gemalto
security to be free

AGS2-E

2G GPRS Class 10

eCall prepared

HQ Voice Support VDA 2a

Voice Prompts

SSL Encryption

Advanced Temperature Management

GPS, GLONASS, Galileo

Antenna Diagnostics

RLS Monitoring (jamming detection)

Generic Flash Access

CINTERION
DEVICE PART NUMBER: S30960-S1111-A222-3
Model: AGS2-E
111111 22 3333334
cRUus CE
DC

intel Intelligent Systems Alliance

Cinterion® AGS2-E IoT Module

Best-in-Class Automotive 2G Connectivity with eCall

Cinterion® AGS2-E IoT Module
Best-in-Class Automotive 2G Connectivity with eCall

The Cinterion AGS2-E IoT module provides optimum automotive 2G wireless connectivity and eCall capabilities for European automotive needs now and in the future. The solution meets the highest level of automotive specification compliance and provides an unparalleled level of quality and performance, even under the harshest operating conditions. It is ideal for high performance automotive and Intelligent Transportation System (ITS) applications including toll collect, onboard telematics and fleet management, in-vehicle entertainment systems as well as automatic emergency calling, breakdown support or roadside assistance.
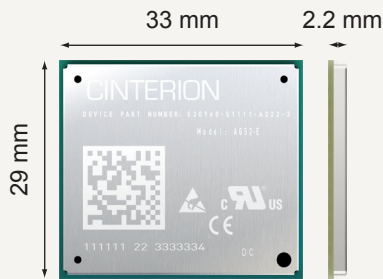
Key Features
Based on Intel's Quad Band GSM/GPRS baseband chipset, the rugged, ultra compact AGS2-E module is equipped with high performance GPS/GLONASS/Galileo to meet the comprehensive requirements of the European eCall initiative. It also features inband modem functionality, voice prompts,

high quality audio according to VDA 2a, jamming detection, antenna diagnosis as well as TCP/IP wireless connectivity services.

Automotive Family Benefits
The AGS2-E module is part of the Cinterion Automotive family, providing a secure foundation for advanced telematics and evolving connected car technology. All automotive modules share an identical footprint enabling a seamless migration path to protect your IoT investment as technology needs change. Feature rich and engineered to withstand the extreme environments and demanding requirements of long life on the road, they are manufactured according to VDA 6.2 and TS16949 quality standards and meet stringent automotive specification compliance. All Cinterion modules are compatible with Gemalto's comprehensive suite of solutions, services and platforms that help enterprises Connect, Secure and Monetize IoT technology.

Automotive 2G optimized for eCall

Future Proof Design
At just 2.2 mm in height, the AGS2-E is ideal for integration in the slimmest and most size constrained automotive solutions. Extreme ruggedness and the latest long-life chipset ensure long product availability to meet automotive market requirements. With the future proven and a LGA footprint, compatible with past and next generation products ensure a seamless and reliable migration path as technology needs and networks evolve.

Generic Flash Access
The Cinterion AGS2-E module provides generic access to its own internal memory, which can be used for voice prompt files common to eCall applications or for downloading application software for upgrade processes.

Automotive Compliance
The AGS2-E solution complies with multiple automotive manufacturing process standards such as TS16949 and it adheres to quality processes including APQP, PPAP, PCN, and 8D.

The Gemalto Advantage
Since 1996, Gemalto has been pioneering market-leading M2M and IoT products that keep our customers on the leading edge of innovation. Unique value added benefits include:

> Trusted partner to 450+ global MNOs ensures products evolve in sync with networks and modules are pre-certified for all global mobile networks

> Core competency in MIM, SIM and eUICC technology allows simplified integration with modules and lower Total Cost of Ownership

> Expert design consulting, local market engineering support and a skilled 24/7 help desk streamline development and deployment

> Global leader in digital security solutions and platforms

> Experienced provider of software solutions for Quality of Service and product lifecycle management

> Extensive RF test capabilities and GCF/PTCRB pretests to validate readiness for solution approval process

Cinterion® AGS2-E Features

GENERAL FEATURES

- GSM Quad-Band: 850 / 900 / 1800 / 1900 MHz
- 3GPP release 99
- GPRS multi-slot Class 10
- SIM application toolkit
- Control via AT commands
  (Hayes, 3GPP TS 27.007 and 27.005)
- Internet services TCP server/client, UDP, HTTP, FTP, SMTP, POP3

- Secure connection with TLS
- DTMF detector
- Supply voltage range 3.3 to 4.5 V
- LGA156 soldering mount, MSL4
- Dimensions: 33 × 29 × 2.2 mm
- Operating temperature: -40 °C to +95 °C (Protection switch-off)

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

SPECIAL FEATURES

- Prepared for EU eCall compatible
- 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

GPS/GLONASS FEATURES

- Integrated 32 Channel GNSS receiver
- Bands: GPS L1, GLONASS L1, Galilieo
- NMEA-183
- Position accuracy (CEP50): 1.5m
- EGNOS, WAAS
- TTFF (-130dBm): 1s Hot Start, <35s Cold Start
- Active antenna feeding and control

- Sensitivity (active antenna):
  - Acquisition -145dBm
  - Navigation -156dBm
  - Tracking -160dBm
- Local ephemeris prediction
- Jammer rejection

INTERFACES (LGA PADS)

- Power supply
- Analog & digital audio interface
- 1x serial interface 1.8 V with baud rate detection
- ICC/UICC card interface 1.8 V and 3.0 V supporting SIM/USIM

- GPIO pins 1.8 V (special option for PWM and status indication)
- I²C interface 1.8 V
- 2x ADC interface
- 1PPS output (GNSS)

DRIVERS

- RIL driver for Android™ based devices

APPROVALS

- CE, RED, GCF, UL, E-Mark
- GCF Listing
- Other local approvals and network operator certifications

Connect. Secure. Monetize.™

Gemalto's complementary offering of solutions, services and solid identity management helps enterprises unleash the power of the IoT, providing a solid foundation of Trust based on three key pillars:

Connect. The backbone of any IoT solution, Cinterion M2M Modules, SIM/MIMs, Terminals and secure services provide future-proof, reliable connectivity for all vertical market IoT solutions.

Secure. Gemalto's end-to-end security solutions protect device s, the network and the cloud while managing the entire application lifecycle.

Monetize. Our agile Sentinel monetization solutions enable innovative business models and new revenue streams through embedded licensing, while the secure SensorLogic Application Enablement Platform speeds time to market.

About Gemalto

Gemalto is the global leader in digital security. We bring trust to an increasingly connected world. We deliver easy to use technologies and services to businesses and governments, authenticating identities and protecting data so they stay safe and enable services in personal devices, connected objects, the cloud and in between.

Our solutions are at the heart of modern life, from payment to enterprise security and the Internet of Things. We authenticate people, transactions and objects, encrypt data and create value for software – enabling our clients in more than 190 countries to deliver secure digital services for billions of individuals and things.

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

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