

LK8620 DateSheet----Based on (TELINK-SEMI) TLR8250

● 1. Introduction

The LK8620 is a Bluetooth LE4.2 (Bluetooth Low Energy) module designed and produced by Shenzhen Linking Technology Co., Inc., based on the design of TERLINK-SEMI BLUEtooth LE chip TLR8250, supporting BLE4.2.

The module leads the original main pins of the chip through the form of peripheral stamp holes, and the module has an on-board antenna, which greatly simplifies the difficulty of end product design and application, shortens the product design cycle, thus reducing the end product design cost, and ensuring product reliability and stability.

Model	LK8620 V1.2
Customer Model	105-18620-001
Spec	LK8620 V1.2/21*15MM-H=2.5/Bluetooth Module

● Update record

Version	Updat	Time	Author
V1.0.0	Release	2020/7/2	Xu
V1.0.1	Add Customer Model	2020/10/9	Xu
V1.2	Customer Model updated	2020/10/21	Xu
V1.3	Add dimensional tolerance	2020/11/27	Xia
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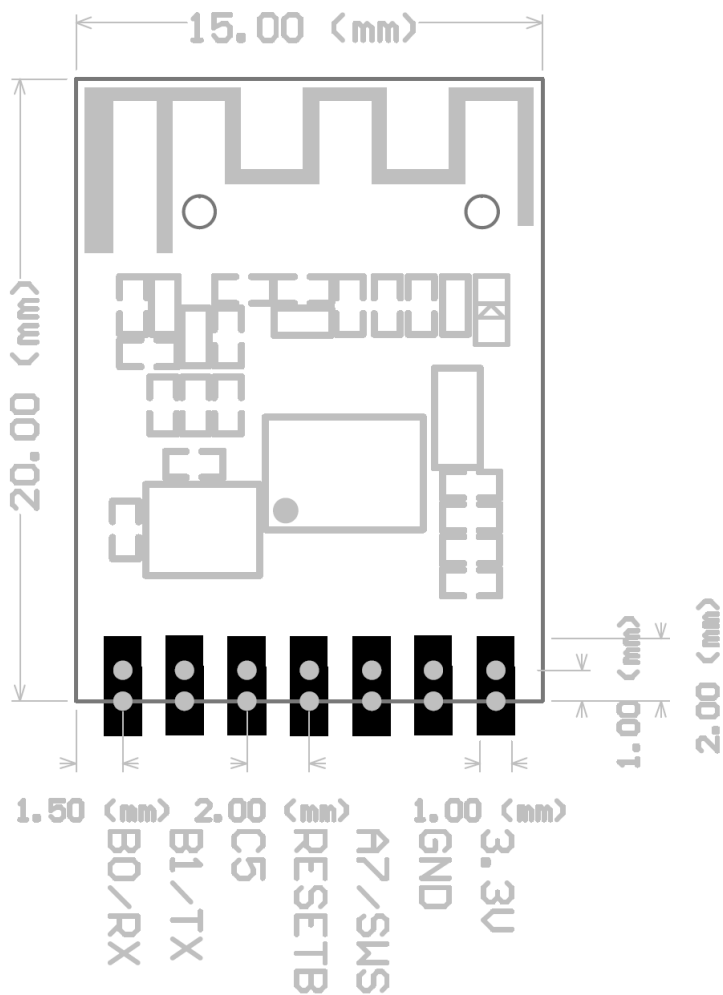
● 1.2 The main features:

- ✧ (1) 1.8 to 3.6V power supply, typical 3.3V.
- ✧ (2) Low power mode:
 - ✧ a) Full-chip mode TX: 4.8mA@0dBm.
 - ✧ b) RX: 5.3mA.
 - ✧ c) Deep sleep: 0.4uA (external wake-up)
- ✧ (3) Built-in 32-bit high-performance processor.
- ✧ (4) Rich external interfaces(I2C, I2S, SPI, PWM, ADC, USB.)
- ✧ (5) Temperature operating range from -40 to 85° degrees C.
- ✧ (6) 512KB FLASH.
- ✧ (7) 32KB SRAM.
- ✧ (8) Bluetooth 4.2 protocol.
- ✧ (9) Receive sensitivity: -96dBm@ BLE 1Mbps.
- ✧ (10) Transmission power: Up to 10dBm.
- ✧

● 2.1 Module size

Tolerance: Width: $15 \pm 0.45\text{mm}$

Lenth: $20 \pm 0.6\text{mm}$



● PIN Description:

LK8620 Pin	Pin name	Pin function	
1	UART-RX	Uart RX	
2	UART-TX	Uart TX	
3	I/O	Digital I/O	
4	Reset	Reset	
5	SWS/UART_RTS/PA<7>	SWS	
6	GND	Ground	
7	VCC	1.8-3.6V	

- **Certification Information**

SRRC

CMIIT ID: 2020DP12510

The LK8620 module SRRC is certified as "a complete radio transmitter module for non-independent operation". The LK8620 module can directly use the CMIIT ID of the LK8620 without re-certification.

