



High-Tech Distribution



GFF910

2G, 3G HSPA+, 4G LTE



Global Form Factor interface

Telit Unified AT Command Set

Multi Band

RX Diversity

Penta Band HSPA+

Quad Band EDGE

Quad Band GPRS

RoHS Compliant

SIM Access Profile

USB 2.0 High Speed Compatible

Embedded FTP and SMTP Client

Serial Port Multiplexer

28 Channel GPS Receiver

Extended RF Sensitivity

The GFF910 module is designed to allow the user easy plug and play options for GSM, UMTS, HSPA and CDMA. With plug and play options via the Telit Global Form Factor the entire range of xE910 modules are supported and options such as voice and GPS can easily be fulfilled without the need for re-work or re-design.

By providing an 80 way Global Form Factor interface the GFF910 allows the user the option to mount the module which best fits their application.

In most cases your design needs to provide flexibility depending which region the product is to be deployed and or certified. The GFF910 form factor takes the guess work out of the design by providing a single connector for interfacing the entire range of radio types depending on your needs.

Full electrical and software (AT command) compatibility is maintained between each module type be it GSM (GFF910-GE), CDMA (GFF910-DE or GFF910-CE) or HSPA+ (GFF910-G).

Part number	Upload	Download	Frequencies	Features				
	HSUPA (Mbps)	HSDPA (Mbps)	UMTS HSPA+ BANDS(MHz)	GSM GRPS EDGE Quad-band	Rx Diversity	Data	Voice	GPS
4G LTE								
GFF910-LE	TBA							
3G Penta Band Global HSPA+								
GFF910-G	5.76	21.0	800/850/900/AWS /1900/2100	•	•	•	•	•
GFF910-DG	5.76	21.0	800/850/900/AWS /1900/2100	•	•	•		•
GFF910-D	5.76	21.0	800/850/900/AWS /1900/2100	•	•	•		
3G Tri Band Europe/APAC/Latin America markets								
GFF910-EUR	5.76	7.2	850/900/2100	•		•	•	
GFF910-EUD	5.76	7.2	850/900/2100	•		•		
GFF910-EUG	5.76	7.2	850/900/2100	•		•		•
3G North America market								
GFF910-NAR	5.76	7.2	850/900/2100	•		•	•	
GFF910-NAD	5.76	7.2	850/900/2100	•		•		
GFF910-NAG	5.76	7.2	850/900/2100	•		•		•
2G GSM/GPRS								
GFF910-GE	4 Bands GSM/GPRS: 850/900/1800/1900MHz			•		•	•	

GFF910 Family



actual size

Python* 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

Product features

- Supported bands
 - 4 Bands GSM / GPRS / EDGE:
850 / 900 / 1800 / 1900 MHz
 - 5 Bands UMTS / HSPA:
800/850, 900, AWS1700, 1900, 2100 MHz
- HSPA+ data up to 21.0 Mbps downlink / 5.76 Mbps uplink
- Quad Band GPRS and EDGE class 33
- 80way Global Form Factor interface
- 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

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 (penta-band variants)
 - Downlink up to 7.2 Mbps (tri-band 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 (2W, 33 dBm) @ GSM 850/900
 - Class 1 (1W, 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)

Known Differences between HE910 (GFF910) and GC and UC864 series:

- Item 1** - ON/OFF pulse (pull down) needs to be a bit longer than UC864-G especially when USB cable is attached. (Refer to the HE910 HW User Guide)
 - Item 2** - AT command set is not 100% compatible eg. default AUTOBND is 2 in HE910. (Refer to the HE910 Software User Guide)
 - Item 3** - GFF910 provides maximum 10 GPIO, and GPIO 1 is shared with STAT_LED. (Refer to the GFF910 H/W User guide)
 - Item 4** - GFF910 provides 1x ADC while UC864-G provides 2.
 - Item 5** - IP address can no longer have any leading zeros for example 169.192.012.2 should be 169.192.12.2. IP addresses with leading zeros are converted to an octet and this is in line with the normal Windows IP addressing.
 - Item 6** - Python interpreter has been enhanced from the old version 1.5.2+ supported in Elite and Xgold platforms to version 2.7.2. (Refer to the Telit Easy Script Python 2.7.2 document)
 - Item 7** - only support digital voice port DVI, and the DVI TX is shared with GPIO 10. that pin on 80 way connector is configured as GPIO10, need some change some resistor jumper settings to enable DVI port.
 - Item 8** - due to the voltage level translation settings, the DVI port is set up to DVI master mode by default, so some hardware modifications needed (resistor jumpers) to change signal directions.
 - Item 9** - serial port default baud rate is 115200, and not support auto baud on GFF910(xE910 family)
 - Item 10** - SLED might not enabled by default, issue command "AT#SLED=4", "AT#GPIO=1,1,2" and "AT#SLEDSAV" to enable.
- Note: GPIO 1 will be toggling because it is shared with pin 1 pin on HE910.



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