gemalto
security to be free

PGS8

Quad Band 2G GPRS Class 10		Advanced Temperature Management	
Generic Flash Access		GPS, GLONASS	
Full Voice Support		TCP/IP	
Voice Prompts		RLS Monitoring (jamming detection)	
SSL Encryption			

intel Intelligent Systems Alliance
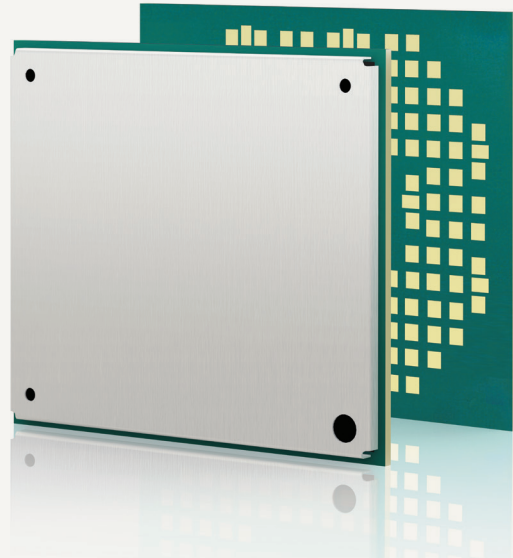
2G

Cinterion® PGS8 Wireless Module
M2M essentials with GNSS built in

— PRELIMINARY VERSION —

Cinterion® PGS8 Wireless Module
M2M essentials with GNSS built in

Part of the Cinterion® Industrial Plus family, the PGS8 wireless module offers full voice capabilities, high speed GPRS data transmission and minimal power consumption. It is an exceptional choice for machine-to-machine (M2M) applications that require focused 2G connectivity with embedded high performance and global satellite (GNSS) service. At just 2.2 mm in height, PGS8 is ideal for integration in the slimmest and most size constrained trace and track applications. The unique cost savings and performance inherent in PGS8 make it an ideal solution for Intelligent Transportation System (ITS) applications including onboard vehicle telematics and fleet management as well as point of sale (POS) and alarm devices.

PGS8 shares the same footprint as Cinterion 3G and LTE solutions enabling integrators to choose radio technology according to regional and vertical needs, maximizing cost savings. It targets high volume, cost sensitive applications that utilize low bandwidth GSM/GPRS connectivity. Its rugged

and compact Land Grid Array (LGA) footprint guarantees long product availability along with optimized Total Cost of Ownership and unparalleled migration opportunities.

Based on the powerful Intel® 2G chipset, the module's unique Cinterion LGA technology enables optimized heat dissipation that prevents warping. This gives demanding industrial customers the freedom to select the most benefi-cial soldering paste for each individual application.

Equipped with high performance GPS/GLONASS, the PGS8 module is prepared to meet the comprehensive requirements of trace and track applications in the mobility aftermarket. It also features an extensive set of secure Internet services including TCP, UDP, HTTP and FTP, voice prompts, generic flash access and a reliable jamming detection.

M2M essentials with GNSS built in

33 mm | 2.2 mm
29 mm
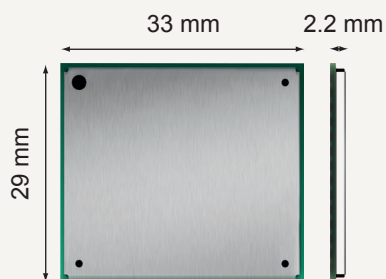
Multi Design Capability
At just 2.2 mm in height, PGS8 is ideal for integration in the slimmest and most size constrained trace and track applications. The successful 2G chipset ensure long product availability and together with the future proven LGA footprint, machine-to-machine applications today are already prepared for seamless migration to LTE modules in the future.

Generic Flash Access
The PGS8 module enables the application processor to have a generic access to the internal memory of the module, allowing it to be used either to store voice prompts or to download application software for upgrades.

RLS Monitoring
Radio link stability (RLS) monitoring enables the application to detect jamming attacks, triggering preventive actions to secure the device.

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.

Cinterion® PGS8 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
- FR, HR, EFR and AMR speech codec support
- Integrated TTY modem

SPECIAL FEATURES

- Voice prompts
- 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
- 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
- I²C interface 1.8 V

- GPIO pins 1.8 V (GPIO interface with 6 GPIO lines.
  GPIO interface is shared wtih a PWM functionality
  as well as a fast shutdown signal, a status line and
  a jamming indicator)
- 2x ADC interface
- 1PPS output (GNSS)

DRIVERS

- RIL driver for Android™ based devices
- RIL driver for Windows Mobile™ based applications

APPROVALS

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

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For more information, please visit
m2m.gemalto.com, developer.gemalto.com, www.facebook.com/gemalto,
or follow @gemaltom2m on twitter.

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