

APPROVAL SHEET



MODEL: BT-1021

Customer's P/N: 603628G

Descriptions: INTERFACE MODULE_BT_Atech Technology Co.,
Ltd_BT-1021

Atech's P/N: 99.BT21CU.40.60

Customer Reply		Atech	
Approved By		Sales	

AtechOEM Inc.

7F., AAEON Building, No.43, Sec. 4, Keelung Rd., Taipei City, Taipei, 10607, Taiwan
(R.O.C.)

tel: +886-2-2377-0282

Fax: +886-2-2377-0283

<http://www.atechoem.com/wl/>

Revision History

Edition #	Reason for revision	Issue Date	Written by
1	Initial Document	2011/7/11	Kevin Shen
1.1	Add Atech P/N	2011/7/15	Kevin Shen
1.2	Modify MAC Label contents	2011/7/22	Kevin Shen
1.3	Change MAC Label to be 2D QR Code	2011/9/30	Kevin Shen
1.4	Change MAC Label to be 2D&Digi	2012/1/11	Joan Hsieh
1.5	Modify RF spec. w/ new PA	2013/3/26	Joan Hsieh
1.6	Modify Module photo, Electrical Characteristics	2014/4/1	Joan Hsieh
1.7	Modify Mechanical Specification	2018/6/4	Kai
1.8	Add Mechanical Specification Tolerance	2018/6/4	Kai

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1. Product Information

■ Product Name : BT-1021

■ Product Description: Class1 BT v2.1 Module for Unitech's Cradle

■ Product Features:

Chips	CSR BlueCore-04 External
Flash	8MB
Host Interface	UART/USB
Standard	Bluetooth v2.1
RF band	2.4~2.4835GHz ISM band
RF Output Power	Class I (< 15dBm)
Sensitivity	<-80dBm
Antenna	External antenna
Power voltage	3.3V
Dimension	22x15.3x3mm

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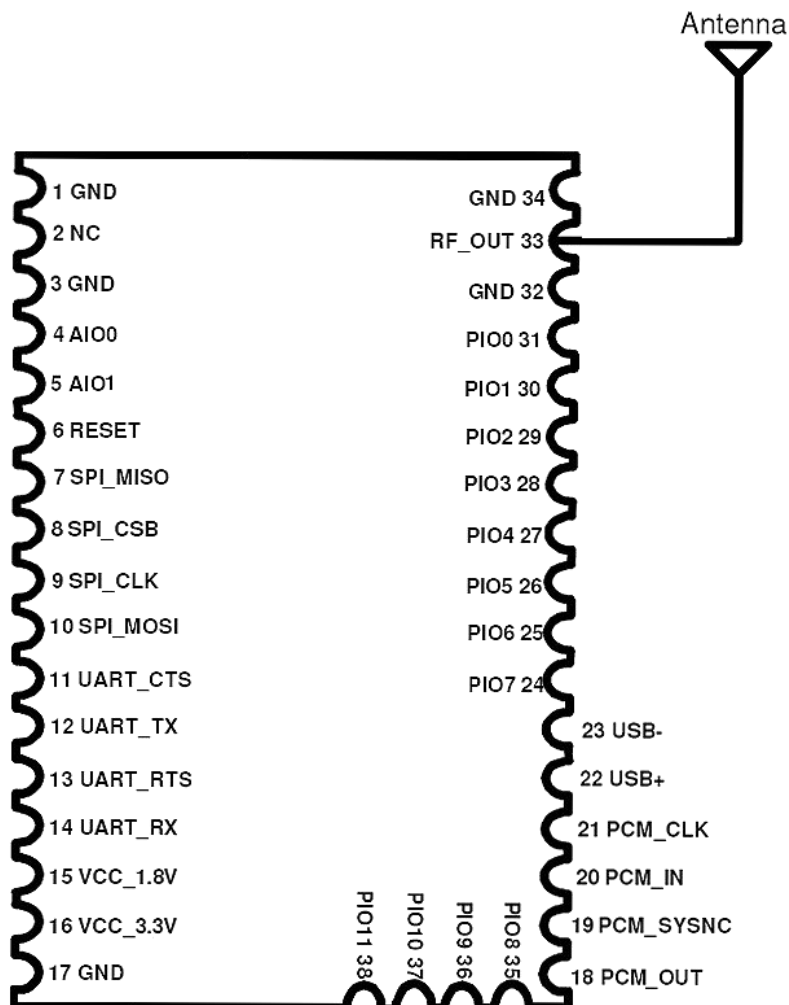
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2. Technical Information

