












# 2G

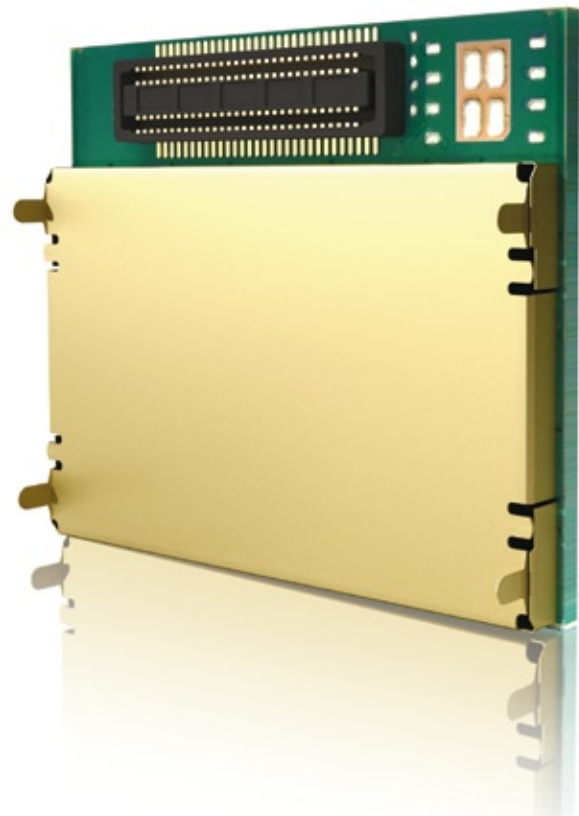
## M2M Value



### Wireless Module BG2

#### The M2M essentials re-invented

-  M2M Value
-  Quad-Band 2G
-  Screwless Mountable
-  GPRS Class 10
-  Full Voice Support
-  TCP/IP
-  Component SIM Prepared
-  60 pin B2B Connector
-  10 GPIOs
-  Extended Temperature Range
-  Highly Compact Size



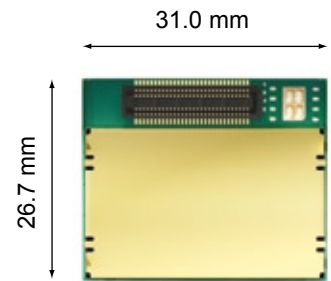
The Cinterion BG2 wireless module is the latest generation of 2G products offering full voice capabilities and high speed GPRS data transmission and is your all-rounder of choice for machine-to-machine including metering, security, vending, POS, and many more applications.

The innovative and integrated antenna connection together with a highly flexible mounting concept allowing screwless mounting reduces significantly the total cost of ownership (TCO) at customers application. This module packs a Quad-Band GSM/GPRS baseband and TCP/IP connectivity

based on GPRS Class 10 data transmission into a compact form factor. BG2 supports industrial interfaces such as two serial interfaces, 10 GPIO's, as well as I<sup>2</sup>C and is already prepared for Component SIM. Alongside highest reliability and quality the BG2 offers an easy start for M2M market entrants and comes along in two flavors as Quad-Band with GPRS Class 10 (BG2-W) and Dual-Band version with GPRS Class 8 (BG2-E). Like all Cinterion modules, the BG2 comes with full type approval (FTA) enabling use across the globe. It has even been certified by the largest carriers worldwide, including US operators.

# Wireless Module BG2

## The M2M essentials re-invented



### General features

- Quad-Band: GSM 850 / 900 / 1800 / 1900 MHz (BG2-W)
- Dual-Band: GSM 900 / 1800 MHz (BG2-E)
- 3GPP release 99
- GPRS multi-slot Class 10/8
- Compliant to GSM phase 2/2+
- Output power:
  - Class 4 (2W) for GSM850
  - Class 4 (2W) for GSM900
  - Class 1 (1W) for GSM1800
  - Class 1 (1W) for GSM1900
- SIM Application Toolkit release 99
- Control via AT commands (Hayes, 3GPP TS 27.007 and 27.005)
- TCP/IP stack access via AT commands
- Internet Services FTP, ICMP, DNS, TCP server & client, UDP client
- Supply voltage range: 3.3 – 4.5 V
- Dimension: 26.7 x 31.0 x 3.0 mm
- Operating temperature range: -40°C to +85°C
- Weight: 5.0 g
- RoHS and EuP compliant
- Screwless mountable
- Mounting clip (optional)

### Specifications

- GPRS Class 10/8
  - DL: max. 85.6 kbps,
  - UL: max. 42.8 kbps (BG2-W)
  - UL: max. 21.4 kbps (BG2-E)
- Mobile Station Class B
- CSD data transmission
- USSD support
- SMS text and PDU mode, cell broadcast
- Fax Group 3, class 1
- High quality voice support
- High quality handsfree operation
- FR, HR, EFR and AMR speech codec support
- Integrated TTY modem

### Interfaces

- 60-pin board-to-board connector
  - Integrated antenna connection
  - 2 Serial interfaces
  - Automatic baud rate detection
  - Audio analog interface (Microphone & Speaker)
  - UICC/SIM card interface 1.8 V and 3.0 V
  - 8 GPIO pins 1.8 V (special option for PWM or Buzzer and status indication functionality)
  - 2 GPIO pins 2.8 V (optional usable as I<sup>2</sup>C)
  - ADC/DAC (PWM) interface

### Special features

- Modem driver for Microsoft® Windows 7™, Windows XP™ and Windows Vista™
- Firmware update via serial interface
- Real time clock with alarm functionality
- Customer IMEI on request
- Prepared for Component SIM

### Approvals

- CE, R&TTE, GCF, FCC, PTCRB, IC
- Local approvals and network operator certifications (including AT&T approval)

**For detailed specification please see Hardware Interface Description.**

### Screwless mountable

Soldering pins allow a quick and reliable mounting without the use of additional screws and spacers.

### Innovative B2B concept

The 60-pin board-to-board connector includes a high quality antenna connection and reduces the total cost of ownership omitting a separate antenna connector.

### Component SIM

A new generation of SIM cards soldered on the pcb with an extended life cycle and high reliability — also in harsh environmental conditions — are available and can be customized for M2M applications. BG2 with Component SIM is offered as variant upon request.



### Cinterion Global Support

Local engineers, a competent helpdesk, a dedicated team of R&D specialists and an advanced development center are the hallmarks of our leading support offer.

The Cinterion support includes:

- Personal design-in consulting for hardware and software
- Extensive RF test capabilities
- GCF/PTCRB conform pretests to validate approval readiness
- Guidelines for local approvals and acceptances
- Regular training workshops

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**Further information about our products and services is also accessible via [www.cinterion.com](http://www.cinterion.com)**

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