

SPECIFICATIONS

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Version ·· V2.0

Date ·· 2014.01.10

MODEL NAME: ZK7632

PRODUCT NAME :2T2R300Mbps '24G+5G+BT4.0 Wi-Fi Module

DESIGN : _____

CHECK : _____

APPROVAL : _____

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企业远景 : 中国无线通信模块第一品牌 !

		DOCUMENT No :
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1. Features

ZK-7632 is the small size and low power module for IEEE 802.11a/b/g/n wireless LAN. **ZK-7632** is based on MT7632 solution. IEEE802.11 a/b/g/n Dual Band WLAN infrastructure Size : 26.9mm x 13mm x 2.4mm

2.4GHz&5GHZ internal PA

Two stream spatial multiplexing up to 867/300Mbps ANT (2T2R)

Use on-chip OTP (One-Time Programmable)

MT7632 USB 2.0

USB/WiFi 2.0

USB/Bluetooth V4.0 Low energy(LE)

Supports drivers for Windows Vista, 2000, XP, Linux

Security : WPA,WPA2,AES(TKIP) ,IEEE 802.1X

- Application: DTV, DVR, HD DVD Player, Blue-ray Disk Player, STB

2. Ordering Information

Model	Description
ZK-7632	Wi-Fi Module, 2TR

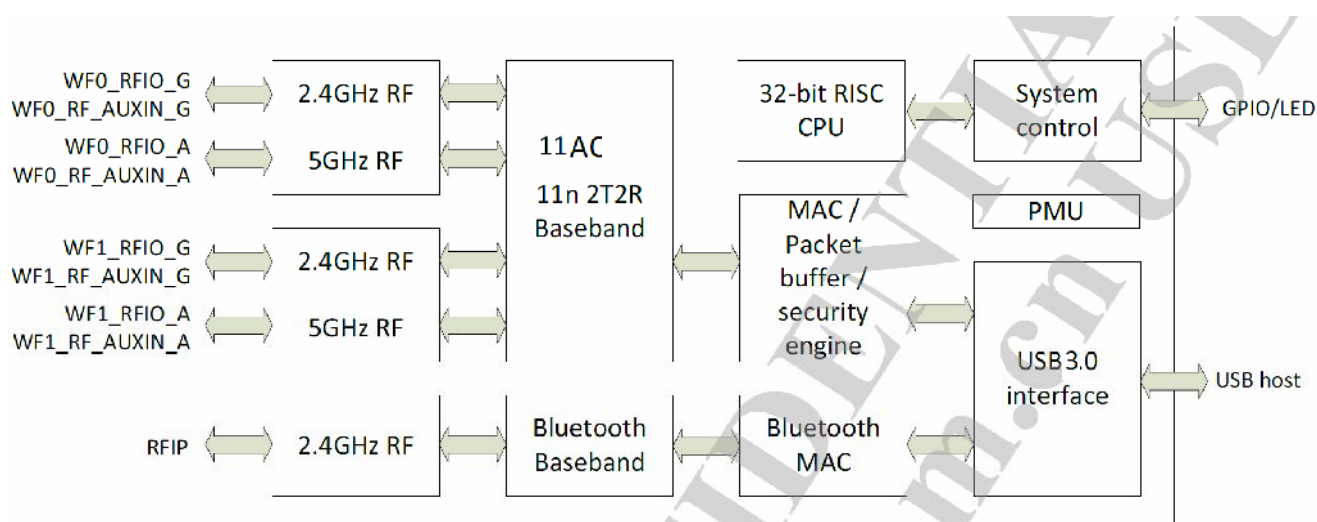
3. Label markin



- | | |
|------------------------|--|
| ① Model No | ④ Product Lot No. : 1110A0401 |
| ② MAC Address BAR Code | - 11 : Year - 02 : Date |
| ③ MAC Address No. | - 11: Month - 01 : Manufactured |
| | - Revision No. : A Process |

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4. Block Diagram



< Fig.1 Hardware Block Diagram >


5. Absolute Maximum Ratings

Caution : The specifications in Table 1 define levels at which permanent damage to the device can occur. Function operation is not guaranteed under these conditions. Operating at absolute maximum conditions for extend periods can adversely affect the long-term reliability of the device.

