

## EHS6T /EHS5T Terminals



Five Band 3G  
HSPA



Quad Band  
GPRS / EDGE  
Class 12



Ethernet  
Interface



Java embedded



USB 2.0  
High Speed  
compatible



Advanced  
Temperature  
Management



Embedded  
TCP/IP Stack



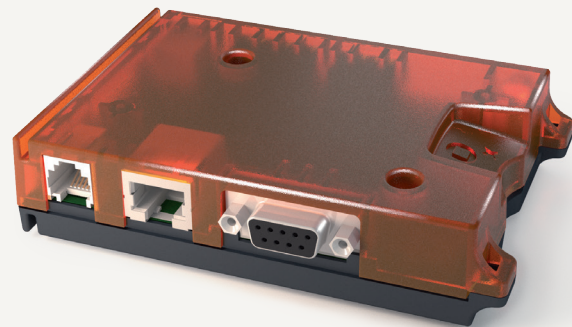
RLS Monitoring  
(Jamming  
Detection)



FOTA  
configurable &  
royalty-free



Flexible  
Mounting



# TERMINALS

**Cinterion® EHS6T, EHS5T Terminals**

**3G Highspeed M2M Gateways powered by Java™**

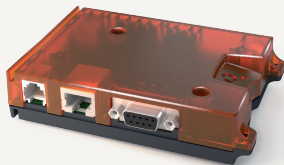
# Cinterion® EHS6T and EHS5T Terminals

## 3G Highspeed M2M Gateways powered by Java

Gemalto's new suite of Cinterion® 3G Smart Terminals takes M2M simplicity to a whole new level. Leveraging Gemalto's next-generation Java® embedded technology, the plug-and-play solutions powered by a five-band HSPA+ baseband enable high-speed, secure wireless TCP/IP connectivity anywhere in the world for a variety of industrial applications such as metering, remote monitoring, transportation, security and many more. The Cinterion gateways come in four versions providing universal industrial interfaces e.g. USB or Ethernet are encased in a compact, rugged housing with integrated SIM cardholder and unprecedented mounting

options. They provide first-time M2M developers and small-scale implementers with a flexible, cost effective solution to quickly launch enterprise optimization solutions that expand the Internet of Things. Optional features include embedded component SIM (MIM) and a cloud based Sensor-Logic application enablement platform that enables out-of-the-box M2M communication reducing integration complexity and Total Cost of Ownership. Like all Cinterion products, the smart 3G terminals comes with full type approval (FTA) and is certified by the largest carriers worldwide.

### Plug-and-Play with Most Flexible Mounting



#### Plug & Play, Power over Ethernet (PoE)

EHS6T Terminals are simple and reliable plug-and-play communication devices that allow new M2M implementers to quickly connect their industrial applications using wireless technology, with very little integration and approval efforts.

Alternative Power over Ethernet (PoE, according to IEEE standard 802.3) for the EHS6T-LAN offers two additional benefits: further cost savings and flexibility of device placement. Because PoE runs data and power together over the same cable to each device attached to the local area network (LAN), devices can be installed without additional power supply and without concern for the proximity to individual AC outlets.

#### Embedded 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.

#### Highly Flexible Mounting Concept

Encased in robust plastic housing, the miniaturized terminal works in virtually any application providing secure 24/7 connectivity. For quick and easy implementation, the terminal is compatible with a variety of mounting schemes including: DIN rail mounting, C-rail mounting, Screw fixing or use of cable ties.

#### Terminal Variants

Interface / Productname	RS-232	RS-485	USB 2.0	Ethernet	Frequencies
EHS6T USB	•		•		Five Band 3G , Four Band 2G
EHS6T LAN	•			•	Five Band 3G , Four Band 2G
EHS5T / EHS5T_US, RS485		•	•		Dual-Band 2G/3G

Common to all are multiple GPIO's, I<sup>2</sup>C and SPI via Weidmüller connector.

#### 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 Terminal Features

## GENERAL FEATURES

- > 3GPP Rel.7 Compliant Protocol Stack
- > EHS6T-LAN / -USB:
  - Five Bands UMTS (WCDMA/FDD), Bands: 800, 850, 900, 1900 and 2100 MHz, Quad-Band GSM
- > EHS5T-E: Dual-Band UMTS (WCDMA/FDD), 900 and 2100 MHz, Dual-Band GSM
- > EHS5T-US: Dual-Band UMTS (WCDMA/FDD)
- > EHS5-US: 850 and 1900 MHz, Dual-Band GSM ; PoE: 42-57V, acc. IEEE 802.3
- > SIM Application Toolkit, letter class "b", "c", "e"
- > Control via standardized and extended ATcommands (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
- > PoE - Power over Ethernet, optional (EHS6T-LAN only)
- > Supply voltage range 8 – 30 V; PoE: 42-57V, acc. IEEE 802.3
- > Dimension: 115 x 86 x 26 mm (incl. connectors)
- > Weight: approx 130g
- > Operating Temperature: -30 °C to +65 °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
- > CSD data transmission up to 9.6 kbps, V.110, non-transparent
- > SMS text and PDU mode support

## 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)
- > Informal Network Scan
- > Programmable hardware watchdog
- > Flexible mounting concept
- > Integrated FOTA, configurable and royalty free
- > Embedded SIM as an option (MIM)

## 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

- > Antenna Connector SMA (female) for GSM/WCDMA
- > 20 pin header (Weidmüller) with GPIO's, power, SPI, I<sup>2</sup>C
  - >> RS485 (EHS5-T only)
- > Min-SIM card reader, 1,8V and 3,0V
- > Component MIM prepared (optional)
- > Embedded SIM as an option (MIM)
- > 2 operating status LED's
- > 4-wire high speed serial interfaces ASC1
- > Plug-in power supply connector (6-pole Western jack)
- > EHS6T-LAN:
  - additional Ethernet interface (NATP), no USB, Power over Ethernet (PoE), Prepared for Secure Element (SE)
- > EHS6T-USB:
  - USB (B) 2.0 HS interface
  - 24/ V.28 RS-232 interface, up to 920kbps, auto-bauding (D-sub 9-pole female socket)
- > EHS5T-E /-US:
  - RS-485 interface

## DRIVERS

- > USB, MUX driver for Microsoft® Vista™ and 7™, 8™, 10™
- > RIL, USB driver for Microsoft® Windows EmbeddedHandheld™ >= 6.x
- > MUX driver for Microsoft® Windows Vista™ and 7™, 8™, 10™

## APPROVALS

- > R&TTE, GCF, CE, FCC\*, PTCRB\*, IC\*, UL
- > AT&T\* and other local approvals and provider Certifications \*) EHS6-T only
- > WEEE, EuP, RoHS and REACH compliant

### For more information, please visit

gemalto.com/m2m, developer.gemalto.com, www.facebook.com/gemalto,  
or follow @gemaltom2m on twitter.

The information provided in this brochure contains merely general descriptions or characteristics of performance, which in case of actual use do not always apply as described or which may change as a result of further development of the products. An obligation to provide the respective characteristics shall only exist if expressly agreed in the terms of contract. All product designations may be trademarks or product names of Gemalto M2M GmbH or supplier companies whose use by third parties for their own purposes could violate the rights of the owners. Oracle and Java are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners. ARM9 is a registered trademark of ARM Limited.

**Gemalto M2M GmbH**  
Werinherstraße 81,  
81541 Munich  
Germany