- The following information should be indicated in the product label or manual: This device contains a radio transmitter module with a model approval code of CMIIT ID: 2020DP12510.

BLUETOOTH SIG QUALIFICATION

1, the LK8620 module has passed the Bluetooth LE4.2 RF-PHY test and Profile test, BAS, DIS, HIDS can provide test reports. When the whole machine is BQB certified, the LK8625 test report can be provided to the certification authority, and the whole machine can be free of testing fees.

2, Register as a finished SIG member: <https://www.Bluetooth.org/login/register/>.

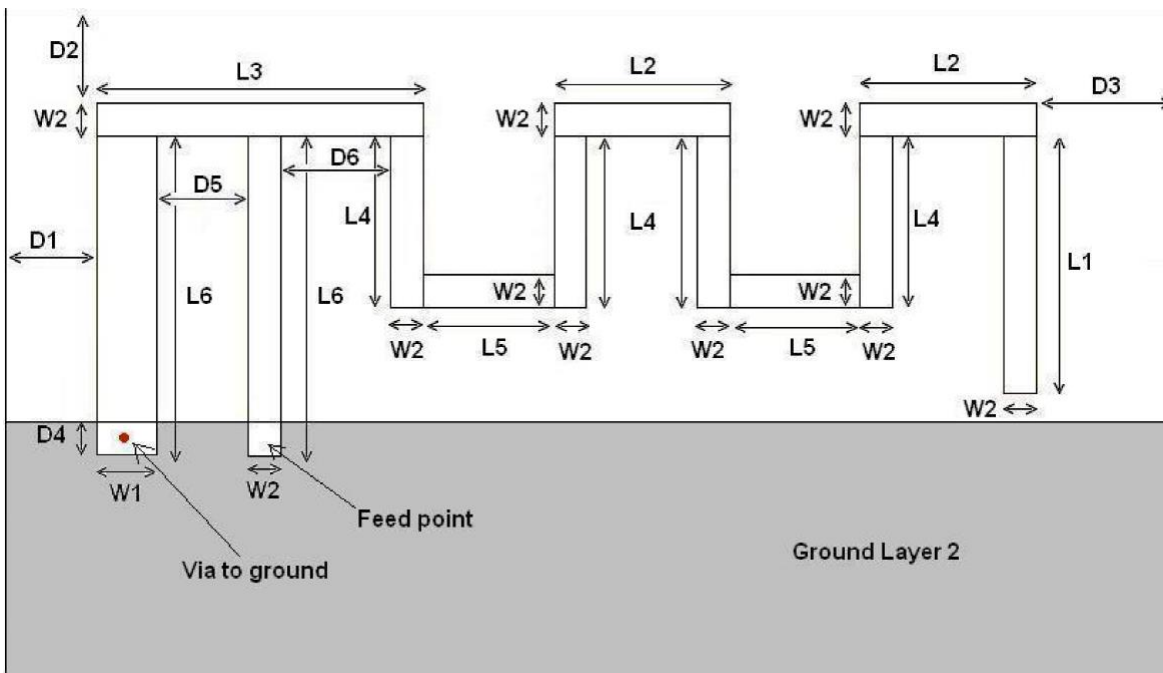
3, To apply for a Declaration ID, the fee depends on membership, see: <https://www.bluetooth.org/en-us/test-qualification/qualification-overview/fees>.

For detailed procedures for the new Declaration ID, please refer to :

https://www.bluetooth.org/DocMan/handlers/DownloadDoc.ashx?doc_id=283698&vId=317486.