2.1 Module Pinout



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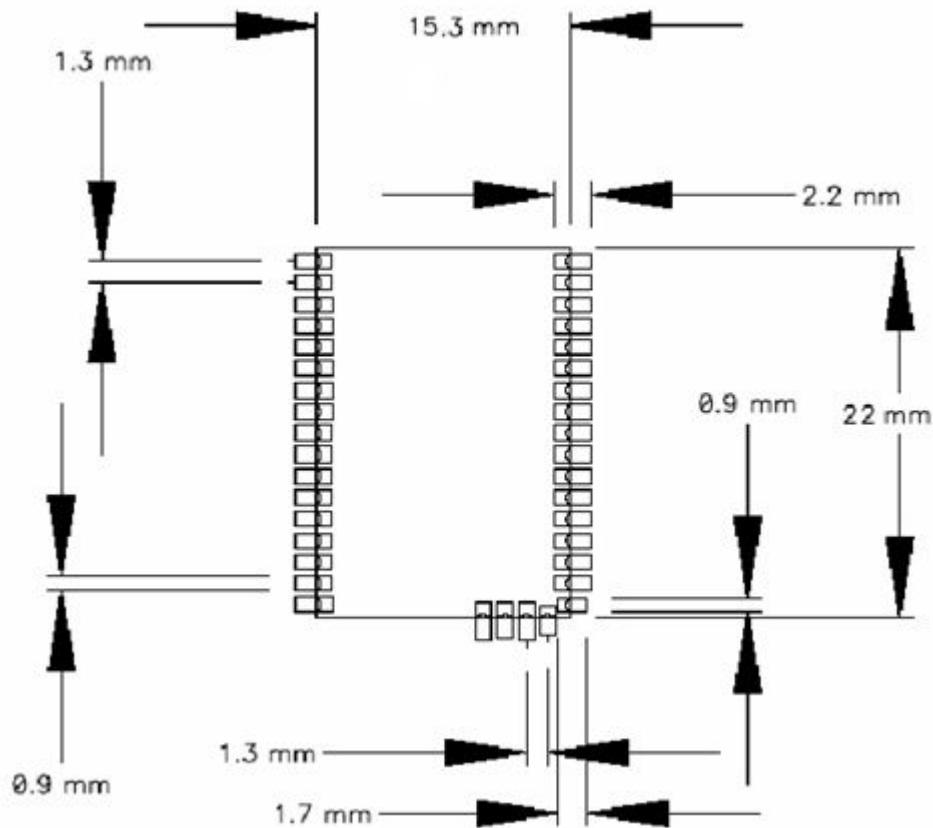
Pin	Name	Type	Note	Pin	Name	Type	Note
1	Ground		Ground Connection	34	AGround		Ground Connection for RF
2	NC			33	RF_OUT	Out	
3	Ground		Ground Connection	32	AGround		Ground Connection for RF
4	AIO0		Internal testing using	31	PIO0	X	Occupied by power amplifier
5	AIO1		Internal testing using	30	PIO1	X	Occupied by power amplifier
6	Reset	Input	1.Pull-High (Active High) 2.A Reset will be performed following PIN6 being active for 5ms and higher	29	PIO2	In/Out	GPIO
7	SPI_MISO		Internal testing using	28	PIO3	In/Out	GPIO
8	SPI_CSB		Internal testing using	27	PIO4	In/Out	GPIO
9	SPI_CLK		Internal testing using	26	PIO5	In/Out	GPIO
10	SPI_MOSI		Internal testing using	25	PIO6	In/Out	GPIO
11	UART_CTS	Input		24	PIO7	In/Out	GPIO
12	UART_TX	Out	BT TX	23	USB-	In/Out	
13	UART_RTS	Out		22	USB+	In/Out	
14	UART_RX	Input	BT RX	21	PCM_CLK	In/Out	
15	VCC_1.8V	Out		20	PCM_IN	In	
16	VCC_3.3V	Input		19	PCM_SYN C	In/Out	
17	Ground			18	PCM_OUT	Out	
35	PIO8	In/Out		37	PIO10	In/Out	
36	PIO9	In/Out		38	PIO11	In/Out	

