Distributed by:
TEXIM EUROPE
www.texim-europe.com

gemalto
security to be free

# BGS5

- Quad Band 2G GPRS Class 12
- Multi Design Capability (LGA)
- FOTA configurable & free of charge
- Java embedded
- USB 2.0 High Speed compatible
- Advanced Temperature Management
- Embedded TCP/IP Stack
- RLS Monitoring (Jamming Detection)




Java POWERED

intel Intelligent Systems Alliance

TEXIM EUROPE

## 2G

## Cinterion® BGS5 Wireless Module With Advanced Processing Power

# Cinterion® BGS5 Wireless Module With Advanced Processing Power

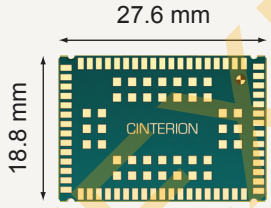
Gemalto M2M is proud to introduce the Cinterion BGS5: the next step in advanced 2G machine-to-machine (M2M) processing and communications. BGS5 provides advanced processing and an embedded Java virtual machine to offload the application, or even remove the microprocessor, significantly reducing the device complexity and Bill of Material (BOM) cost. With a small footprint compatible with the Cinterion Industrial platform, it offers the perfect complement to 3G solutions when the application processing power is required, but the high throughput is not.

At only 27.6 mm x 18.8 mm x 2.7 mm, BGS5 is the smallest module to offer advanced application processing power. It is a full Quad-Band GSM (850/900/1800/1900 MHz) module with GPRS class 12 support. Designed to deal with harsh environments, BGS5 supports M2M-grade extended temperature ranges.

The application processor makes BGS5 the perfect fit for applications like track and trace or Automatic Meter Reading (AMR), remote maintenance and control, and aftermarket telematics. In such applications, the module itself can be programmed to collect specific information, process it via embedded business logic, and send the results at a scheduled time. Device makers can program and add applets to fit their needs, or use existing JSRs which are publically available. As the Java platform is open, this code can then be ported to other Java enabled devices later without requiring additional modifications.

As part of our Edge-to-Enterprise concept, the embedded Java allows seamless integration between your application and the backend server – optimizing information collection and processing while ensuring you a future-proof infra-structure. In addition any infrastructure developed on this platform can easily be migrated to any other Java enabled Cinterion module. BGS5 is a key product for the Industrial platform which embeds intelligence directly in the module, saving you cost and design complexity!

## Perfect M2M at Minimal Footprint




**LGA technology**
Land grid array, or LGA, is a surface-mount technology for fully automated manufacturing allowing to benefit from efficiency and process consistency. Cinterion's unique type of LGA technology is designed with focus on highest reliability and flexibility and to meet the demanding requirements of M2M application manufacturers.

**Multi Design Capability**
The unique BGS5 footprint, based on LGA technology, offers seamless migration from 2G to 3G within a single design footprint. Compatibility with the world's smallest HSPA wireless module ensures future-proof design and longevity of M2M applications.

**Java™**
Java offers easy and fast application development, a broad choice of tools, high code reusability, easy maintenance, a proven security concept, on-device debugging as well as multi-threading programming and program execution.

**Gemalto M2M Support includes:**

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



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.

TEXIM EUROPE

# Cinterion® BGS5 Features

## GENERAL FEATURES

- GSM Quad-Band: 850 / 900 / 1800 / 1900 MHz 3GPP Release 6
- GPRS multi-slot Class 12
- 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, Class 3
- Control via standardized and extended AT commands (Hayes, TS 27.007 and 27.005)
- TCP/IP stack access via AT commands and transparent TCP services
- Secure Connection for client IP services
- Internet Services TCP/UDP server/client, DNS, Ping, FTP client, HTTP client
- Supply voltage range 3.3 - 4.5 V, highly optimized for minimal power consumption
- LGA66 soldering mount, MSL4
- Dimensions: 27.6 x 18.8 x 2.7 mm
- Weight: 3 g
- Operating temperature: -40°C to +85°C

## SPECIFICATIONS

- GPRS Class 12
  DL: max. 85.6 kbps,
  UL: max 85.6 kbps
  Mobile Station class B
- CSD data transmission up to 9.6 kbps, V.110, non-transparent
- USSD support
- SMS text and PDU mode, cell broadcast
- High quality digital voice support for handset, headset and handsfree operation
- Speech codec: FR, HR, EFR and AMR

