

# 2G

## Advanced Automotive Grade Modules

### AGS2



eCall  
prepared



Quad-Band



Full Voice  
Support



LGA  
Mounting



GPRS  
Class 10



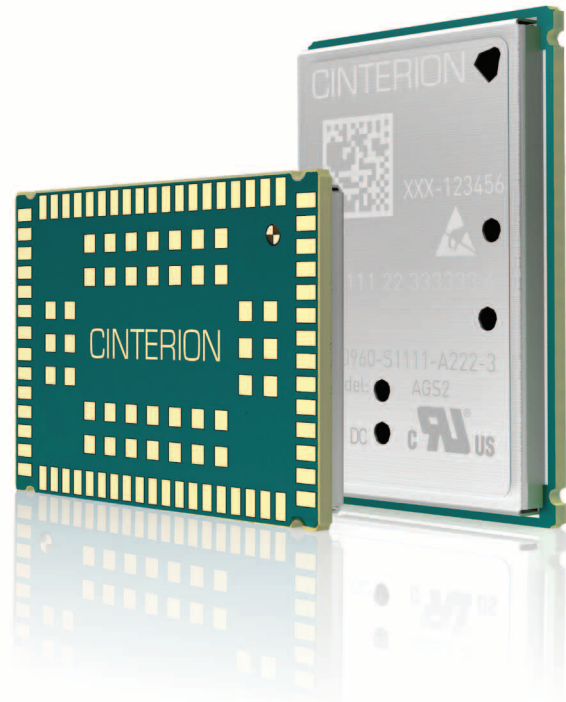
Antenna  
Diagnostics



RLS  
Monitoring



Advanced  
Temperature  
Management



### Cinterion AGS2

#### Advanced 2G Automotive Grade Wireless at its Best

The Cinterion AGS2 wireless module is another in a long history of successful automotive grade products, offering an ultra compact LGA footprint with a compelling set of features for 2G networks.

The ruggedized AGS2 is engineered to meet the highest level of compliance with automotive specifications and provides an unparalleled level of quality and performance, even under the harshest operating conditions.

Based on the latest generation of Intel's Quad-Band GSM/GPRS baseband chipset, the Cinterion AGS2 module incorporates best in class low power consumption and ensures long-term availability.

AGS2 is prepared to meet the comprehensive requirements of the European eCall initiative as well as ERA/Glonass. It also features in-band modem functionality such as voice prompts, VDA 6.2 audio quality, jamming detection, antenna diagnosis as well as advanced SSL encryption to support IP-based services.

The AGS2 is an ideal enabler for automotive and ITS applications such as toll collect, onboard vehicle telematics and fleet management as well as emergency call, breakdown support or roadside assistance.



## General Features

- GSM Quad-Band: 850 / 900 / 1800 / 1900 MHz
- 3GPP release 99
- GPRS multi-slot Class 10
- Compliant to GSM phase 2/2+
- Output power:
  - Class 4 (2W) for 850 / 900
  - Class 1 (1W) for 1800 / 1900
- SIM Application Toolkit Class 3, letter Class B and C, Release 99
- Control via AT commands (Hayes, 3GPP TS 27.007 and 27.005)
- Internet Services TCP server/client, UDP, HTTP, FTP, SMTP, POP3, Ping
- Secure Connection with TLS
- DTMF detector
- Supply voltage range 3.3 to 4.5 V
- LGA66 soldering mount, MSL4
- Dimensions: 27.6 x 18.8 x 2.7 mm
- Operating temperature: -40°C to +90°C
- RoHS and EuP compliant

## Specifications

- GPRS Class 10
  - DL: max. 85.6 kbps,
  - UL: max. 42.8 kbps
- Mobile Station Class B
- CSD data transmission up to 14.4 kbps, V.110, non-transparent
- USSD support
- SMS text and PDU mode, cell broadcast
- Fax Group 3, Class 1 and Class 2
- High quality voice support for handset, headset and hands free (double talk) operation, VDA 2a
- FR, HR, EFR and AMR speech codec support
- Integrated TTY modem

## Interfaces (LGA Pads)

- Power supply
- Audio analog & digital interface
- Serial interface 1.8 V, including automatic baud rate detection
- ICC/UICC card interface 1.8 V and 3.0 V supporting SIM
- 6 GPIO pins 1.8 V (special option for PWM or Buzzer and status indication functionality, 2 GPIO usable for I<sup>2</sup>C)
- fast shut down
- ADC interface

## Special Features

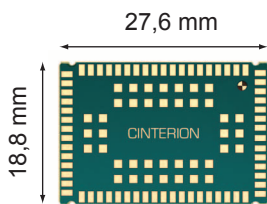
- Prepared for EU eCall & ERA-Glonass compatible
- RIL driver for Android™ based devices
- RIL driver for Windows Mobile™ based applications
- In-band Modem Release 10.0.0
- Voice prompts
- Antenna diagnostic
- Firmware update via serial interface
- Radio Link Stability Monitoring
- Real time clock with alarm functionality
- Customer Flash Storage / Generic flash access

## Approvals

- CE, R&TTE, GCF, FCC, PTRCB, UL, IC, E-Mark
- GCF Listing
- Other local approvals and network operator certifications

For detailed specification please see hardware interface description.

## Advanced 2G Automotive Grade Wireless at its Best



## 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.

## Generic Flash Access

The Cinterion AGS2 module provides the application processor with generic access to the internal memory of the module, allowing it to be used either for voice prompt files common to eCall applications or to download application software for upgrade processes.

## Automotive Compliant

The AGS2 is compliant with multiple automotive manufacturing process standards according to TS16949 and quality processes including APQP, PPAP, PCN, and 8D.



## 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/PTRCB conform pretests to validate approval readiness
- Guidelines for local approvals and acceptances
- Regular training workshops

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

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