



DFBM-CR220

DFBM-CR220 Bluetooth™ Module Class 2

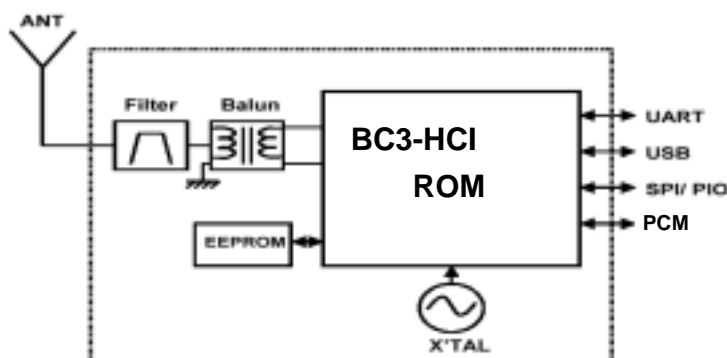
**Wireless communication
module compliant with
Bluetooth™ Specification V1.2**



FEATURES:

- **Suitable for Cellular Phones, Notebook PCs, PDAs, Digital Cameras, Printers, etc.**
- **Small size and Low Profile using high-density packaging technology.**
- **High sensitivity for better reception.**
- **Variable profiles with 4M flash ROM.**
- **Various interfaces: UART, USB and PCM.**
- **Wide operating temperature range: -40~+85 .**

Device diagram





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General Specification

Bluetooth Specification	Version 1.2
Frequency	2402~2480MHz
Modulation	FHSS/GFSK
Transmission Rate	721kbps
Receive Sensitivity	Typ. -78dBm
Maximum Output Power	+4dBm(Class 2)
Operating Voltage	2.7~3.3V
Operating Temperature	-40~+85
Antenna Impedance	50
Flash Memory	4M bit
Package Size	10.5*10.5*2.0 (mm)



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Interface

Interface	Description
Antenna	External Antenna 50
UART Interface	TX, RX, RTS, CTS(9600bps~1.5Mbps)
SPI Interface	Synchronous Serial Interface for firmware download
USB Interface	Full speed Universal Serial Bus interface
PCM Codec	Qualcomm MSM 3000/5000 , Motorola MC145483/ MC145481 OKI MSM7705 , STW 5093/5094
PIO Interface	8 terminals
AIO Interface	2 terminals

Pin description

Pin No.	Name	Description
1	Reset	An active high reset
2	AIO_1	Analogue Programmable input/output
3	AIO_0	Analogue Programmable input/output

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4	ANT	RF input/output
5	Gnd	Ground
6	NC	Leave unconnected
7	NC	Leave unconnected
8	NC	Leave unconnected
9	NC	Leave unconnected
10	Vdd_1.8V	Supply Voltage (1.8V)
11	Vdd_3.15V	Supply Voltage (3.15V)
12	USB_DP	USB data plus with selectable internal 1.5kohm pull-up resistor
13	USB_DN	USB data minus
14	Gnd	Ground
15	UART_RTS	UART request to send active low
16	UART_CTS	UART clear to send active low
17	UART_RX	UART data input active high
18	UART_TX	UART data output active high
19	PCM_CLK	Synchronous data clock
20	PCM_SYNC	Synchronous data sync
21	PCM_OUT	Synchronous data output
22	PCM_IN	Synchronous data input



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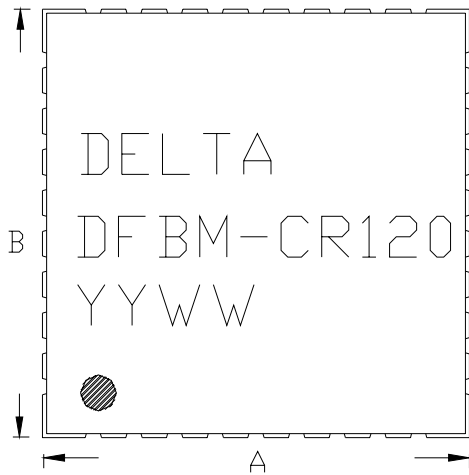
23	Gnd	Ground
24	SPI_CS	Chip select for Serial Peripheral Interface, active low
25	SPI_CLK	Serial Peripheral Interface clock
26	SPI_MOSI	Serial Peripheral Interface data input
27	SPI_MISO	Serial Peripheral Interface data output
28	PIO_11	Programmable input/output line
29	PIO_9	Programmable input/output line
30	PIO_5	Programmable input/output line
31	PIO_4	Programmable input/output line
32	Gnd	Ground
33	PIO_3	Programmable input/output line
34	PIO_2	Programmable input/output line
35	PIO_1	Programmable input/output line
36	PIO_0	Programmable input/output line



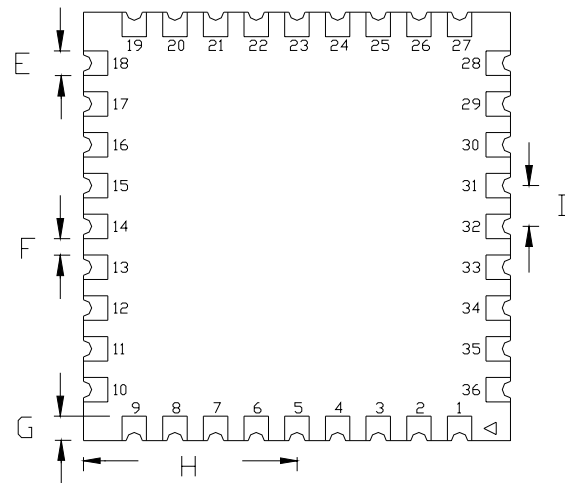
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Dimensions (mm)

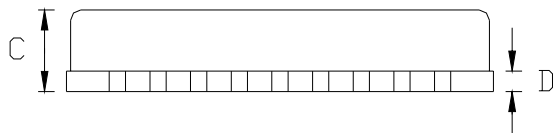
TOP VIEW



BOTTOM VIEW



SIDE VIEW



Unit:mm

A	10.5 ± 0.2	D	0.5 ± 0.1	G	0.6 ± 0.1
B	10.5 ± 0.2	E	0.6 ± 0.1	H	5.25 ± 0.1
C	2.0 max	F	0.4 ± 0.1	I	1.0 ± 0.1



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Record of changes

Date	Reason of change	Issue by
May 11 2005	Original publication for this document.	Emerson.Shih

Contact information:

Website: <http://www.deltaww.com>

Email: Richard.meng@delta.com.tw (Worldwide)

Tel: [886-3-3591968](tel:886-3-3591968) Ext: 2925