode (client-server) communication.
- Drivers support Windows 2000/ XP/Vista/ 7, Windows CE 5.0/6.0 , Linux.
- Auto scan to find AP nearby and show signal strength for each channel.
- Support AES, TKIP, WPA, IEEE 802.1x and CCX.
- Comply with 802.11e. Support WMM and WMM power saving.
- Support WPS (Wi-Fi Protected Security).

Product Specification

Main chipset

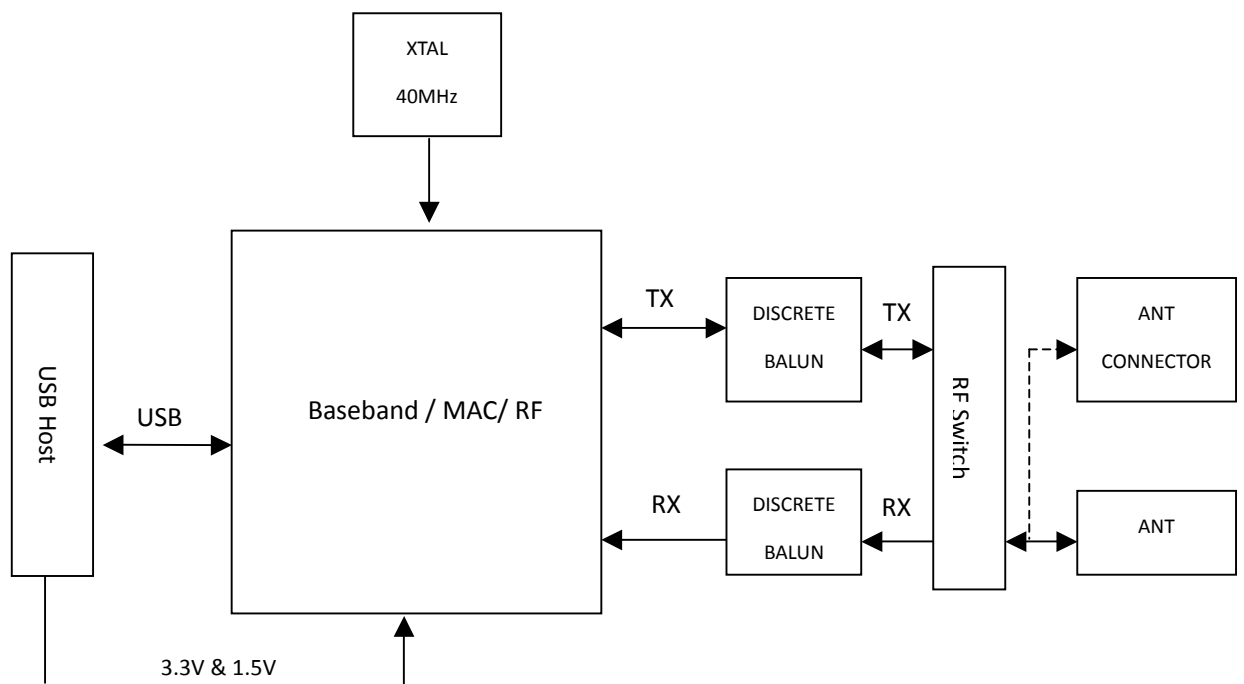
Baseband / MAC/ RF Ralink chipset

Function Specifications

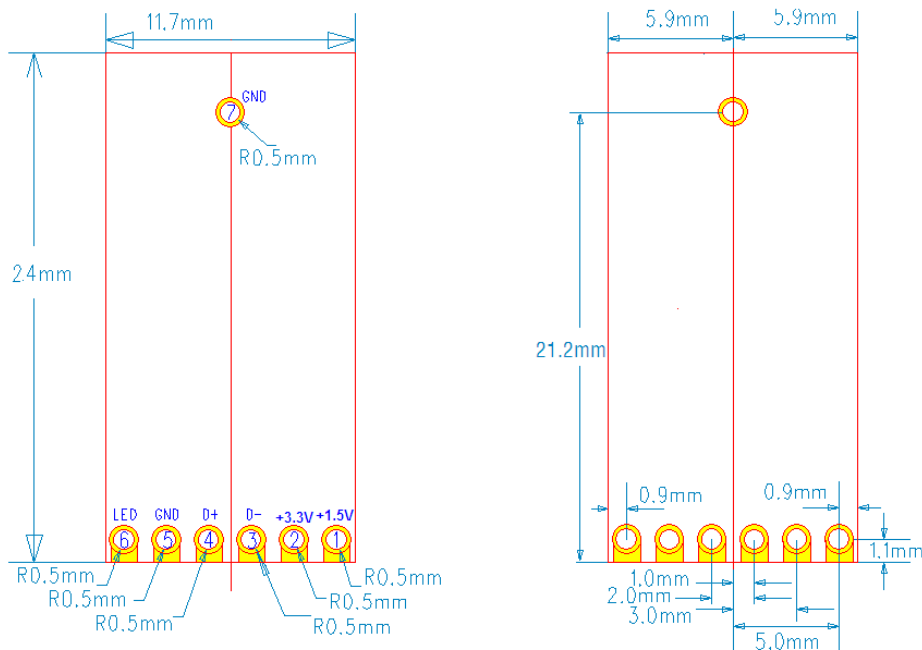
Standard	IEEE802.11b, IEEE802.11g.	
BUS Interface	USB 2.0 interface	
Operation system	Windows 2000/XP/Vista/7, Windows CE 5.0 / 6.0, Linux.	
Dimension	2.4cm X 1.17cm X 0.3cm	
Data Rate	802.11b: 11, 5.5, 2, 1 Mbps 802.11g: 54, 48, 36, 24, 18, 12, 9, 6 Mbps	
Medic Access Control	CSMA/CA with ACK	
Modulation Techniques	802.11b: DSSS (PSK/CCK, DQPSK, DBPSK) 802.11g: OFDM (64QAM, 16QAM, QPSK, BPSK)	
Network Architecture	Ad-hoc mode (peer to Peer) Infrastructure mode	
Operating Channel	11: (Ch. 1-11)-N. America 13: (Ch. 1-13)-Europe 14: (Ch. 1-14)-Japan	
Frequency Range	2.412~2.462GHz-N. America 2.412~2.472GHz-Europe 2.412~2.484GHz-Japan	
