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# Bluetooth Module

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## ■ INTRODUCTION

Bluetooth wireless technology is a 2.4GHz ISM-band open industry standard for short range wireless communication, which is capable of voice and data transfer (up to 723 kbps data transfer in ACL link or up to 3 simultaneous voice connections in SCO links in a piconet).

In this document, the SEMCO-Bluetooth Modules are presented, which consists of RF, baseband, and link manager protocol together with Host Controller Interface(HCI) / HCI-UART functionality implemented according to the Bluetooth specification version 1.1.

SEMCO-Bluetooth Modules are designed for use as an universal Bluetooth module compliant for the Bluetooth specification version 1.1, which can be applied to hand-held phones, PDAs, headsets, PCs and PC-peripherals, et cetera for wireless voice and data communication.

SEMCO-Bluetooth Modules or Evaluation Board Demo Kits are available by Samsung Electro-Mechanics for development.

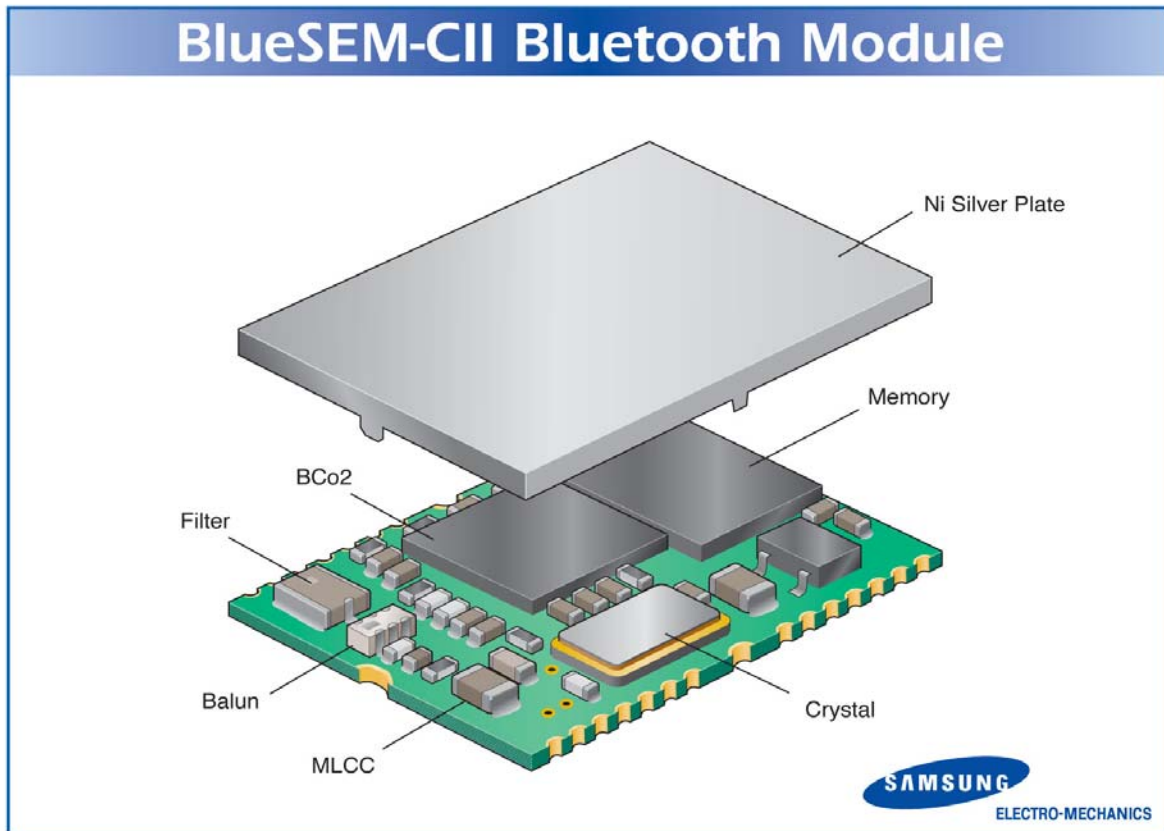
Further more detailed information on the SEMCO-Bluetooth v1.1 modules, are presented in this document below, or also available on our web site under <http://www.sem.samsung.com/bluetooth>

