















# UMTS | HSPA+ 14.4/5.7

## HE910 Embedded



-  Ultra Compact
-  GPS Receiver
-  Telit Unified AT Command Set
-  LGA Package
-  Multi Band
-  RX Diversity
-  Penta Band HSPA+
-  Quad Band EDGE
-  Quad Band GPRS
-  RoHS Compliant
-  SIM Access Profile
-  USB 2.0 High Speed Compatible
-  Extended RF Sensitivity
-  Embedded TCP/IP Stack



TELIT INFINITA SERVICES

The HE910 modules are small, lightweight, low power consumption and RoHS compliant devices which combines the access to digital communication services in GSM, GPRS, EDGE, UMTS and HSPA networks with Land-Grid Array (LGA) form factor.

The LGA package provides ultra low profile in the integrated solution while at the same time enhancing the performance of mechanical resistance to shock and reducing cost in high-volume applications, saving space and weight in portable devices.

The HE910 includes features like HSDPA 14.4 Mbps (Cat 10), HSUPA 5.7 Mbps (Cat 6), EGPRS Class 33, digital voice interface, circuit switched data transfer, phonebook and SMS support, embedded TCP/IP protocol stack and custom Telit AT commands.

Due to its low profile, low consumption and advanced connectivity features, HE910 is particularly suitable for applications such as mobile computing devices, PDAs, smartphones, table PCs and consumer electronics in general, both for business and personal life.

HE910 family can also be provided with an optional integrated high sensitivity A-GPS functionality for indoor fixes and simultaneous GPS with voice and data.

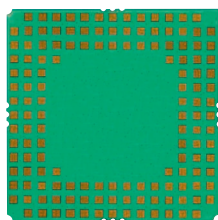
As a part of Telit's corporate policy of environmental protection, all Telit products comply with the RoHS (Restriction of Hazardous Substances) directive of the European Union (EU Directive 2002/95/EG).

### Product features

- Supported bands
  - 4 Bands : GSM/GPRS/EDGE
  - 5 Bands : UMTS/HSPA 850/900/1700/1900/2100
- HSPA data up to 14.4 Mbps downlink / 5.7 Mbps uplink
- Quad Band GPRS and EDGE class 33
- Small dimensions 28.2 x 28.2 x 2.6 mm
- Optional GPS
- Rx Diversity
- Extended temperature range
- SIM Access Profile
- 3GPP release 7 compliant
- Control via AT commands according to 3GPP TS27.005, 27.007 and customized Telit AT commands
- Serial port multiplexer 3GPP TS27.010
- SIM application Tool Kits 3GPP TS 51.014
- Built in UDP/TCP/FTP/SMTP stack

# HE 910

Embedded



actual size

### Optional GPS receiver

- GPS power consumption:
  - 15 mA in low power tracking mode
  - 30  $\mu$ A in sleep mode
- High sensitivity for indoor reception, up to -163 dBm (with active antenna)
- Accuracy < 3 m
- Extremely fast TTFF's at low signal levels
- Hot start autonomous < 3 s
- Warm start autonomous < 40 s
- Cold start autonomous < 45 s
- Supports multi-channel GPS,
- L1 1575.42 MHz
- GPS NMEA 0183 output format
- Datum WGS-84
- Dedicated GPS AT commands
- Low power consumption

### Interfaces

- 10 I/O ports maximum including multifunctional I/Os
- Buzzer output
- Status LED output
- I2S for digital audio interface
- 1 A/D converters, 1 D/A converter (PWM output)
- USB 2.0 HS
- USB HSIC
- 2 UART
- SPI
- 1 I2C
- MIPI HSI
- 1.8 V / 3 V SIM interface
- MMC interface

### Data

- HSPA category 6 in uplink and category 10 in downlink
  - Downlink up to 14.4 Mbps
  - Uplink up to 5.76 Mbps
- UMTS
  - Downlink/Uplink up to 384 kbps
- EDGE
  - Downlink up to 296 kbps
  - Uplink up to 236.8 kbps
- GPRS
- CSD

### Electrical

- Output power
  - Class 4 (2 W, 33 dBm) @ GSM 850 / 900
  - Class 1 (1 W, 30 dBm) @ GSM 1800 / 1900
  - Class 3 (0.25 W, 24 dBm) @ UMTS
  - Class E2 (0.5 W, 27 dBm) @ EDGE 850 / 900
  - Class E2 (0.4 W, 26 dBm) @ EDGE 1800 / 1900
- Sensitivity
  - -108 dBm @ UMTS
  - -107 dBm @ GSM 850 / 900 MHz
  - -106 dBm @ DCS1800 / PCS1900 MHz
- Supply voltage
  - Nominal: 3.8 VDC
  - Range: 3.4 - 4.2 VDC

### Additional features

- Digital voice and SMS
- IP stack with TCP and UDP protocol
- Standard and extended AT command set

### Approvals

- RoHS Compliant
- CE, GCF (Europe)
- FCC, PTCRB, IC (North America)

### Order-No.

Please contact your Telit representative for order codes and all further information

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**Telit**® wireless solutions

Telit Communications S.p.A.  
Via Stazione di Prosecco, 5/B  
I-34010 Sgonico (Trieste), Italy  
Tel +39 040 4192 200  
Fax +39 040 4192 289  
E-Mail: EMEA@telit.com

Telit Wireless Solutions Inc.  
3131 RDU Center Drive, Suite 135  
Morrisville, NC 27560, USA  
Tel +1 888 846 9773 or +1 919 439 7977  
Fax +1 888 846 9774 or +1 919 840 0337  
E-Mail: NORTHAMERICA@telit.com

Telit Wireless Solutions Inc.  
Rua Cunha Gago, 700 - cj 81, Pinheiros  
São Paulo - SP, 05421001, Brazil  
Tel +55 11 2679 4654  
Fax +55 11 2679 4654  
E-Mail: LATINAMERICA@telit.com

Telit Wireless Solutions Co., Ltd.  
12th Fl., Shinyoung Securities Bld.  
34-12, Yeouido-dong, Yeongdeungpo-gu  
Seoul, 150-884, Korea  
Tel. +82 2 368 4600  
Fax +82 2 368 4606  
E-Mail: APAC@telit.com

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