

Introduction

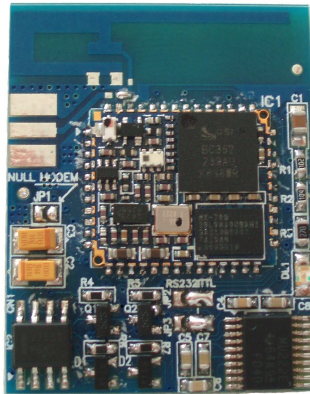
BLUEMORE600 is a professional, slim, wireless module ready for integration in brand new or existing electronic products.

Based on CSR chipset BC03MM it's fully compatible for Serial Port profiles.

EikonAT firmware (default Serial Port profile) you can set Bluetooth parameters by the PC setup utility or through the command line interface.

Module includes a PCB inverted "F" antenna or you can use the external SMA connector (option)

Dimensions: 27.5 x 35 x 5.5 mm.
Connector: 20 pins, pitch 2.54mm, Male pinstrip
Power supply: 3.3V or 5V



Applications

BLUEMORE600 allows you to cut the cables using wireless communication with PC, Pda, Mobile phone, etc...

BLUEMORE600 with EikonAT firmware can be used up for :

- Pure serial cable replacement (2 BLUEMORE600 wireless connected to each other)
- Mixed serial cable replacement (1 BLUEMORE600 connected to a Bluetooth PC or a PDA)

It's suitable for integration in microprocessor systems without operative system since it does not need drivers to work. It can be used as simple cable replacement for serial communications.

Features

- Bluetooth v1.2 compliant Class1 100 meters range
- CSR Bluecore BC03MM
- 3.3V power supply
- UART Serial port 5V
- RS232 Serial port
- 1.200 baud to 921kbaud
- N° 2 I/O signals
- Standard or custom Firmware
- OEM version on request

Benefits

- Easy to setup
- Easy to manage and use
- Low power
- Zero Time for development
- Plug and Play

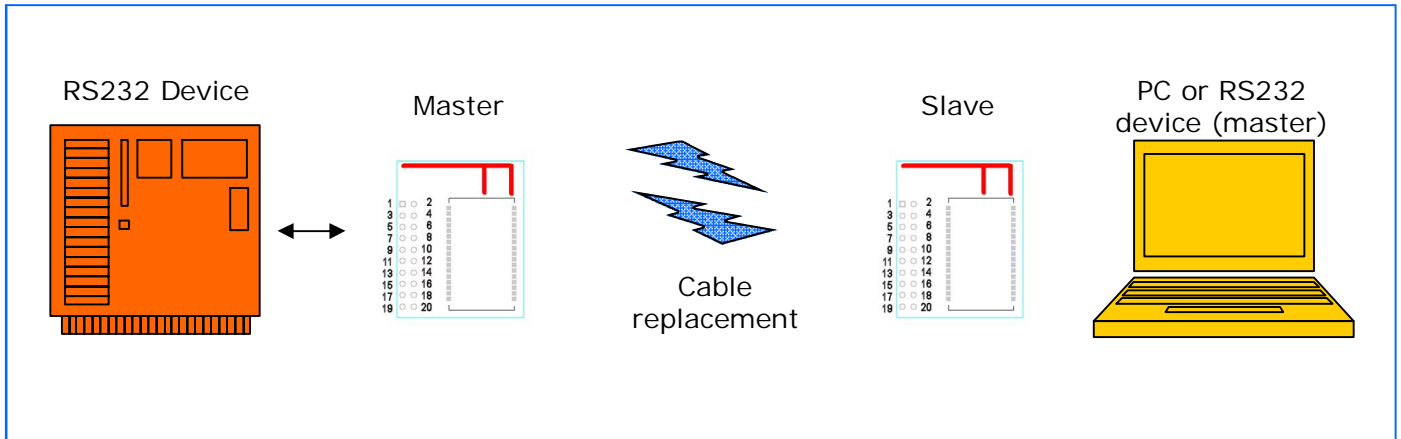
Applications

- Wireless RS232
- Wireless Audio with PTT
- Wireless Stereo Headset
- Wireless Stereo A2DP
- Wireless Handsfree