Transmit Output Power (Tolerance:+1.5dBm, -1.5dBm)	802.11b 18dBm	802.11g 15dBm
Receiver Sensitivity (Tolerance:+2dBm, -2dBm)	802.11b 11Mbps@8%PER -85dBm	802.11g 54Mbps@10%PER -68dBm
Security	64/128 bit WEP, WPA/WPA2, WPA-PSK(TKIP) / WPA2-PSK(AES)	
Operation Voltage	3.3V ± 5% & 1.5V ± 5%	

Power Consumption @ 3.3V & 1.5V	802.11b	802.11g
	Standby: 150mW	Standby: 100mW
	Tx mode: 500mW	Tx mode: 450mW
	Rx mode: 280mW	Rx mode: 280mW
Transmission Distance	Indoors up to 100m, outdoors up to 300m	
Antenna Type	External antenna	

Block Diagram



Mechanical



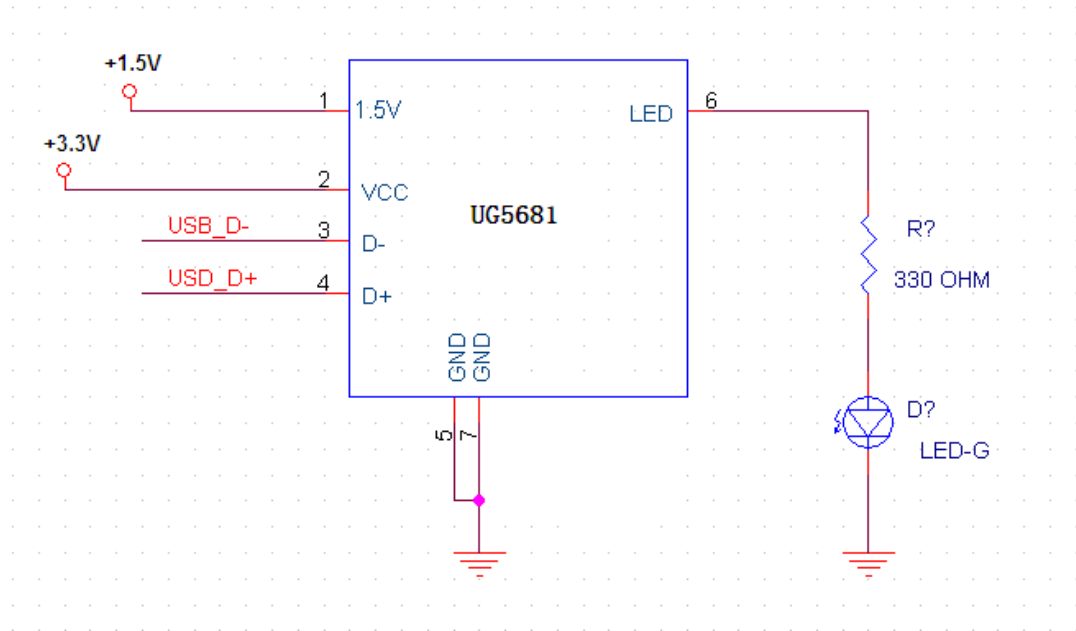
UG5681 Module PIN ASSIGNMENT

Pin No.	Definition	Basic Description	Signal	Type
1	1.5V*	Mainly chip core vorage		Power
2	3.3V*	VCC DC power supply	VCC	Power
3	D-	USB D- as defined by USB 2.0		
4	D+	USB D+ as defined by USB 2.0		
5	GND	Ground	GND	Power
6	LED	Active low signal. The signal is used to provide status indicators via LED.	GPIO	Output
7	GND	Ground	GND	Power

Remark:

- 1) Only use 3.3V module,the 1th pin will NC.
- 2) Use double voltage,provide 1.5V for core voltage will reduce chip host.and reduce the consumed power. Reference our application note, and ask for our engineer.