## ■ FEATURE AND APPLICATION

Model Name	BTMZ5012XX	BTMZ7311XX	BTMZ4912XX	BTMZ5211XX	BTR1B2NR16KAA0
Common	Bluetooth specification version 1.1 Compliant				
Chip Vendor	CSR BCO2	CSR BCO2	INFINEON	INFINEON	BROADCOM
Product Type	RF + Baseband	RF + Baseband	RF + Baseband	RF + Baseband	RF only
Class	Class 2	Class 1	Class 2	Class 1	Class 2
Operating Temperature	-20°C ~ 85°C	-20°C ~ 75°C	-40°C ~ 85°C	-40°C ~ 85°C	-30°C ~ 70°C
Voltage Range	2.7V ~ 3.6V	3.0V ~ 3.4V	3.0V ~ 3.6V	3.0V ~ 3.6V	2.7V ~ 3.3V
Size (mm)	18×14×2.0	26×14×2.0	15.3×15.3×2.1	15.3×16.2×2.1	9.5×8.9×1.9
Interface	UART,USB,PCM supported	UART,USB,PCM supported	UART,PCM supported	UART,PCM supported	QUALCOMM chip Interface
Memory Type	Flash embedded	Flash embedded	ROM Mask Type	ROM Mask Type	×
Firmware Upgrade	○	○	×	×	×
Qualification	○	○	TBD	TBD	○
Applications	PCs, Mobile Phones, PDAs, Digital Camera, Printers, FAX, Headset, Other Peripheral Devices				Mobile phone sets(CDMA, PCS phones)

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## ■ STRUCTURE



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## ■ Part Numbering

### ● BTMZXXXXXX



<b>B</b>	<b>T</b>	<b>M</b>	<b>Z</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>
②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪
<b>00</b>		<b>00</b>		<b>00</b>		<b>A</b>	<b>A</b>	<b>A</b>	
(a)		(b)		(c)		(d)	(e)	(f)	



(g)

Symbols	Description	Symbols	Description
①	Manufacturing Company	(a)	Manufacturing year (20xx)
②, ③	Abbreviation code (BT: Bluetooth)	(b)	Manufacturing month
④	Product type (RF+BB: M) Product type (RF : R)	(c)	Manufacturing date
⑤, ⑥, ⑦	Product volume (cc) (Z71: 0.71cc)	(d)	Code for Manufacturing line
⑧	Frequency Range (1: Europe/USA)	(e)	History
⑨	Classification of power (1: Class-1) Classification of power (2: Class-2)	(f)	Manufacturing Plant (Place)
⑩	(Interface & Baud rate : USB) : A (Interface & Baud rate : UART 115.2k) : C (Interface & Baud rate : UART 203.4k) : D	(g)	Bluetooth Qualification Logo
⑪	Revision No. : 0, 1, 2, ...		

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## ● BTR1B2NR16KAA0



①

<b>BT</b>	<b>R</b>	<b>1</b>	<b>B</b>	<b>2</b>	<b>N</b>	<b>R16</b>	<b>K</b>	<b>A</b>	<b>A0</b>
②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪
<b>00</b>		<b>00</b>		<b>00</b>		<b>A</b>	<b>A</b>	<b>A</b>	
①		②		③		④	⑤	⑥	



⑦

Symbols	Description	Symbols	Description
①	Manufacturing Company	⑩	Manufacturing Factory (A ; Main Factory)
②	Product name (BT: Bluetooth)	⑪	Serial Number (A0,A1)
③	Product type (RF+Baseband : M,RF only : R)	①	Manufacturing year (20xx)
④	Frequency Band (Europe/USA)	②	Manufacturing month
⑤	IC Maker (B : Broadcom)	③	Manufacturing date
⑥	Classification of power (2: Class-2)	④	Code for Manufacturing line
⑦	Whether or not contains antenna (N : Antenna)	⑤	History
⑧	Volume (R16 : 0.16cc)	⑥	Manufacturing Plant (Place)
⑨	Code of user Country (K : Korea)	⑦	Bluetooth Qualification Logo