Applications (serial port profile eikonAT firmware)

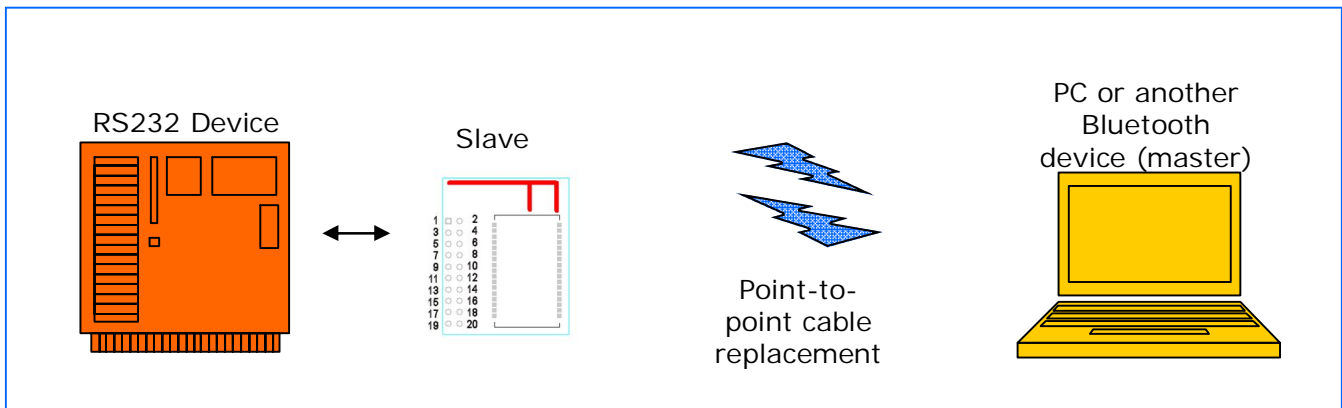
Pure serial cable replacement solution

Replace your serial cable with a wireless connection

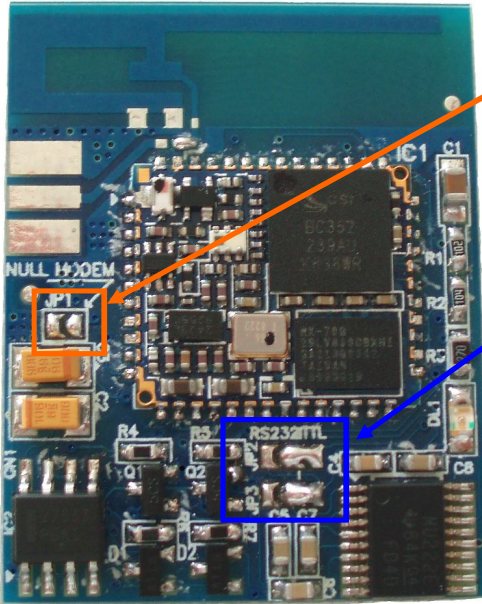


Mixed serial cable replacement

Wireless connection between a Bluetooth and RS232 device.



Configuration jumpers



RTS/CTS—NULL MODEM (default)

If shorted JP1 the module is set in nullmodem mode (Rts-Cts signals shorted together).
If your application doesn't use hardware flowcontrol this short MUST be done

RS232/UART signal level

JP2 and JP3 sets the module to work with RS232 or TTL voltage levels (factory default is RS232)

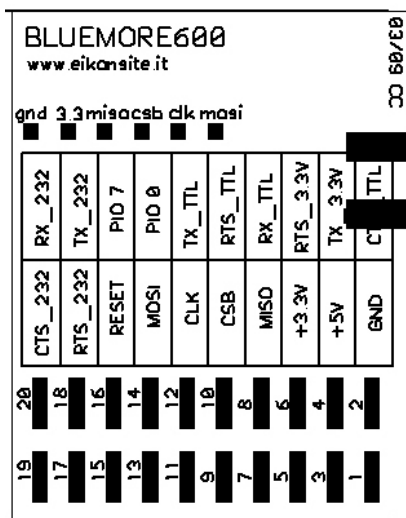
RS232

JP2 central-left
JP3 central-left

UART (TTL)

