

# WRAP THOR

FOR WIRELESS MACHINE COMMUNICATIONS (M2M)



26 mm

## KEY FEATURES

- ▶ *Bluetooth Module for embedded applications*
- ▶ *100 meter range*
- ▶ *UART or USB interfaces for host processor or application*
- ▶ *PIO and SPI interfaces for hardware integration*
- ▶ *Support for applications inside the module*
- ▶ *Simple WRAP ASCII Command Interface available*

## DESCRIPTION

The WRAP THOR™ is a robust, configurable sub-system optimized for embedded applications. It enables device manufacturers to easily add secure and sound wireless communications elements in new or existing applications.

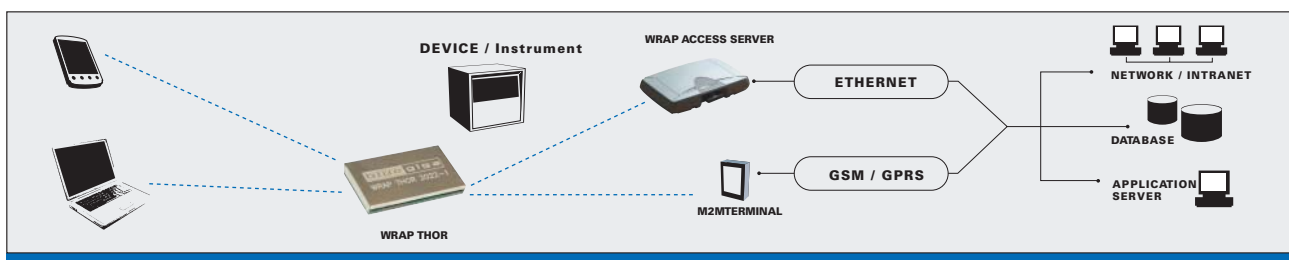
The product supports two different designs:

- Module integration to systems with a processor
- Module integration through RS-232, SPI, or PIO port, without further requirements for the system; the module acts autonomously

The WRAP THOR Module comes with the necessary *Bluetooth* hardware. It facilitates a communication range of 100 meters using TCP/IP\* or serial port communication.

With the WRAP THOR, your product will reach the market faster without wasting time or resources. The threshold to wireless connectivity has never been lower!

\*If supported by the embedded host.



## TECHNICAL DATA

### Software

- WRAP ASCII interface Easy-to-use command API for accessing the *Bluetooth* functionality from a host system. No *Bluetooth* design skills needed.
- Possibility to use also custom software

### Hardware

- *Bluetooth* Class 1 (100 meters)
- Uses 2.4 GHz ISM Band
- Host processor interface (UART)
- Application HW interfaces UART, SPI and GPIO
- Supply voltage:
  - Regulated 3.3 VDC
- Power consumption:
  - Link active max: 140mA min: 26 mA
  - Park mode average: 2 mA (1 s beacon interval, 38.4 kbps UART)
  - Deep sleep mode: 100  $\mu$ A
- PCB form factor: 26 x 14 x 3 mm
- Operating temperature: -40° C to +70° C
- Reference designs and antennas available for several architectures

### Certifications

- *Bluetooth* version 1.1

### Product Numbers

- WRAP THOR-2022-1
- WRAP THOR-2022-1-CR (carrier board)

### Development System

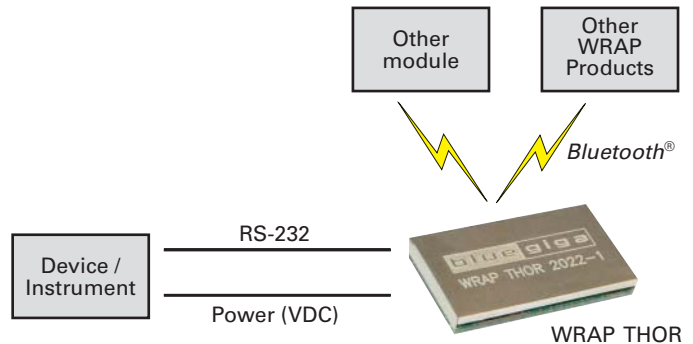
- WRAP THOR Evaluation Kit
- WRAP THOR Onboard Installation Kit

### Other Bluegiga Products

- WRAP THOR Board to Board Module
- WRAP Access Server
- WRAP Cable Replacer

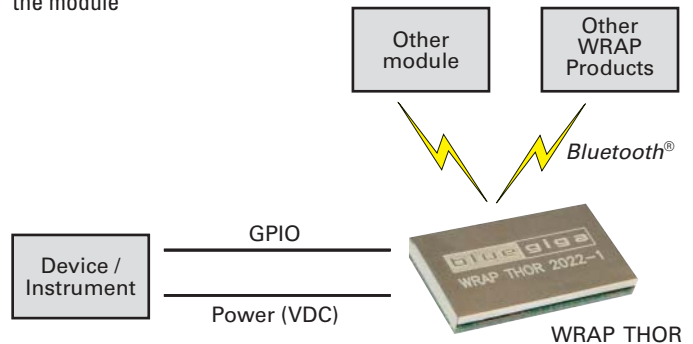
### Example 1:

RS-232 Cable Replacement with WRAP ASCII Interface



### Example 2:

Simple device monitor/controller with custom software running inside the module



### Target applications for WRAP THOR:

- Embedded cable replacement
- Embedded systems
- Telemetry, telematics and M2M applications
- Industrial instruments, sensors and devices
- Handheld devices

For more information about Bluegiga Technologies, please contact:

**Bluegiga Technologies Oy**  
Sinikalliontie 11, 02630 Espoo  
PL 120, 02631 Espoo, Finland  
Phone: +358 9 435 50 60  
Fax: +358 9 435 50 660  
[WWW.BLUEGIGA.COM](http://WWW.BLUEGIGA.COM)  
[SALES@BLUEGIGA.COM](mailto:SALES@BLUEGIGA.COM)

© Bluegiga Technologies 2000-2004.

Bluegiga Technologies assumes no responsibility for any errors which may appear in this document, reserves the right to change devices, software or specifications detailed herein at any time without notice, and does not make any commitment to update the information contained herein. Bluegiga Technologies' products are not authorised for use as critical components in life support devices or systems.

The WRAP and WRAP THOR trademarks are trademarks of Bluegiga Technologies Oy, The *Bluetooth* trademark is owned by *Bluetooth* SIG, Inc., U.S.A. and is licensed to Bluegiga Technologies. BlueCore is a trademark of CSR. Linux is a trademark of Linus Torvalds.