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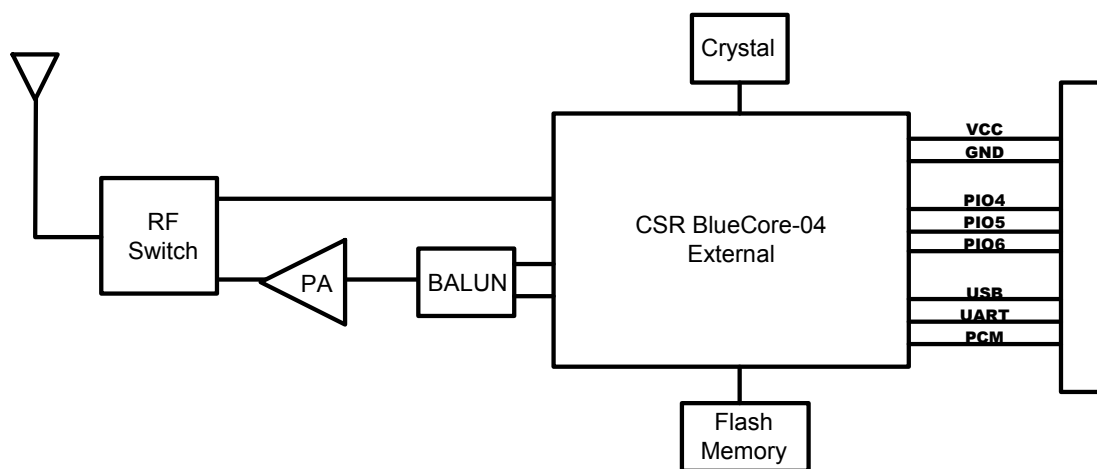
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2.2 Mechanical Specification



公差：±0.1mm

2.3 Block Diagram



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2.4 Electrical Characteristics

	Min	Typ.	Max.	Unit
Supply Voltage	3.0	3.3	3.6	V
RX Supply Current	-	35	-	mA
TX Supply Current(Normal)	-	65	-	mA
TX Supply Current(Continuous)	-	110	-	mA
Sniff Mode Current	-	2	-	mA

■ Operating Conditions

Voltage Range	3.3V±0.3V
Operating Temperature Range	-20 °C ~ 60 °C
Storage Temperature Range	-20 °C ~ 80 °C
Relative Humidity (Operating)	≤90%
Relative Humidity (Storage)	≤90%

2.5 Radio Characteristics

	Frequency (GHz)	Min	Typ	Max	BT Spec.	Unit
Sensitivity at 0.1%BER	2.402	-	-76	-80	≤ -70	dBm
	2.441	-	-76	-80		dBm
	2.480	-	-76	-80		dBm
RF Transmit Power	2.402	12	14	16	≤ 15	dBm
	2.441	12	14	16		dBm
	2.480	12	14	16		dBm
Initial Carrier Frequency Tolerance	2.402	-	30	75	75	kHz
	2.441	-	30	75		kHz
	2.480	-	30	75		kHz
20dB bandwidth for modulated carrier		-	900	1000	≤ 1000	kHz
Drift (Five slots packet)		-	15	-	40	kHz
Drift Rate		-	13	-	20	kHz
$\Delta f_{1\text{avg}}$ "Maximum Modulation"	2.402GHz	140	165	175	$140 < \Delta f_{1\text{avg}}$	kHz
	2.441GHz	140	165	175		kHz
	2.480GHz	140	165	175		kHz
$\Delta f_{2\text{max}}$ "Minimum Modulation"	2.402GHz	115	190	-	115	kHz
	2.441GHz	115	190	-		kHz
	2.480GHz	115	190	-		kHz

3. Packing and Label Information

3.1 Label Information

BD LABEL :

MAC範圍=00190E

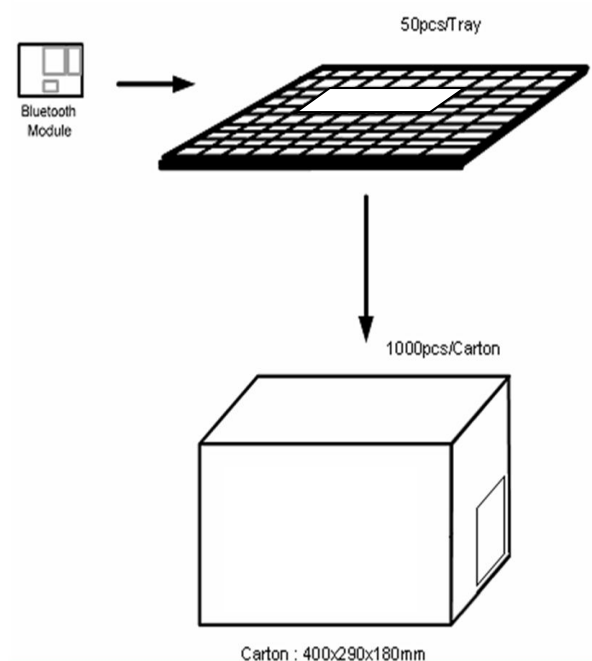
ZZZZZZ(MAC流水號)



3.2 Packaging

Carton 貼紙內容：脆盤*1,外箱左右下方各一張。

最上層空脆盤中央貼一張 Carton Label (70x60mm)



P/O : 依實際訂單號碼

P/N : 603628G

Model : BT-1021

Q`ty : PCS 依實際數量

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