JP2 central-right
JP3 central-right

Pinout



Bottom view

Note for BLUEMORE106 and BLUEMORE200 users:

BLUEMORE600 is fully pin to pin compatible with BLUEMORE106 and BLUEMORE200, but in order to select serial level from UART to RS232 you must pay attention on solder joints JP2 and JP3)

Duplicate signals:

Some of the UART_XX signals are duplicated in order to have compatibility with BLUEMORE106 and BLUEMORE200.

| Pin | Name | In Out | Description |
|-----|-----------|--------|--|
| 1 | GND | In | Ground |
| 2 | UART_CTS | In | UART CTS (5V TTL level — please see note on JP2-JP3 page 3) |
| 3 | +5V | In | +5V (do not use if powered by Pin 5) |
| 4 | UART_TX | Out | UART TX (5V TTL level — please see note on JP2-JP3 page 3) |
| 5 | +3.3V | In | +3.3V (or regulated output if there's power supply on Pin 3) |
| 6 | UART_RTS | Out | UART RTS (5V TTL level — please see note on JP2-JP3 page 3) |
| 7 | MISO | Out | SPI programming MISO signal |
| 8 | UART_RX | In | UART RX (5V TTL level — please see note on JP2-JP3 page 3) |
| 9 | CSB | In | SPI programming CSB signal |
| 10 | UART_RTS | Out | UART RTS (5V TTL level — please see note on JP2-JP3 page 3) |
| 11 | CLK | In | SPI programming CLK signal |
| 12 | UART_TX | Out | UART TX (5V TTL level — please see note on JP2-JP3 page 3) |
| 13 | MOSI | In | SPI programming MOSI signal |
| 14 | PIO 0 | In/Out | Module ON : Blinks |
| 15 | - | NC | Not connected |
| 16 | PIO 7 | In/Out | Module ON: Blinks Module CONNECTED : Fixed HIGH |
| 17 | RS232_RTS | Out | RS232 RTS (RS232 level — please see note on JP2-JP3 page 3) |
| 18 | RS232_TX | Out | RS232 TX (RS232 level — please see note on JP2-JP3 page 3) |
| 19 | RS232_CTS | In | RS232 CTS (RS232 level — please see note on JP2-JP3 page 3) |
| 20 | RS232_RX | In | RS232 RX (RS232 level — please see note on JP2-JP3 page 3) |

IMPORTANT NOTE ON HARDWARE FLOWCONTROL

eikonAT firmware uses hardware flowcontrol (RTS/CTS). If your application doesn't please be sure that these 2 signals are **shorted** together.

You may use JP1 solder joint to make it easier (Null modem configuration, see page 3)

MECHANICAL DRAWING (millimeters)

