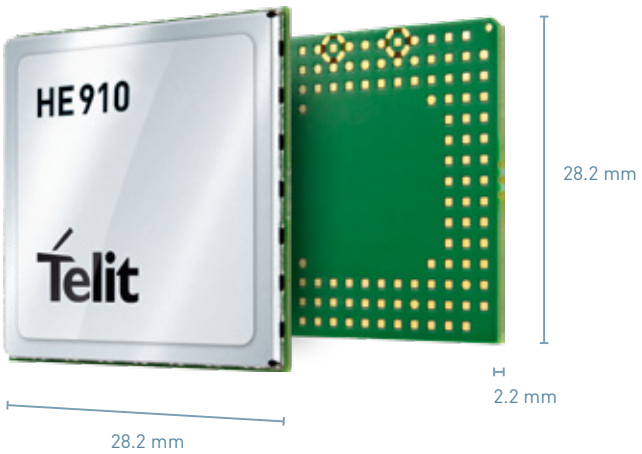
HE910 Series

UMTS | HSPA+ 21.0 / 5.76 Embedded



Product Description

The HE910 is our most compact multi-band HSPA+ LGA module seires, with built-in GPS and GSM | EGPRS fallback at 28 x 28 mm. As a member of the xE910 LGA unified form factor family the HE910 series is pin-to-pin compatible with LTE, HSPA, GSM | GPRSand CDMA | EVDO xE910 family counterparts.

Featuring seven-band HSPA+ data rates of up to 21 Mbps (Cat 14) downlink and 5.7 Mbps (Cat 6) uplink, ideal for high performance global roaming.

The HE910 series is well-suited for a wide range of industrial and consumer applications with high data throughput requirements, including, asset & fleet tracking, in-car telematics, PDAs, security surveillance, personal navigation devices, e-readers and consumer electronics in general. Several variants are offered, ranging from low cost tri-band models with reduced throughput, to fully-loaded configurations including receiver diversity and high sensitivity A-GPS functionality.

Key Benefits

- Seven-band HSPA+ for worldwide coverage
- Design once and deploy globally, thanks to xE910 unified form factor
- LGA package ideally suited for low profile integrated solutions, reducing cost in high-volume applications, as well as saving space and weight in portable devices
- Optional GPS ideal for applications requiring indoor fixes and simultaneous GPS with voice and data
- Perfect platform for a wide range of applications requiring HSPA connectivity

Family Concept

The xE910 Unified Form Factor family is comprised of pin-to-pin compatible modules in Telit's broadest range of cellular air interfaces and band combinations making it a pillar of the concept "design once and deploy globally".

A one-time design and integration effort enables worldwide or regional device re-use across different data rates and wireless technologies with air interfaces in GSM | GPRS, UMTS | HSPA+, 1xRTT, EV-DO, and LTE (pre-release).

The xE910 family was conceived to enable applications to be easily upgraded in a number of ways. For example: migrating from 2G to 3G or 4G; or upgrading from 2 bands to 3, 4, or more. The family fully preserves the core design of the application or device from launch to phase-out with modules packaged in a common 28.2 x 28.2 mm LGA footprint. It is recommended for mid to high-volume, compact sized applications.

Telit IoT LOCATE

IoT LOCATE is a Telit portal-based service that provides a device's position based on observed cellular Cell-IDs. Accessing a database of over 40 million cell-IDs globally, IoT LOCATE can provide a position for every use-case including indoors/underground, outdoors, and boundary situations.

IoT Connectivity and Portal Ready

This product is capable of supporting the extensive suite of Value Added Services from IoT Connectivity including Module Management and others which make the management of IoT deployments under mobile networks effective, enhancing profitability and reliability. It is also Portal-ready which means that the AT command library in this module includes a set of high-level commands designed exclusively for quick and hassle-free on-boarding of the device to the portal and to back-end systems and servers. Telit Portal-ready modules powered by deviceWISE make application-level data flows and controls simple to program, maintain and improve.

AVAILABLE FOR

- EMEA
- North America
- Latin America
- APAC
- Korea
- Australia

Click-to-Cloud – with Powerfull AT Commands

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Complete, Ready to Use Access to the Internet of Things

ENABLING THE IOT
IS WHAT WE DO.

	HE910-G*	HE910-DG*	HE910-D	HE910-GL	HE910-EUR	HE910-EUD	HE910-EUG	HE910-NAR	HE910-NAD	HE910-NAG
Market	GLOBAL	GLOBAL	GLOBAL	GLOBAL	EMEA/APAC/ Latinamerica	EMEA/APAC/ Latinamerica	EMEA/APAC/ Latinamerica	North America	North America	North America
HSPA+ Upload (Mbps)	5.76	5.76	5.76	5.76	5.76	5.76	5.76	5.76	5.76	5.76
HSPA+ Download (Mbps)	21.0	21.0	21.0	7.2	7.2	7.2	7.2	7.2	7.2	7.2
Frequencies										
UMTS | HSPA+ bands (MHz)	800/850, 900, AWS 1700, 1900, 2100	800/850, 900, AWS 1700, 1900, 2100	800/850, 900, AWS 1700, 1900, 2100	800/850, 900, AWS 1700, 1900, 2100	800/850, 900, 2100	800/850, 900, 2100	800/850, 900, 2100	800/850, AWS1700, 1900	800/850, AWS1700, 1900	800/850, AWS1700, 1900
Features										
GSM | GPRS | EDGE Quad-band	•	•	•	•	•	•	•	•	•	•
Rx Diversity	•	•	•							
Data	•	•	•	•	•	•	•	•	•	•
Voice	•			•	•			•		
GNSS	•	•					•			•

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

HE910 Series

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
- Optional GPS
- Rx Diversity
- Extended temperature range: specify temp range -40 +85°C
- 3GPP release 7 compliant
- Control via AT commands according to 3GPP TS 27.005, 27.007 and Telit custom AT commands
- Serial port multiplexer 3GPP TS27.010
- SIM application Tool Kits 3GPP TS 51.014
- Built in UDP/TCP/FTP/SMTP stack
- Digital voice and SMS
- IP stack with TCP and UDP protocol
- eCall compliant
- Standard and extended AT command set

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)

Environmental

- Dimensions 28.2 x 28.2 x 2.2 mm

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
- I^2C
- 1.8 V / 3 V SIM interface

Approvals

- FCC and IC
- CCF57 Level 2
- CDMA Carrier Approvals
- RoHS

Electrical & Sensitivity

- 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
- Supply voltage
  - Nominal: 3.8 VDC
  - Range: 3.4 - 4.2 VDC
- Sensitivity
  -111 dBm @ UMTS
  -109 dBm @ GSM 850/900 MHz
  -110 dBm @ DCS1800/PCS1900 MHz

Software

- 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

AppZone application resources

- Programming language: C
- IDE: Eclipse
- Dedicated File System: 5 MB
- Separate App. RAM Space: 2 MB

Join the Telit Technical Forum

For a quicker and more rewarding integration experience join the Telit Technical Forum. There you can browse the first open forum covering all IoT topics, get direct support by region (EMEA, North America, Latin America, APAC), take part in this quickly growing IoT community and exchange experiences.

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