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gemalto
security to be free

EHS5 mini PCIe

- Dual-Band 3G
- Dual-Band 2G
- GPRS / EDGE Class 12
- USB 2.0
- Universal SIM Interface
- Advanced Temperature Management

Intelligent Systems Alliance

3G

Cinterion® EHS5 miniPCIe Wireless Module
The industrial-grade and cost-optimized 3G wireless solution for cloud connected intelligent systems

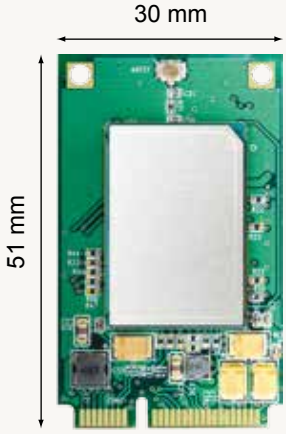
— PRELIMINARY VERSION —

Cinterion® EHS5 miniPCIe
The Solution for Cloud Connected Intelligent Systems

The Cinterion EHS5 miniPCIe is an easy to integrate data modem card designed to add cost efficient 3G wireless connectivity to industrial systems requiring a mid-range bandwidth demand of up to 7.2 Mbps in the downlink and 5.76 Mbps in the uplink. Leveraging the Cinterion EHS5 module and the standard PCI Express® Mini Card form factor (miniPCIe), the solution provides double dual-band 3G and 2G support enabling geographically optimized Internet access and cloud-based services for intelligent systems with x86-architecture. It is ideal for intelligent systems that frequently transfer large amounts of data such as smart signs that download new advertising campaigns or any solution that requires operating system updates.

With an extended temperature range from -40 °C up to 85 °C, the Cinterion EHS5 miniPCIe is reliable in extreme environments for use outdoors or inside at sites that lack cooling and heating systems. It provides simple plug-in integration via the standardized 52-pin PCIe system connector and works with built-in Windows® and Linux modem drivers easing integration work for intelligent system developers. An optional micro SIM card (3FF) holder allows easy replacement of WiFi miniPCIe card to transform existing applications into cellular-based smart solutions capable of operation anyplace with cellular coverage. With its straightforward installation and regionally optimized 3G and 2G connectivity, the EHS5 miniPCIe enables cost optimized, broadband cellular connectivity for any PC-based industrial M2M application.

The Solution for Cloud Connected Intelligent Systems



M2M miniPCIe Offers Extended Temperature Range and Advanced Temperature Management

Compared to consumer electronic products, industrial and commercial M2M applications demand more durable components, which are designed to work 24/7 under extreme temperature conditions. The Cinterion M2M miniPCIe functions reliably in temperatures ranging from -40 °C up to +85 °C for use outdoors in snow and ice, or inside industrial facilities and equipment that lack heating and cooling systems. With an Advanced Temperature Management feature, the EHS5 module will react under extreme thermal conditions and automatically adapt the current radio performance to avoid overheating.

Convenient miniPCIe System Connector

The miniPCIe form factor provides flexible integration of cellular modem functionality for M2M applications based on an x86-processor architecture. With the standardized 52-pin interface, the miniPCIe card just needs a USB and SIM interface as well as power supply and control pins for full operation.

Soldered Machine Identification Modules (MIM)TM Provide Increased Longevity

Gemalto's next generation MIMs are ruggedized for industrial M2M applications and can be soldered directly on the circuit board, extending the product's life with highest reliability even in harsh environments. The Cinterion EHS5 miniPCIe can be customized with a soldered MIM for M2M applications with specific needs and ordered as a product variant upon request.

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 miniPCIe Features

GENERAL FEATURES

- Dual-Band UMTS (WCDMA/FDD): 850/1900 MHz (EHS5-US), 900/2100 MHz (EHS5-E)
- Dual-Band GSM: 850/1900 MHz (EHS5-US), 900/1800 MHz (EHS5-E)
- 3GPP Release 7 Compliant Protocol Stack
- SIM Application Toolkit , letter class "c"
- Control via AT commands (Hayes, 3GPP TS 27.007 and 27.005)
- Supply voltage range 3.0...3.6 V
- Dimension: 51 × 30 × 4.7 mm (full mini card size)
- Operating temperature: -40 °C to +85 °C
- Weight 7.5 g
- RoHS and EuP (EHS5-E) compliant

SPECIFICATIONS

- HSPDA 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
- SMS text and PDU mode, cell broadcast

SPECIAL FEATURES

- Advanced Temperature Management
- Compatible with USB and modem driver of Microsoft® Windows 8™, Windows 7™, Windows Vista™, Windows XP™
- Compatible with USB and modem driver of Linux kernel, e.g. Wind River Linux
- Parallel COM ports (6) under Microsoft® Windows 8™, Windows 7™, Windows Vista™, Windows XP™ and Linux

INTERFACES

- PCI Express®Mini Card system connector (52 pin)
  - Supply voltage 3.3 V
  - USB 2.0 HS interface up to 480 Mbps
  - UICC/SIM card interface 1.8 V / 3.0 V
  - Reset
- Antenna connector: U.FL 50 Ω
- Optional: Micro-SIM holder on backside

APPROVALS

- R&TTE, GCF (EHS5-E module full type approved)
- FCC, PTCRB, IC (EHS5-US module full type approved)
- CE (EHS5-E), UL (EHS5-US)

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

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