Antenna

Antenna Size:

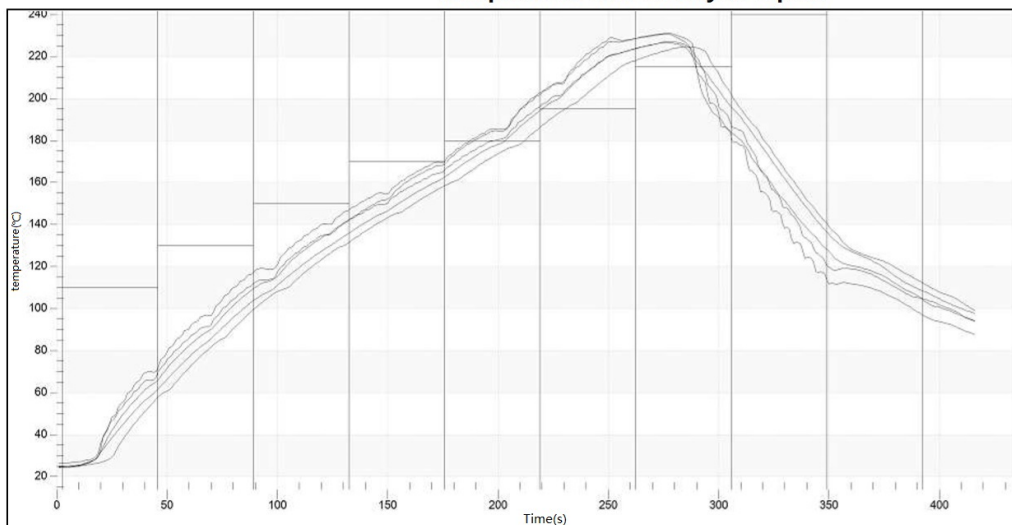


L1	3.94 mm
L2	2.70 mm
L3	5.00 mm
L4	2.64 mm
L5	2.00 mm
L6	4.90 mm
W1	0.90 mm
W2	0.50 mm
D1	0.50 mm
D2	0.30 mm
D3	0.30 mm
D4	0.50 mm
D5	1.40mm
D6	1.70 mm

Gain: 1.74dBi

- **4.4 Secondary flows welding temperature control diagram:**

Temperature curve analysis report



detailed information
 Client: Shenzhen Linking Technology Co., Inc.
 Solder paste: Tongfang lead free
 remarks: File name: 3 lines
 Furnace: three wire Jintuo reflow soldering
 Process: lead free
 Products: Guodian technology + Linking
 Chain speed: 90.0
 Collection date: July 20, 2019 16:03:46
 Print date: July 24, 2019 11:52:52

remarks
 Tested by: Fang Yuan
 Reviewed by: Yu Xilin

Temperature	One	Two	Three	Four	Five	Six	Seven	Eight	Nine	Ten
Upper	110	130	150	170	180	195	215	240	260	245
Lower	110	130	150	170	180	195	215	240	260	245

path	(50°C~150°C)Preheat		(150°C~200°C)Homiothermy		(220°C)Backflow		(120°C)Cooling		Peak value (220~245)	Time	Peak difference	Valley value	Time	Average value	Standard deviation
	Slope	Time	Time	Slope	Time	Slope	Time								
	(0~3)	(80~150)	(40~120)	(0~2)	(25~70)	(-5~-1)	Time								
#1 1	1.43	122.0	74.0	0.27	40.0	-2.39	73.0	227.1	276.0	4.1	26.3	0.0	140.7	54.44	
#2 2	1.11	121.0	73.0	0.26	38.0	-1.50	98.0	226.7	276.0	4.5	24.7	0.0	140.0	56.12	
#4 4	1.58	110.0	80.0	0.31	48.0	-3.02	67.0	231.2	276.0	0.0	24.5	0.0	141.5	55.97	
#5 5	1.17	124.0	76.0	0.26	28.0	-1.76	94.0	224.7	285.0	6.5	24.8	0.0	137.8	56.20	
#7 7	1.23	114.0	71.0	0.27	49.0	-3.04	86.0	230.7	276.0	0.5	24.1	0.0	141.5	56.56	

● **4.5 Precautions for the use of Bluetooth modules:**

- ✧ (1) Bluetooth use environment, wireless signal applications are greatly affected by the surrounding environment, such as trees, metals and other obstacles will have a certain absorption of wireless signal, so that in practical applications, the distance of data transmission is affected by a certain degree.
- ✧ (2) Because the Bluetooth module should be equipped with the existing system, placed in the shell, because the metal housing on the radio frequency signal is shielded. Therefore, it is not recommended to install in a metal housing.
- ✧ (3) PCB cloth board: Bluetooth module antenna part, because the metal will weaken the function of the antenna, in the module cloth board, the module antenna (the left and right side of the antenna and front end) under the strictly prohibited laying and wiring, if you can hollow out better.
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