Product Specification

Model Name: W725T0

IEEE 802.11ABGN 2T2R USB LGA Module

Version: 0.2

Date: Aug. 02. 2013

Release History

DATE	REV	Description of Change
2013/07/26	0.1	Preliminary specification release
2013/08/02	0.2	Update mechanical drawing

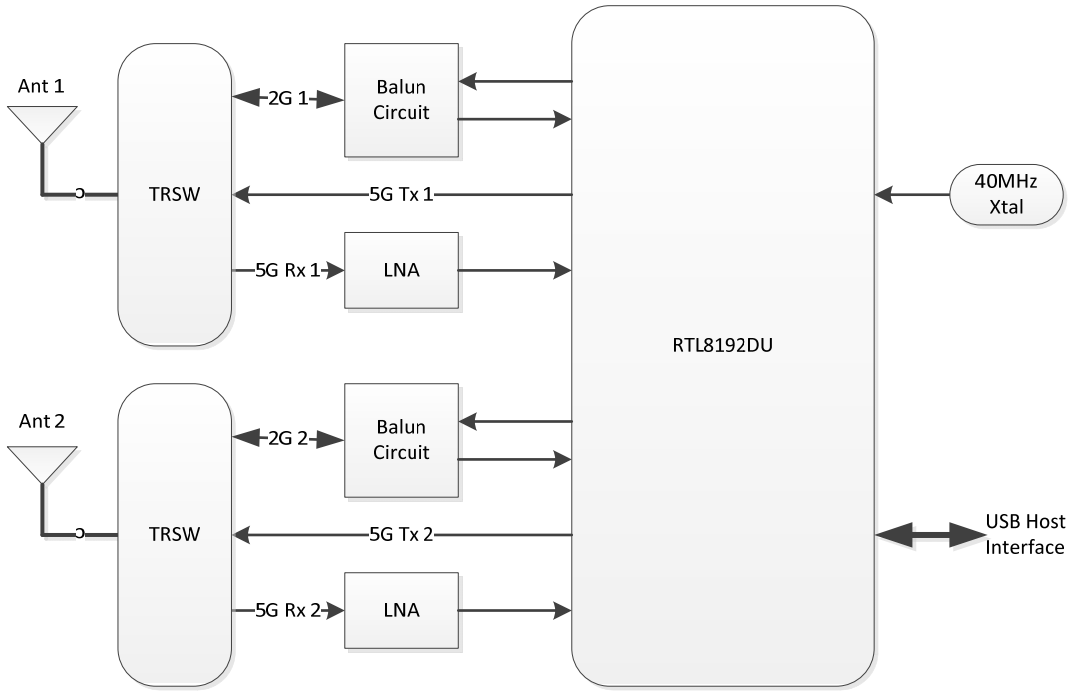
W725T0

IEEE 802.11ABGN 2T2 USB LGA Module

1 Product Features

- Supports 2T2R 2.4/5GHz dual-band
- Maximum PHY data rate up to 144.4 Mbps using 20MHz bandwidth, 300Mbps using 40MHz bandwidth
- Short Guard Interval (400ns)
- Sounding packet
- Host interface complies with USB Specification Revision 2.0
- Supports IEEE 802.11 e/ i/ h/ k
- WAPI (Wireless Authentication Pivacy Infrastructure) cerified
- Frame aggregation for increased MAC efficiency (A-MSDU, A-MPDU)
- Low latency immediate High-Throughput Block Acknowledgement (HT-BA)
- Long NAV for media reservation with CF-End for NAV release
- PHY-level spoofing to enhance legacy compatibility
- MIMO power saving mechanism
- Channel management and co-existence
- Multiple BSSID feature allows the RTL8192DU to assume multiple MAC identities when used as a wireless bridge
- Supports Wake-On-WLAN via Magic Packet and Wake-up frame
- Transmit Opportunity (TXOP) Short Inter-Frame Space (SIFS) bursting for higher multimedia bandwidth
- Dual MAC architecture allows dual band or dual network access or behaves a station and an AP concurrently.
- WiFi Direct supports wireless peer to peer applications.

