gemalto

security to be free

EHS6

Five Band 3G HSPA	Java embedded
Multi Design Capability (LGA)	RLS Monitoring (Jamming Detection)
USB 2.0 High Speed compatible	Advanced Temperature Management
Embedded TCP/IP Stack	eCall / ERA GLONASS compliant
FOTA configurable & free of charge	Bearer Independent Protocol

CINTERION
Model: EHS6
S30960-S1111-A222-3

111111 22 333333 4   DC

Java POWERED

intel Intelligent Systems Alliance

3G

Cinterion® EHS6 Wireless Module
Global 3G with Java™ embedded

Cinterion® EHS6 Wireless Module
Global 3G with Java™ Embedded

The flagship Cinterion® EHS6 is the 5th generation of Gemalto's Java embedded machine-to-machine (M2M) modules, which have simplified highly efficient, end-to-end industrial communication for the last decade. Gemalto's Java strategy enables customers and partners to leverage the massive Java ecosystem by offering a powerful ARM11 architecture to reduce complexity and speed application integration. The tiny EHS6 module offers the latest Java ME 3.2 client runtime platform optimized for resource-constrained M2M applications. It significantly reduces total cost of ownership (TCO) and time to market by sharing internal resources such as memory, a large existing code base and proven software building blocks.
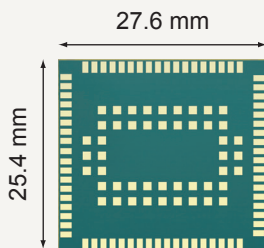
The improved Java concept uses Multi MIDlet Java execution to simultaneously host and run multiple applications and protocols. An extended security concept with the latest TLS/SSL engine provides secure and reliable TCP/IP connectivity while an enriched internal flash file system enables free of charge firmware updates over-the-air (FOTA) when required. Sophisticated sandbox modeling and layered architectures simplify device management (DM) and separate mobile network operator approvals from application code development, allowing simultaneous progress of both phases for a shorter time to market.

Providing the capability for multiple designs from one solution, the newest addition to Gemalto's Industrial platform is an ideal module for M2M applications migrating from 2G to 3G that require cost efficiency along with global connectivity. EHS6 offers five band HSPA to support high bandwidth connectivity, enabling speeds up to 7.2 Mbps in downlink and 5.7 Mbps in uplink and rounds out the existing portfolio comprised of the Evolution platform.

EHS6 comes in Gemalto's unique Land Grid Array (LGA) package perfectly suited to the manufacturing needs of small, high-volume M2M devices with a focus on reliable and efficient processes. The ultra compact hardware design incorporates minimal power consumption, optimized heat dissipation even under harsh operating conditions and an extended product lifecycle to guarantee long product availability. EHS6 supports common industrial interfaces such as USB, serial interfaces, I²C and various GPIO's to be connected with the Java engine.

Global 3G with Java™ Embedded

27.6 mm

25.4 mm

BIP (Bearer Independent Protocol)
BIP secures broadband speed to eUICC (MIM / classic) to enable On-Demand Provision Service (OPS) and Remote Application Management by direct communication between eUICC and network based on internal TCP/IP stack. As a result it enables instant data connectivity on 1st use of a device, as well as a flexible mobile subscription throughout the lifecycle and a reduced number of customer device variants.

Analog Audio
The EHS6 platform incorporates a variant supporting high quality digital and analog audio, which is often needed in alarm systems or e-call/ERA GLONASS solutions.

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.

Cinterion® EHS6 Features

GENERAL FEATURES

> 3GPP Rel.7 Compliant Protocol Stack
> Five Bands UMTS (WCDMA/FDD)
  Bands: 800, 850, 900, 1900 and 2100 MHz
> Quad-Band GSM
  Bands: 850, 900, 1800 and 1900 MHz
> SIM Application Toolkit, Class 3,
  with BIP and RunAT support
> Embedded IP stack
> Control via standardized and extended
  AT commands (Hayes, TS 27.007 and 27.005)

> TCP/IP stack access via AT command 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 3.1 - 4.5 V, highly optimized
  for minimal power consumption. (Baseband) Supply
  voltage range 2.8 - 4.5 V (RF-PA)
> Dimension: 27.6 x 25.4 x 2.3 mm
> Weight: 3 g
> Operating Temperature: -40 °C to +90 °C

SPECIFICATIONS

> HSDPA Cat.8 / HSUPA Cat.6 data rates
  DL: max. 7.2 Mbps, UL: max. 5.76 Mbps
> EDGE Class 12 data rates
  DL: max. 237 kbps, UL: max. 237 kbps
> GPRS Class 12 data rates
  DL: max. 85.6 kbps, UL: max. 85.6 kbps
> EU eCall and ERA/GLONASS support

> CSD data transmission up to 9.6 kbps, V.110,
  non-transparent
> SMS text and PDU mode support
> High quality voice support for handset, headset and
  hands-free operation
> Integrated TTY modem
> Speech codec: FR, HR, EFR and AMR

SPECIAL FEATURES

> USB interface supports multiple composite modes
  and a Linux-/Mac- compliant mode
> Firmware update via USB and serial interface
> Real time clock with alarm functionality
> Multiplexer according 3GPP TS 27.010

> RLS Monitoring (Jamming detection) in 2G and 3G
> Informal Network Scan
> Customer IMEI/SIM-Lock as variant
> Integrated FOTA, configurable and free of charge

JAVA OPEN PLATFORM

> Java™ ME 3.2
> Secure data transmission with HTTPS/SSL

> Multi-Threading programming and Multi-Application
  execution
> 10 MB RAM and 10 MB Flash File System

INTERFACES (LGA PADS)

> Pad for GSM/WCDMA Antenna
> USB 2.0 HS interface up to 480 Mbps
> High speed serial modem interface ASC0
> HSIC HS interface up to 480 Mbps
> 16 GPIO lines shared with DSR, DTR, DCD (all ASC0),
  ASC1 (RXD, TXD, RTS, CTS), SPI, Fast-Shutdown,
  Network-Status-Indication

> ADC and I^{2}C interface
> 4-wire high speed serial interfaces ASC1
> Digital audio interface (analog audio optional)
> UICC and U/SIM card interface 1.8 V / 3 V
> Lines for Module-On and Reset

DRIVERS

> USB, MUX driver for Microsoft® Windows XP™,
  Vista™ and 7™
> RIL, USB driver for Microsoft® Windows Embedded
  Handheld™ >= 6.x
> USB, MUX driver for Microsoft® Windows Embedded
  Compact™ >= 5.x

APPROVALS

> R&TTE, GCF, CE, FCC, PTCRB, IC, UL
> AT&T and other local approvals and provider
  certifications
> EuP, RoHS and REACH compliant

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

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