Parameter	Min	Max	Unit
Storage Temperature	-10	+80	
Storage Humidity (40)	-	90%	%

< Table 1 Absolute Maximum Ratings > . Other conditions

- 1) Do not use or store modules in the corrosive atmosphere, especially where chloride gas, sulfide gas, acid, alkali, salt or the like are contained. Also, avoid exposure to moisture.
- 2) Store the modules where the temperature and relative humidity do not exceed 5 to 40 and 20 to 60%.
- 3) Assemble the modules within 6 months.
Check the soldering ability in case of 6 months over.

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5. Operating Conditions

Parameter	Min	Typ	Max	Unit	
Operating Temperature	0	-	100	°C	
Operating Humidity	-	-	130	%	
Supply Voltage1	VDD_3.3V	2.7	3.3	4.0	Vdc

6. Standard Test Conditions

The Test for electrical specification shall be performed under the following condition unless otherwise specified.

1). Ambient condition

Temperature :25°C ± 5°C

. Humidity:65% ± 5% R.H.

2). Power supply voltages

3.3V (±5%) input power at the Module

3). Current consumption over recommended range of supply voltage and operating

conditions is like below.

When it's tested, it must be supplied more than 2 times of maximal current.



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7. Electrical Specifications

1) DC Characteristics

Current Consumption	Min.	Typ.	Max.	Unit
TX Mode (MCS7)	-	240	-	mA
Idle and Associated state	-	160	-	
Radio disabled state	-	20	-	

2) RF Characteristics for IEEE802.11b (11Mbps mode unless otherwise specified)

Items	Contents			
Specification	IEEE802.11b			
Mode	DSSS/CCK			
Channel frequency	2400 ~ 2483 MHz			
Data rate	1,2,5.5,11Mbps			
TX Characteristics	Min.	Typ.	Max.	Unit
Power Level	16	17	18	dBm
Spectrum Mask				
1 st side lobes (to fc ±11MHz)	-	-43	-30	dBr
2 nd side lobes (to fc ±22MHz)	-	-58	-50	dBr
Modulation Accuracy (EVM)	-	30	30	%
Power On/Off ramp	-	0.5	2.0	Usec
Freq. Tolerance	-15	-	15	ppm
Chip Clock Freq. Tolerance	-15	-	15	ppm
RX Characteristics	Min.	Typ.	Max.	Unit
Minimum Input Level Sens (FER 8%)	-	-88	-76	dBm
Maximum Input Level (FER 8%)	-10	-	-	dBm

* Normal Condition : 25 , VDD=3.3/5V.



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3) RF Characteristics for IEEE802.11g (54Mbps mode unless otherwise specified)

Items	Contents			
Specification	IEEE802.11g			
Mode	OFDM			
Channel frequency	2400 ~ 2483 MHz			
Data rate	6,9,12,18,24,36,48,54Mbps			
TX Characteristics	Min.	Typ.	Max.	Unit
Power Level	14	15	16	dBm
Spectrum Mask				
at fc ±11MHz	-	-32	-20	dBr
at fc ±20MHz	-	-43	-28	dBr
at fc ± 30MHz	-	-48	-40	dBr
Constellation Error (EVM)	-	-34	-25	dB
Freq. Tolerance	-15	-	15	ppm
Chip Clock Freq. Tolerance	-15	-	15	ppm
RX Characteristics	Min.	Typ.	Max.	Unit
Minimum Input Level Sens. (PER 10%)	-	-75		ppm
Maximum Input Level (PER 10%)	-20	-		ppm

*Normal Condition : 25°C, VDD=3.3/5V



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5) RF Characteristics for IEEE802.11an (MCS7 mode unless otherwise specified)