## SPECIAL FEATURES

- USB interface supports multiple composite mode and a Linux-/Mac- compliant mode
- Firmware update via serial and USB interfaces
- Real time clock with alarm functionality
- Multiplexer according 3GPP TS 27.010
- RLS Monitoring (Jamming detection)
- Informal Network Scan
- Customer IMEI/SIM-Lock as variant
- Integrated FOTA, configurable and free of charge

## JAVA OPEN PLATFORM

- Java™ profile IMP-NG & CLDC 1.1 HI
- Secure data transmission with HTTPS/SSL
- Multi-Threading programming and Multi-Application execution
- 5 MB RAM and 10 MB Flash File System

## INTERFACES (LAND GRID ARRAY)

- Power supply
- Digital Audio interface, prepared for Analog Audio support
- USB 2.0 Interface
- Serial interface , including automatic baud rate detection
- Serial interface (4-wire)
- UICC/SIM card interface 1.8 V and 3.0 V
- 4 GPIO pins (special option for PWM or Buzzer and status indication functionality)
- $I^2C$ interface
- ADC interface

## DRIVERS

- Serial interface modem driver for Microsoft® Windows 8™, 7™, Vista™, XP™
- USB and MUX Drivers for Microsoft® Windows Embedded Compact™ 7 and Embedded Handheld® 6.5
- MUX Driver for Microsoft® 8™, 7™, Vista™, XP™

## APPROVALS

- CE, R&TTE, GCF, FCC, PTRCB, UL, IC
- GCF Listing
- Other local approvals and network operator certifications
- EuP, RoHS and REACH compliant

TEXIM EUROPE

**For more information, please visit**
gemalto.com/m2m, developer.gemalto.com, www.facebook.com/gemalto, or follow @gemaltoIoT on twitter.

The information provided in this brochure contains merely general descriptions or characteristics of performance, which in case of actual use do not always apply as described or which may change as a result of further development of the products. An obligation to provide the respective characteristics shall only exist if expressly agreed in the terms of contract. All product designations may be trademarks or product names of Gemalto M2M GmbH or supplier companies whose use by third parties for their own purposes could violate the rights of the owners. Oracle and Java are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners. ARM9 is a registered trademark of ARM Limited.

**Gemalto M2M GmbH**
Werinherstraße 81
81541 Munich
Germany

GEMALTO.COM/M2M

Distributed by:
TEXIM EUROPE
www.texim-europe.com

gemalto
security to be free

© Gemalto 2013. All rights reserved. Gemalto, the Gemalto logo, are trademarks and service marks of Gemalto and are registered in certain countries. December 2014

TEXIM EUROPE

# Contact details

## The Netherlands



Elektrostraat 17
NL-7483 PG Haaksbergen

T: +31 (0)53 573 33 33
F: +31 (0)53 573 33 30
E: nl@texim-europe.com

## Belgium



Zuiderlaan 14 bus 10
B-1731 Zellik

T: +32 (0)2 462 01 00
F: +32 (0)2 462 01 25
E: belgium@texim-europe.com

## UK & Ireland



St. Mary's House, Church Lane
Carlton Le Moorland
Lincoln LN5 9HS

T: +44 (0)1522 789 555
F: +44 (0)845 299 22 26
E: uk@texim-europe.com

## Germany North



Bahnhofstrasse 92
D-25451 Quickborn

T: +49 (0)4106 627 07-0
F: +49 (0)4106 627 07-20
E: germany@texim-europe.com

## Germany South



Martin-Kollar-Strasse 9
D-81829 München

T: +49 (0)89 436 086-0
F: +49 (0)89 436 086-19
E: germany@texim-europe.com

## Austria



Warwitzstrasse 9
A-5020 Salzburg

T: +43 (0)662 216 026
F: +43 (0)662 216 026-66
E: austria@texim-europe.com

## Nordic region



Sdr. Jagtvej 12
DK-2970 Hørsholm

T: +45 88 20 26 30
F: +45 88 20 26 39
E: nordic@texim-europe.com

## Italy



Via Matteotti 43
IT-20864 Agrate Brianza (MB)

T: +39 (0)395 967 226
F: +39 (0)395 967 226
E: italy@texim-europe.com

## General information

**info@texim-europe.com**
**www.texim-europe.com**