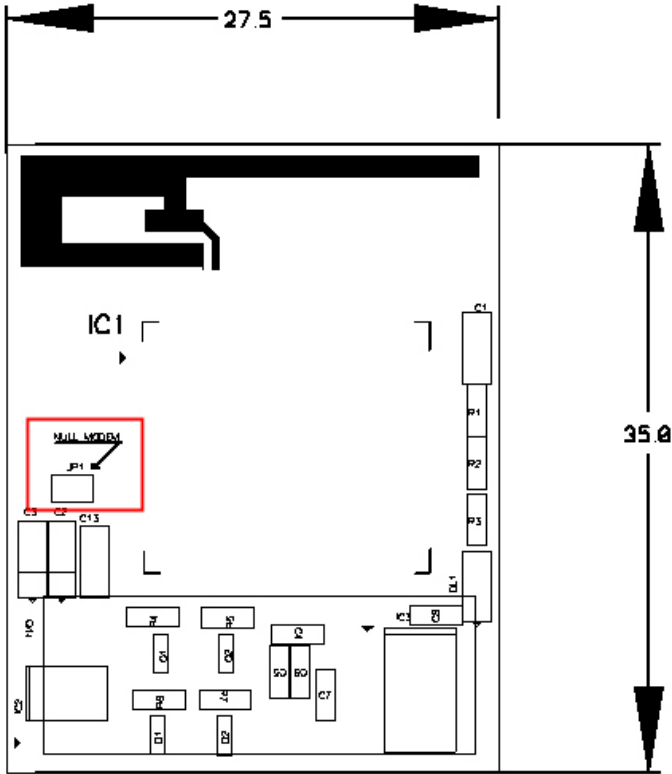
BLUEMORE600 Top view

Note on PCB ANTENNA

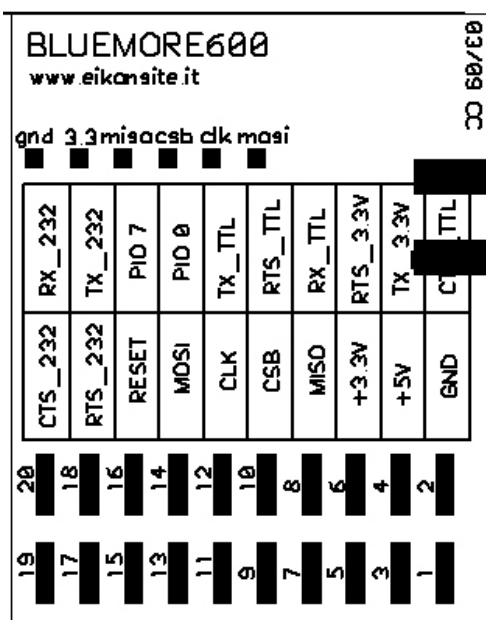
To have the max performance the PCB antenna has to be free to irradiate signal. If the module is place into a base PCB the area under the antenna must be free from tracks or copper areas. Please leave free space under the antenna and 10-15mm all around it.

PCB antenna is connected by default. If you need SMA connector move the solder joint to the CENTRAL—LEFT position

Ask us to supply the special version with SMA connector for external antenna.



BLUEMORE600 Bottom view



Serial

| | FACTORY DEFAULT | |
|--------------|------------------|------------------------|
| Baud rate: | 1200..921600 bps | 9600 |
| Data bits: | 8 | 8 |
| Stop bit(s): | 1, 2 | 1 |
| Parity: | None/Even/Odd | None |
| Handshake: | None/Hardware | None (RTS/CTS shorted) |

if NONE RTS and CTS must be shorted together)

Preinstalled eikonAT firmware allows you set these parameters simply by AT command or by our PC utility software "eikonAT setup PC" (download it from our website)

PIO

I/O pins are available to turn on/off external devices, to send informations to a microprocessor, to turn on led, buzzer, etc...

Pins are 3,3V logic level, max 10mA output current

SPI

These 4 signals are used for firmware upgrade and module settings change.

POWER

Voltage input

| | |
|---------|----------------|
| Pin 3 : | 5V DC +/- 5% |
| Pin 5 : | 3,3V DC +/- 5% |

Bluetooth Power Class

| | | |
|----------|---|---------------|
| RF Power | 1 | 100mW (20dBm) |
|----------|---|---------------|

Average current consumptions for Master firmware (v3.1) :

| | |
|------------------------------------|-------------|
| No connection: | 67 mA |
| Active connection (data on UART): | 33 mA |
| Idle connection (no data on UART): | 27 mA |
| Max RF burst (peak): | up to 88 mA |

Average current consumptions for Slave firmware (v3.0) :

| | |
|------------------------------------|-------------|
| No connection (inquiry): | 18 mA |
| Active connection (data on UART): | 48 mA |
| Idle connection (no data on UART): | 18 mA |
| Max RF burst (peak): | up to 86 mA |

TEMPERATURE RANGE

| | |
|------------|------------------------------|
| Operation: | 0°C +70°C (not condensing) |
| Storage: | -40°C +85°C (not condensing) |

Applications and firmware options

- Serial port cable replacement with AT commands for setup (default firmware : EikonAT onboard)

ORDERING INFORMATION

BLUEMORE600 is shipped with EikonAT firmware by default. This firmware allows you to setup the module (Serial port profile) by AT commands or by a simple PC software

For special needs please send us a description of your system and we'll suggest you the best firmware solution (we develop custom firmware)

Firmware on BLUEMORE600 can be flashed using our evaluation board (SPI connection)

Buy online from our website www.eikonsite.it or contact your local reseller.

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