Items	Contents			
Specification	IEEE802.11n - 5GHz			
Mode	OFDM			
Channel frequency	5150~5650MHz, 5725 ~ 5850 MHz			
Data rate	6513195263952585,65Mbps.,,,,,,.			
TX Characteristics	Min.	Typ.	Max.	Unit
Power Level	11	12	13	dBm
Spectrum Mask				
at fc ±11MHz	-	-32	-20	dBr
at fc ±20MHz	-	-35	-28	dBr
at fc ± 30MHz	-	-45	-40	dBr
Constellation Error (EVM)	-	-32	-28	dB
Freq. Tolerance	-15	-	15	ppm
Chip Clock Freq. Tolerance	-15	-	15	ppm
RX Characteristics	Min.	Typ.	Max.	Unit
Minimum Input Level Sens.(HT20,PER 10%)	-	-71	-64	ppm
Minimum Input Level Sens.(HT40,PER 10%)	-30	-68	-61	ppm
Maximum Input Level (PER 10%)	-30			ppm



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11. Bluetooth Specification

Bluetooth Specification Conditions : VBAT=3.3V ; Temp:25°C

Feature	Description		
General Specification			
Bluetooth Standard	Bluetooth V3.3 of 1, 2 and 3 Mbps.		
Host Interface	USB		
Antenna Reference	Small antennas with 0~2 dBi peak gain		
Frequency Band	2.400 GHz ~ 2483.5 GHz		
Number of Channels	79 channels		
Modulation	FHSS, GFSK, DPSK, DQPSK		
RF Specification			
	Min.	Typical.	Max.
Output Power (Class 1.5)		10	
Output Power (Class 2)		2	
Sensitivity @ BER=0.1% for GFSK (1Mbps)		-86	
Sensitivity @ BER=0.01% for /4-DQPSK (2Mbps)		-86	
Sensitivity @ BER=0.01% for 8DPSK (3Mbps)		-80	
Maximum Input Level	GFSK (1Mbps):-20dBm		
	/4-DQPSK (2Mbps) :-20dBm		
	8DPSK (3Mbps) :-20dBm		



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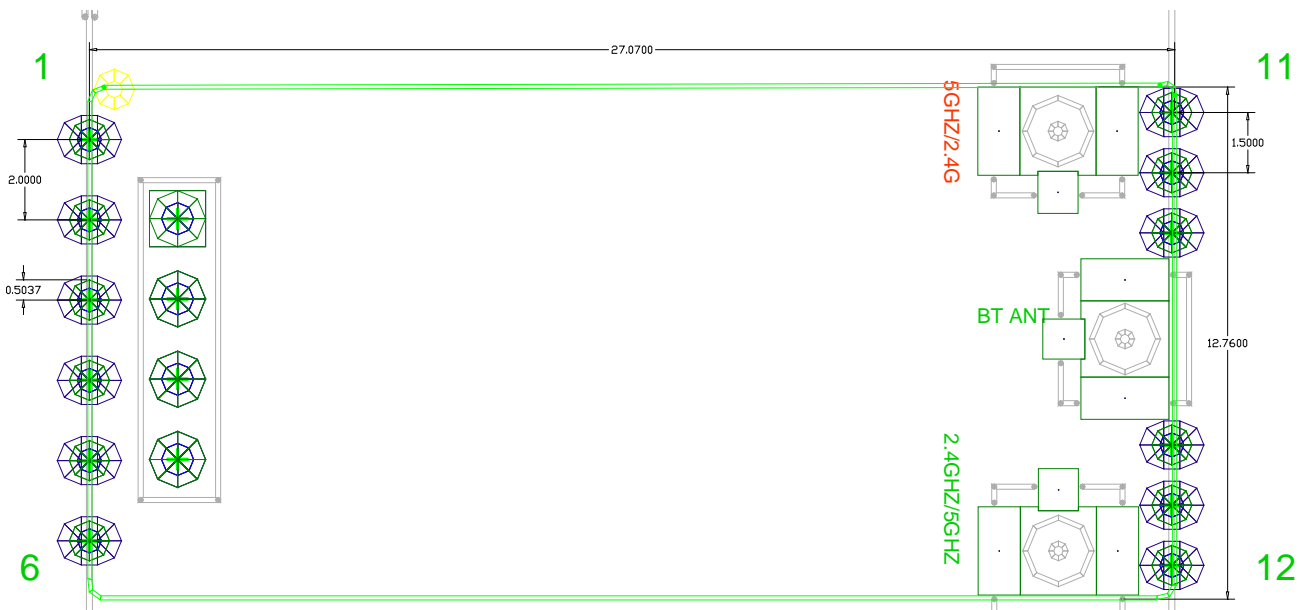
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8. Pin Description