Application Circuit



Operation System.

Operation System	Module Driver
Windows 2000/XP/Vista	Available
Windows 7	Available
Windows CE 5.0 / 6.0	Available
Linux 2.6.X	Available
MAC	Available

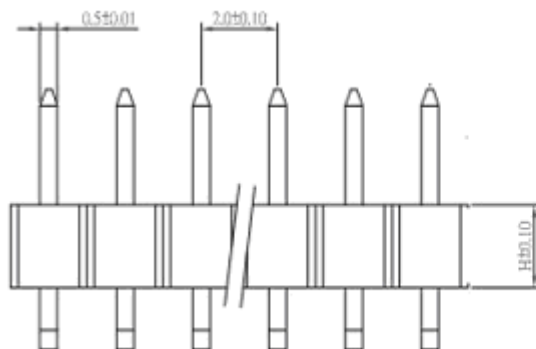
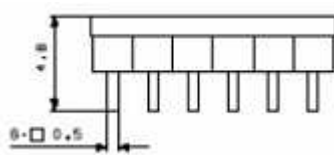
Environmental Requirements

	Operating	Non-operating
Temperature	-20°C to +70°C	-40°C to +85°C
Humidity	10% to 90%	5% to 90%

Ordering Information

Product Number	Antenna Config	Operation Voltage
UG5681-O-33D	External antenna	Vcc=3.3V & 1.5V
UG5681-O-33	External antenna	Vcc=3.3V

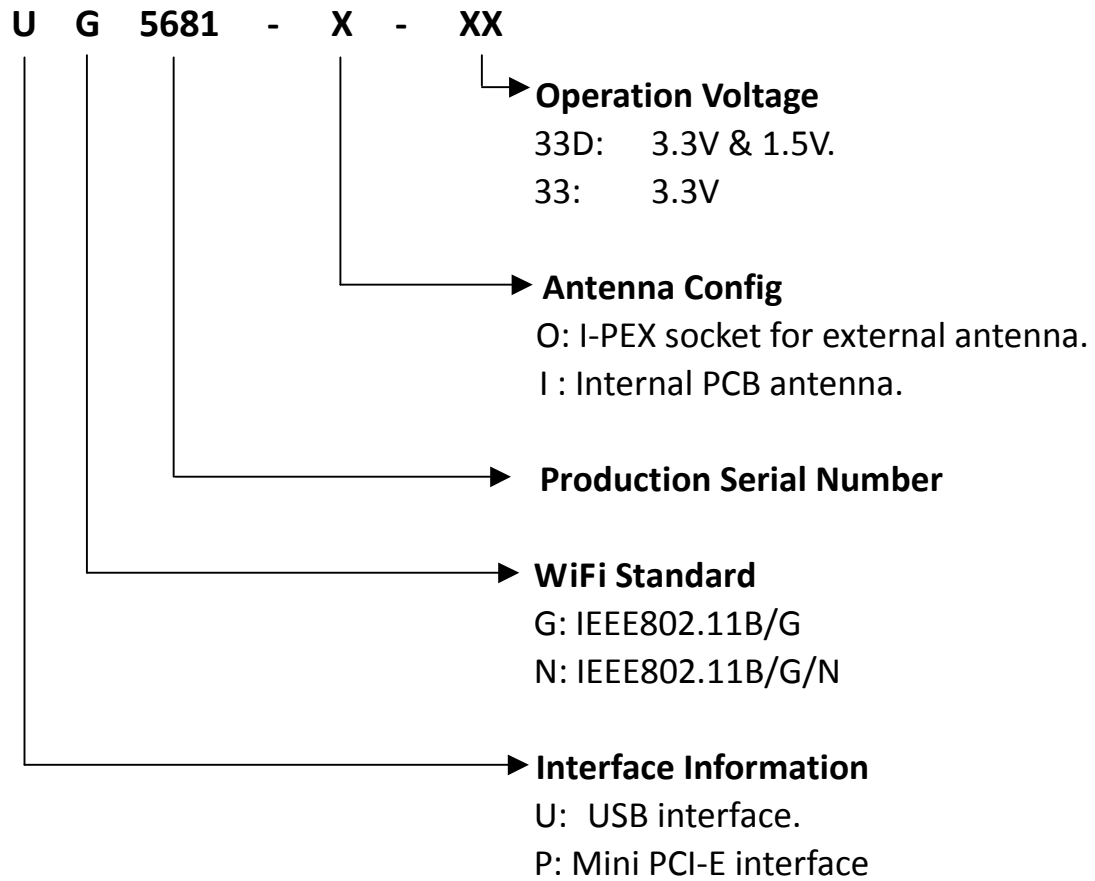
UG5681 For Pin Strip



6 pin (pin to pin=2mm)

H=1.5mm.

Appendix A



Appendix B

Accessories: Antenna (Not include the module)



Antenna Size:

