

GWB8811C Bluetooth Module Manual

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ShenZhen MTC Co., Ltd

GWB8811C Module

CSR8811A12

Rev0.1

Mar. 2016

Device Features

- Fully qualified Bluetooth® v4.1 system
- Dual-mode Bluetooth/Bluetooth low energy operation
- HCI mode operation with full Bluetooth stack
- High-sensitivity Bluetooth and Bluetooth low energy receiver
- Class1 Bluetooth power level supported
- Basesband processor running Bluetooth HCI firmware stack
- High-speed UART port(up to 4Mbps)
- Full-speed USB2.0 interface
- No external regulators required for USB supply operation
- On-chip encoding of SBC and aptx codecs for A2DP music streaming
- 2 x PCM/I2S digital audio interface
- On-chip SBC encoding
- Support for IEEE802.11 coexistence
- Bluetooth Smart Ready
- Small size
- PCB antenna

General Description

GWB8811C from GooWi is a dual-mode Bluetooth 4.1 module. Working as HCI mode, together with the host Bluetooth stack, provides full Bluetooth functions to the end customers.

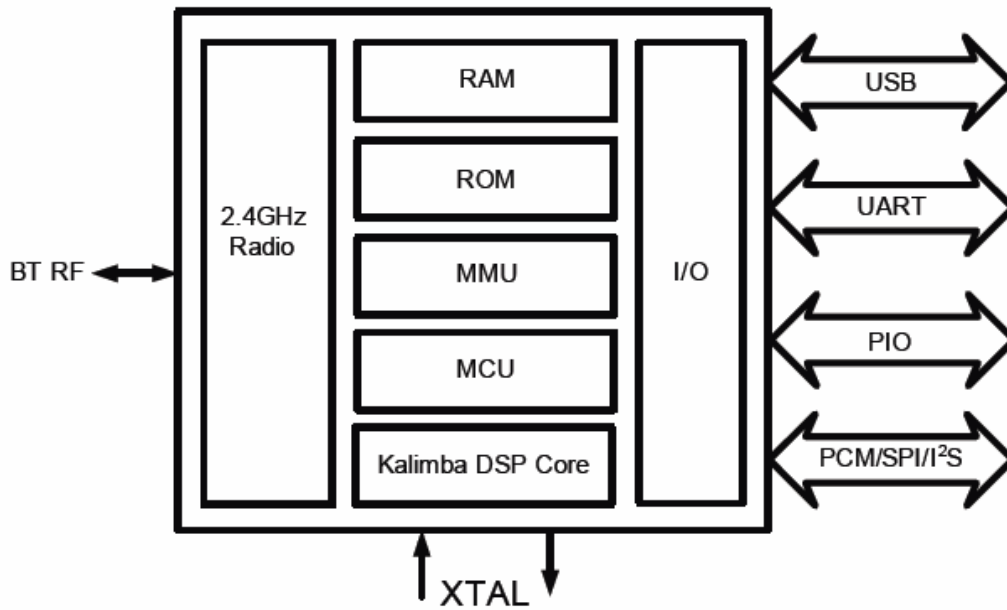
Applications

- Personal Navigation Devices(PNDs)
- Industrial
- USB Bluetooth dongles
- Portable media Players(PMPs)
- Smartphones,Feature phones
- TV Application
- Setup Box

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System Architecture



Specifications

Operating Frequency Band	2.4GHz ~ 2.4835GHz unlicensed ISM band
Bluetooth Specification	V4.1
Operating Voltage	5V/3.3V
Host Interface	UART/USB
Dimension	35.00mm (L) x 19.00 mm (W) x 2.5mm (H)

NOTES: Specifications are subject to change without prior notice

Electrical Characteristics

Absolute Maximum Ratings

GWB8811C_5V

Rating	Min	Max	Unit
Storage temperature	-40	85	°C
VBUS	-0.4	5.75	V
IO	-0.4	3.6	V

GWB8811C

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Recommended Operation Conditions

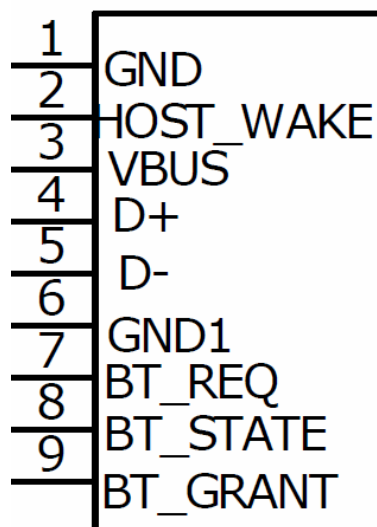
GWB8811C_5V

Operating Condition	Min	Typ	Max	Unit
Operating temperature range	-30	-	85	°C
VBUS	4.25	-	5.75	V
IO	1.2	3.3	3.6	V

GWB8811C

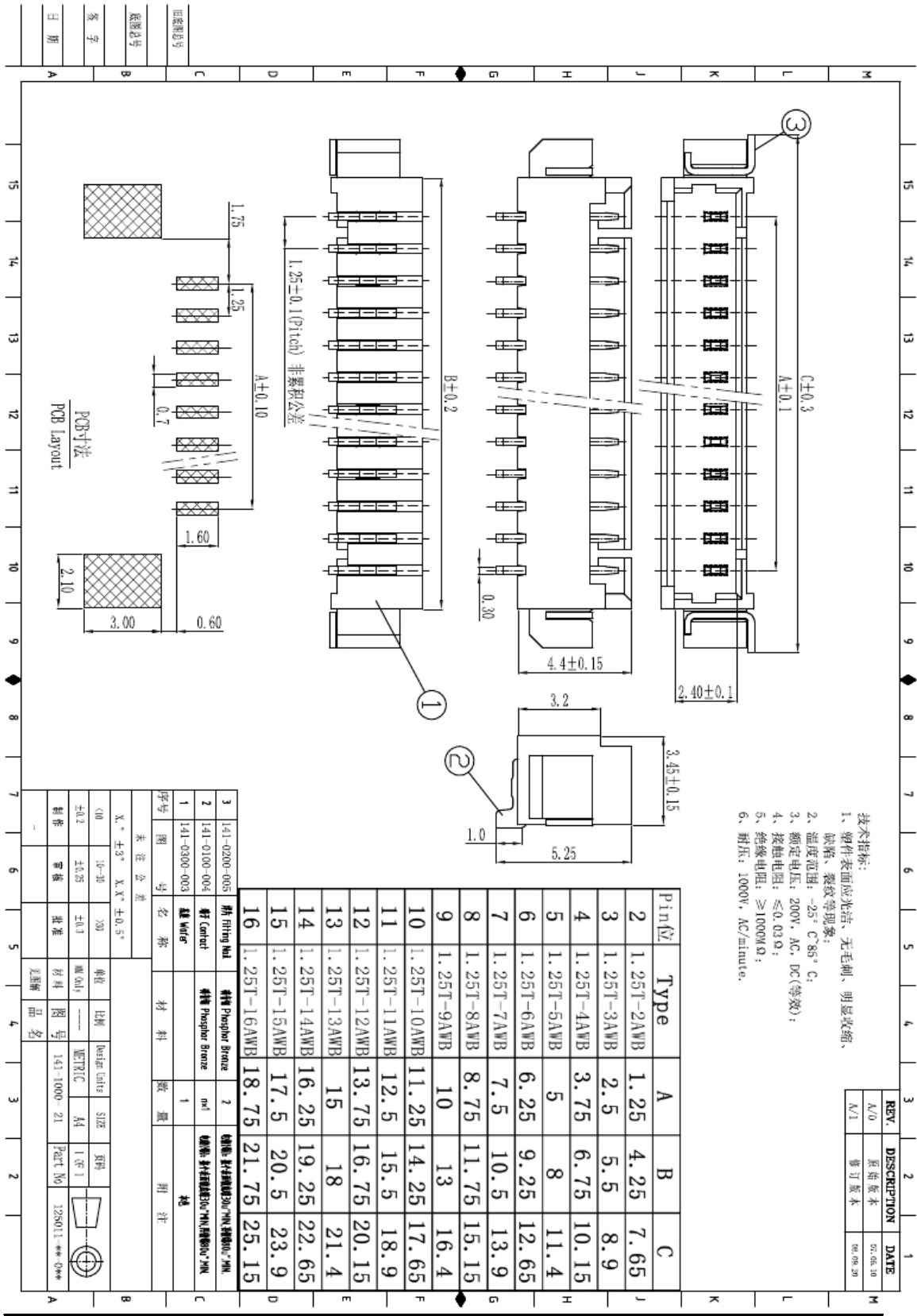
Operating Condition	Min	Typ	Max	Unit
Operating temperature range	-30	-	85	°C
VBUS	3.1	-	3.6	V
IO	1.2	3.3	3.6	V

Pin Definitions



Pin No.	Name	Type	Function	Remark
1	GND	GND	Ground	
2	Host_wake	Bi-directional	Host wake output Programmable Input/Output Line 5	
3	VBUS	POWER	Input to USB regulator. Connect to external USB bus,e.g.USB_VBUS	
4	D+	Bi-directional	USB data plus with selectable internal 1.5K pull-up resistor	
5	D-	Bi-directional	USB data minus	
6	GND1	GND	Ground	
7	BT_REQ	Bi-directional	BT_REQ is a dual signal used by the BlueCore IC to indicate transaction priority, Programmable Input/Output Line 2	
8	BT_STATE	Bi-directional	BT_STATE indicates to the PTA that the BlueCore IC is initiating a transaction Programmable Input/Output Line 1	
8	BT_GRANT	Bi-directional	BT_GRANT is used by the PTA to deny (block) transmission by the BlueCore IC before it starts Programmable Input/Output Line 0	

Connector



- 技术指标:
1. 塑件表面应光洁, 无毛刺, 明显收缩, 缺陷, 裂纹等现象;
 2. 温度范围: -25°C ~ 85°C ;
 3. 额定电压: 200V, AC, DC(等效);
 4. 接触电阻: $\leq 0.03\Omega$;
 5. 绝缘电阻: $\geq 1000\Omega$;
 6. 耐久: 1000V, AC/minute.

Pin位	Type	A	B	C
2	1.25T-2AWB	1.25	4.25	7.65
3	1.25T-3AWB	2.5	5.5	8.9
4	1.25T-4AWB	3.75	6.75	10.15
5	1.25T-5AWB	5	8	11.4
6	1.25T-6AWB	6.25	9.25	12.65
7	1.25T-7AWB	7.5	10.5	13.9
8	1.25T-8AWB	8.75	11.75	15.15
9	1.25T-9AWB	10	13	16.4
10	1.25T-10AWB	11.25	14.25	17.65
11	1.25T-11AWB	12.5	15.5	18.9
12	1.25T-12AWB	13.75	16.75	20.15
13	1.25T-13AWB	15	18	21.4
14	1.25T-14AWB	16.25	19.25	22.65
15	1.25T-15AWB	17.5	20.5	23.9
16	1.25T-16AWB	18.75	21.75	25.15

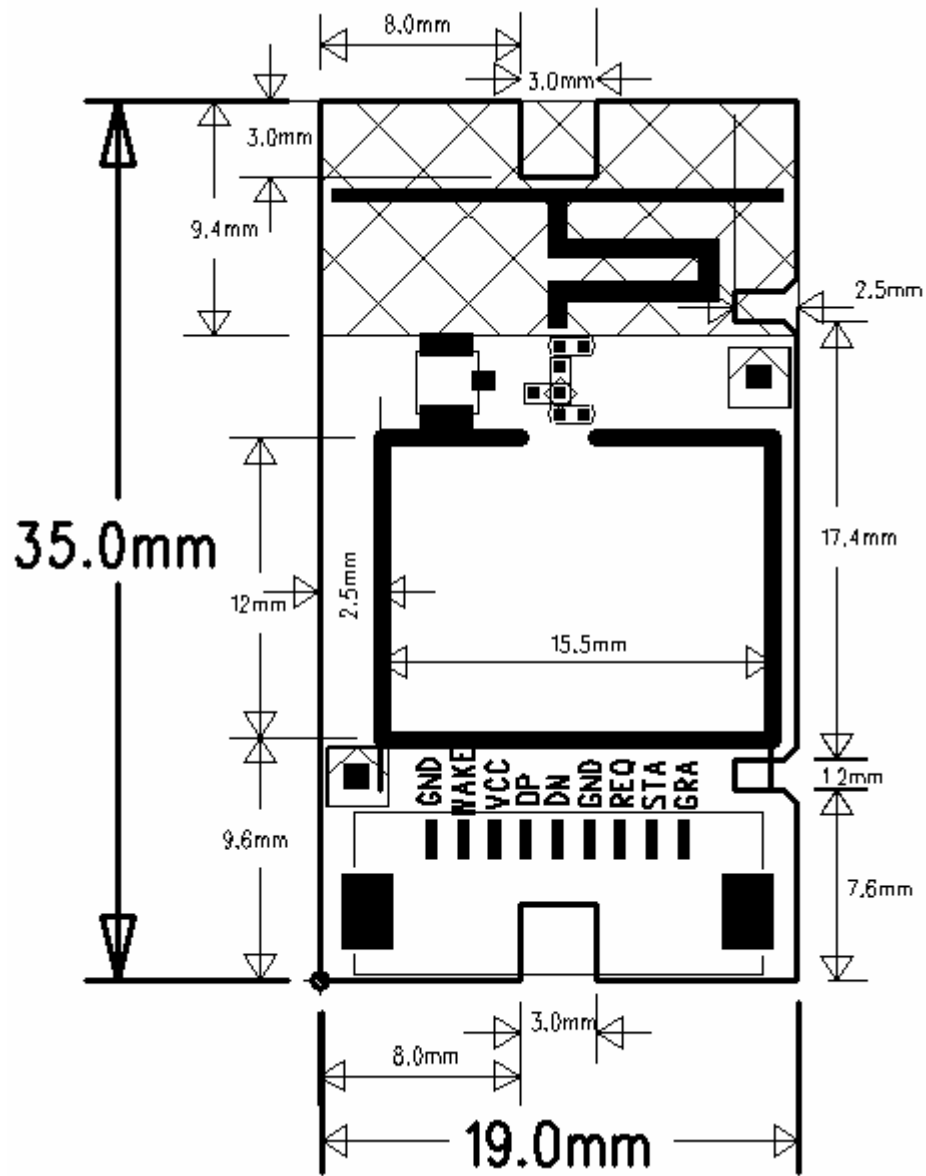
序号	图号	名称	材料	数量	附注
1	141-0300-003	键 Wides		1	
2	141-0100-004	射 Contact	材料: 磷青铜		
3	141-0200-005	插 fitting Mat	材料: 磷青铜		

公差		单位	比例	公差	尺寸	材料	图号	Part No
X, X*	$\pm 0.5^{\circ}$							
Ø	±0.2	mm	1:1	±0.1	44	塑料	141-1000-21	128011-***-0**
长度	±0.25	mm	1:1	±0.1	44	塑料	141-1000-21	128011-***-0**

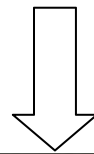
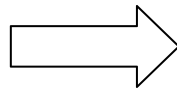
REV.	DESCRIPTION	DATE
A/0	原始版本	07.06.20
A/1	修订版本	06.06.20

图例	A
日期	
签字	
版本号	
图例	B
图例	C
图例	D
图例	E
图例	F
图例	G
图例	H
图例	I
图例	J
图例	K
图例	L
图例	M

Mechanical Dimension



Package



Pumping air into vacuum state, anti-static packaging

Ordering Information

No.	P/N	Description
1	GWB8811C	Basic features, Support 3.3V power supply
2	GWB8811C-5V	Support 5V power supply version

Document Reference

Document	Reference,Date
BlueCore Audio API Specification	CS-209064-DD
BlueTest User Guide	CS-102736-UG
Bluetooth and USB Design Considerations	CS-1014
Core Specification of the Bluetooth System	Bluetooth Specification 4.0,17 December 2009
Blue core CSR8811 A12 QFN Bluetooth v4.0 specification	CS-319460-DS-1

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. *Wash hands after handling.*

Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

"FCC RF Radiation Exposure Statement Caution: To maintain compliance with the FCC's RF exposure guidelines, place the product at least 20cm from nearby persons."

The OEM integrator has to be aware not to provide information to the end user regarding how to install or remove this RF module in the user's manual of the end product which integrates this module. The end user manual shall include all required regulatory information/warning as show in this manual.

The transmitter module can not be located with any transmitter or antenna. The Module shall be only used with listed antenna(s) that has been originally tested and certified with this modul. End product labeling: The final end product must be labeled in a visible area with the following: Contains FCC ID:2AHVHG811