















# UMTS | HSPA+ 5.76/21.0

## HE 910 Family Embedded



-  Ultra Compact
-  28 Channel GPS Receiver
-  Telit Unified AT Command Set
-  LGA Package
-  Multi Band
-  RX Diversity
-  Multi 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 combine 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 21.0 Mbps (Cat 14), 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, broadband and worldwide coverage, HE910 is particularly suitable for applications such as mobile computing devices, tablet 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.

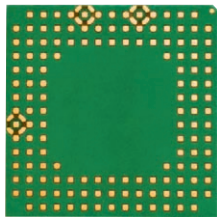
As a part of Telit's corporate policy of environmental protection, all Telit products comply with the RoHS (Restriction of Hazardous Substances) directive of the European Union (EU Directive 2002/95/EG).

HE910 Variants								
Variant name	Upload	Download	Frequencies	Features	Features			
	HSUPA (Mbps)	HSDPA (Mbps)			GSM   GPRS   EDGE Quad-band	Rx Diversity	Data	Voice
<b>Global market</b>								
HE910-G*	5.76	21.0	800/850, 900, AWS 1700, 1900, 2100	▪	▪	▪	▪	▪
HE910-DG*	5.76	21.0	800/850, 900, AWS 1700, 1900, 2100	▪	▪	▪	▪	▪
HE910-D	5.76	21.0	800/850, 900, AWS 1700, 1900, 2100	▪	▪	▪		
<b>EMEA / APAC / Latin American markets</b>								
HE910-EUR	5.76	7.2	800/850, 900, 2100	▪		▪	▪	
HE910-EUD	5.76	7.2	800/850, 900, 2100	▪		▪		
HE910-EUG	5.76	7.2	800/850, 900, 2100	▪		▪		▪
<b>North American market</b>								
HE910-NAR	5.76	7.2	800/850, AWS1700, 1900	▪		▪	▪	
HE910-NAD	5.76	7.2	800/850, AWS1700, 1900	▪		▪		
HE910-NAG	5.76	7.2	800/850, AWS1700, 1900	▪		▪		▪

\* HE910-G and HE910-DG are certified under the Model and Marketing Name "HE910"

# HE 910 Family

Embedded



actual size

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Subject to changes in technology,  
design and availability

Distributed by:

## Product features

- Supported frequencies  
GSM/GPRS/EDGE:  
850, 900, 1800, 1900  
UMTS/HSPA:  
800/850 \*, 900, AWS1700, 1900, 2100 MHz  
\* Bands B6 and B19 (800 MHz) are a subset of B5(850 MHz) and supported as well.
- HSPA+ data up to 21.0 Mbps downlink / 5.76 Mbps uplink
- Quad Band GPRS and EDGE class 33
- Small dimensions 28.2 x 28.2 x 2.2 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

## Optional GPS receiver

- SUPL 1.0
- High sensitivity for indoor reception, better than -165 dBm with A-GPS
- GPS Cold Start Autonomous (acquisition sensitivity) -147 dBm
- GPS Hot Start Autonomous -161 dBm
- GPS tracking mode -166 dBm
- Accuracy 3 m
- TTFF from Cold Start 42 s
- TTF from Warm Start 30 s
- TTF from Hot Start 1.8 s
- Supports multi-channel GPS
- L1 1575.42 MHz
- GPS NMEA 0183 output format
- Datum WGS-84
- Dedicated GPS AT commands

## Interfaces

- 10 I/O ports maximum including multifunctional I/Os
- I2S for digital audio interface
- USB 2.0 HS
- 2 UART
- SPI
- I2C
- 1.8 V / 3 V SIM interface

## Data

- HSPA category 6 in uplink and up to category 14 in downlink
  - Uplink up to 5.76 Mbps
  - Downlink up to 21.0 Mbps (high-end variants)
  - Downlink up to 7.2 Mbps (low-end variants)
- UMTS
  - Uplink/Downlink up to 384 kbps
- EDGE
  - Uplink up to 236.8 kbps
  - Downlink up to 296 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
  - -111 dBm @ UMTS
  - -109 dBm @ GSM 850 / 900 MHz
  - -110 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)

## Python\* application resources

- Python\* version= 2.7.2
- Python\* script interpreter (module takes the application code directly in the Python\* language)
- Memory: 2MB of NV memory for the user scripts and 2 MB RAM for the Python engine usage



## Order No.

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



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