2 Block Diagram



3 General Specification

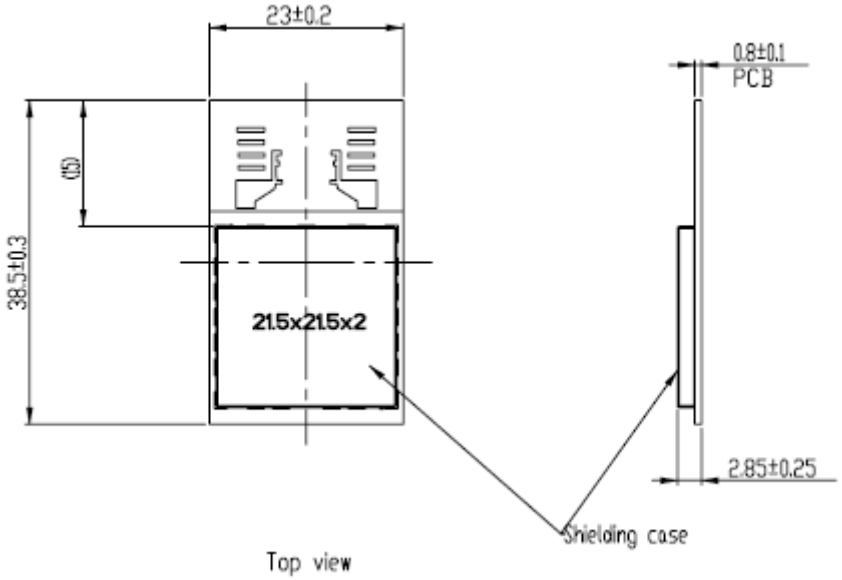
■ **Module Name**					
• W725T0					
■ **Product Specification**					
• WLAN Standard	IEEE 802.11a/b/g/n				
• Host Interface	USB 2.0				
• Host Connector Options	LGA module				
• Major Chipset	Realtek RTL8192DU				
• Dimensions (board size)					
		Minimum	Typical	Maximum	Unit
	Length	37	38.5	40	mm
	Width	22	23	24	mm
	Height	2.7	2.85	3.0	mm
	Weight		TBD		g
• Antenna Connector Options	2 printed PCB antennas on board				
■ **Operating Condition**					
		Minimum	Typical	Maximum	Unit
• Voltage	DC	3.15	3.3	3.45	V
• Temperature		0		70	°C
• Storage temperature		-20		70	°C
• Humidity Non-Operating		10		80	%
■ **Electrical Specification**					
• Frequency Range	2400 ~ 2483 MHz; 5150 ~ 5825 MHz				
• Band Width	20MHz/ 40MHz Mixed mode				
2.4GHz Band					
• Output power					
		Minimum	Typical	Maximum	Unit
802.11b		15	17	19	dBm
802.11g	54Mbps	9	11	13	dBm
802.11n/ HT20	MCS7	7	9	11	dBm
802.11n/ HT40	MCS7	7	9	11	dBm
• Receiver Sensitivity					
		Minimum	Typical	Maximum	Unit
802.11b	11Mbps			-80	dBm
802.11g	54Mbps			-65	dBm
802.11n/ HT20	MCS7			-64	dBm
802.11n/ HT40	MCS7			-61	dBm

5GHz Band					
• Output power					
		Minimum	Typical	Maximum	Unit
802.11a	54Mbps	8	10	12	dBm
802.11n/ HT20 MCS7	Lower/ Middle Band	7	9	11	dBm
802.11n/ HT20 MCS7	Upper Band	5	7	9	dBm
802.11n/ HT40 MCS7	Lower/ Middle Band	7	9	11	dBm
802.11n/ HT40 MCS7	Upper Band	5	7	9	dBm
• Receiver Sensitivit y					
		Minimum	Typical	Maximum	Unit
802.11a	54Mbps			-65	dBm
802.11n/ HT20	MCS7			-64	dBm
802.11n/ HT40	MCS7			-61	dBm

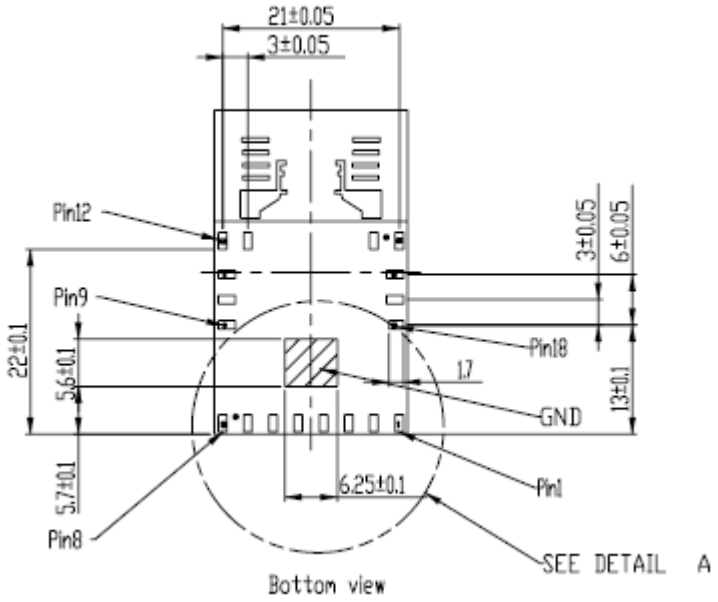
4 Pin Definitions

Pin	Definition	Type	Description
1	GND	G	Ground
2	GPIO2(WPS)	I	WPS pin, high active WPS function.
3	GPIO9(LED)	O	LED pin, active low
4	DP	I/O	USB D+
5	DM	I/O	USB D-
6	VDD33	P	3.3Vdc power input
7	GND	G	Ground
8	GND	G	Ground
9	GND	G	Ground
10	GND	G	Ground
11	GND	G	Ground
12	GND	G	Ground
13	GND	G	Ground
14	GND	G	Ground
15	GND	G	Ground
16	GND	G	Ground
17	GND	G	Ground
18	GND	G	Ground

