

EHS5



Dual Band 3G



Java



HSPA



Multi Design
Capability



GPRS / EDGE
Class 12



Highly Compact
Size



Basic Voice
Support



USB 2.0



TCP/IP



Advanced
Temperature
Management



3G

Cinterion® EHS5 Wireless Module
Highly Efficient 3G in a 2G Footprint

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The Cinterion EHS5 module represents a milestone in embedded Java machine-to-machine (M2M) communication, offering smart connectivity for industrial applications

EHS5 delivers highly efficient 3G communication in an ultra-compact footprint. The EHS5 is an ideal solution for M2M applications moving to 3G technology with a focus on long-lasting, futureproof and cost efficient M2M applications. Offering a backward and forward compatible footprint, its multi design capability offers seamless migration and unmatched flexibility to choose frequency bands and global roaming whenever needed.

The platform incorporates an improved Java concept using 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 royalty free firmware updates over-the-air when required. A sophisticated sandbox model and layered architecture simplifies device management (DM) and

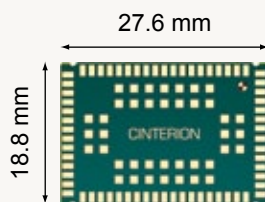
separates mobile network operator approvals from application code development allowing simultaneous progress of both phases for a shorter time to market.

Powered by Intel's latest HSPA+ baseband, the next generation of the award-winning Evolution platform features high speed data communication with 7.2 Mbps (max) in the downlink and 5.76 Mbps (max) in the uplink.

The tiny EHS5 comes in Cinterion's unique LGA (Land Grid Array) package perfectly suited to the manufacturing needs of small, high-volume M2M devices with a focus on reliable and efficient processes. EHS5 supports voice and data communication and best in class low power consumption incorporated with common industrial interfaces such as USB and serial interfaces.

EHS5 is available in two variants: EHS5-US (850/1900 MHz) for North America, and EHS5-E (900/2100 MHz) assuring global coverage.

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 EHS5 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.

Miniaturization

The world's slimmest module with a unique size-performance-ratio suits perfectly to size critical designs.

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® EHS5 Features

GENERAL FEATURES

- > 3GPP Rel.7 Compliant Protocol Stack
- > Dual-Band UMTS (WCDMA/FDD)
EHS5-E: 900 and 2100 MHz
EHS5-US: 850 and 1900 MHz
- > Dual-Band GSM
EHS5-E: 900 and 1800 MHz
EHS5-US: 850 and 1900 MHz
- > SIM Application Toolkit, letter class "b", "c", "e"
- > Control via standardized and extended AT commands (Hayes, TS 27.007 and 27.005)
- > Supply voltage range 3.3 - 4.5 V, highly optimized for minimal power consumptions
- > Dimension: 27.6 x 18.8 x 2.3 mm
- > Operation Temperature: -40 °C to +90 °C
- > Weight: 2.7 g
- > EuP, RoHS and REACH compliant

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
- > CSD data transmission up to 9.6 kbps
- > SMS text and PDU mode support
- > High quality voice support for handset, headset and hands-free operation
- > Integrated TTY modem

SPECIAL FEATURES

- > USB interface supports multiple composite mode 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)
- > Informal Network Scan
- > Integrated FOTA, configurable and royalty free

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, PWM and Pulse-Counter lines
- > ADC and I2C interface
- > 4-wire high speed serial interface ASC1
- > Digital audio interface
- > 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

For more information, please visit

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