Terminal No	公板 Terminal name	乐视专用	Terminal Voltage
1	GND	GND	
2	GND	UDP	
3	UDP	UDM	
4	UDM	WiFi RST	
5	VDD3.3V	VDD3.3V	3.3V
6	Wakeup	Wakeup	
7	GND		
8	WIFI ANT1		
9	GND		
10	GND		
11	WIFI ANT2		
12	GND		





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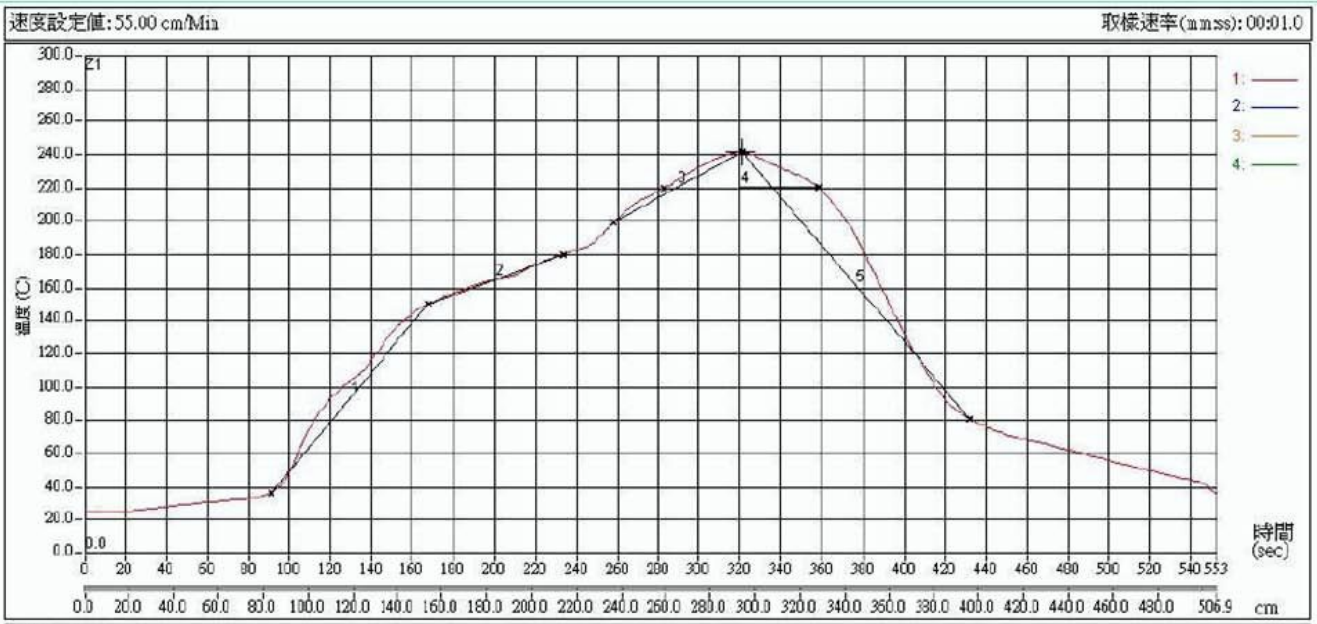
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9. Recommended Reflow Profile



~ 150 °C < 2 °C/s	150 ~ 180 °C 55 ~ 65 sec	200°C ~ peak < 1 °C/s	above 220°C 65 ~ 75 sec	Peak Temp. 235~245 °C
1.47	65	0.66	75	241.5