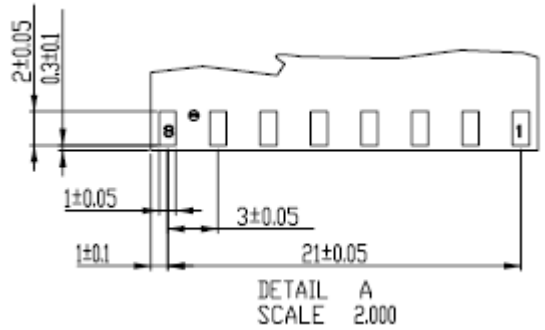
5 Mechanical Dimension



Top view

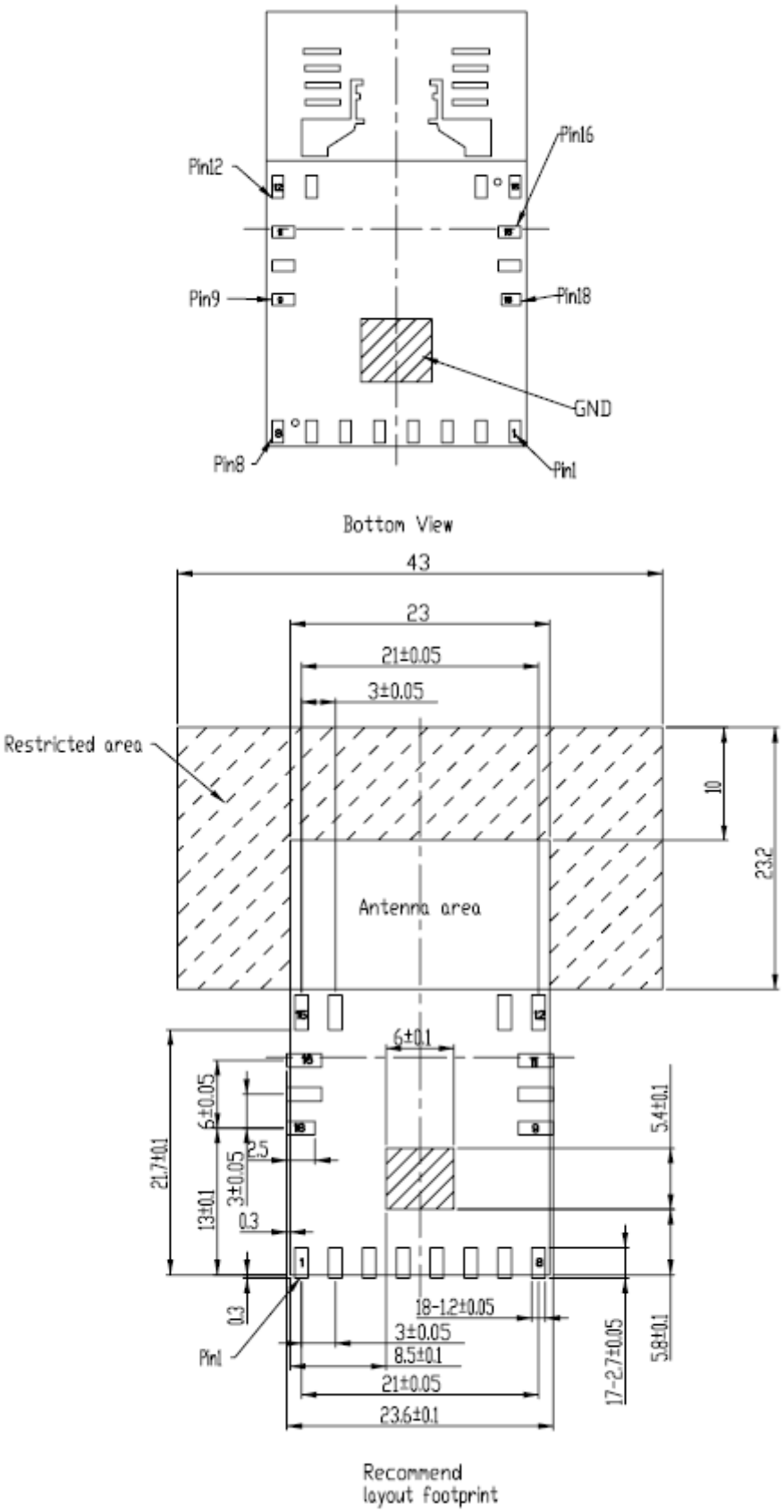


Bottom view



DETAIL A
SCALE 2.000

6 Recommended Layout Footprint



7 Application circuit