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DGS-200
GSM / GPS Experimental Set

*Notebook is excluded
*Local SIM card is required

DGS-200 covers two topics in modern communication:GPS technology and GSM/GPRS technology.

In GPS module, the GPS receiver decodes the NMEA data strings from the satellites and output to software interface for the discussion of current position, speed, direction, time, etc.

In GSM / GPRS module, the usage of AT commands is introduced. Students can use software interface to send AT command to control GSM / GPRS module, send SMS message and make a phone call through headset interface, or access to the Internet.

When integrating both GPS and GSM / GPRS modules, the latitude and longitude data received by GPS module, this reference data will be sent to internet by GPRS service and reported in Google Map Website.

● Features

It's a powerful platform for wireless communication experiments when training and integrating GSM/GPRS with GPS modules, FAX Class1, TCP/IP, NMEA0183, 3GPP TS 27.005 and 3GPP TS 27.007 protocols to be one set.

● Specification

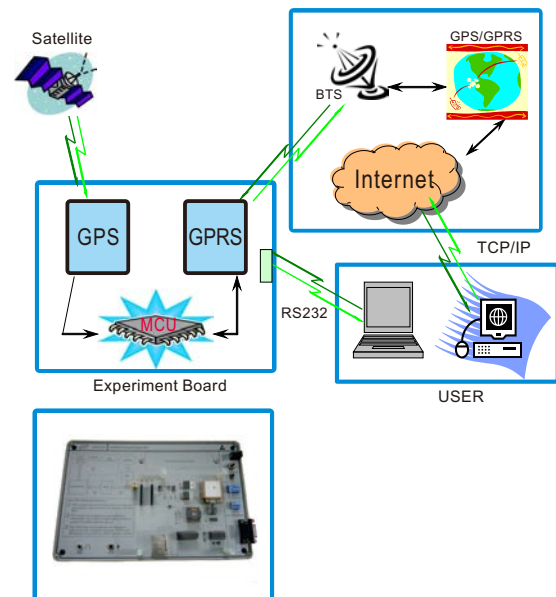### Hardware Specification

GSM/GPRS Module : Telit GC864-Quad V2
1. Support 3GPP TS 27.005, 3GPP TS 27.007, FAX class 1, TCP/IP protocol
2. Bandwidth : 850/900/1800/1900 MHZ
3. GPRS follows PPP(Point-to-Point Protocol) transmission protocol

GPS Module : Global Positioning System module EM-406A
1. SiRF star Ⅲ high performance GPS chipset
2. Support NMEA0183 data protocol
3. Built-in patch antenna, bandwidth 1575.42MHz

Micro-controller : Philip P89LPC922FN
1. 8KB flash memory, 256 byte RAM
2. Microcontroller is responsible for transferring longitude and latitude message received from GPS module. The related message will be sent to GSM/GPRS module through GPRS service to appointed IP address.

DGS-200

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Software Function

The user interface supports an experimental environment friendly and clear. All experiments can be implemented step by step. Moreover, students can follow the relevant description of each step listed in our manual to complete the experiment easily.
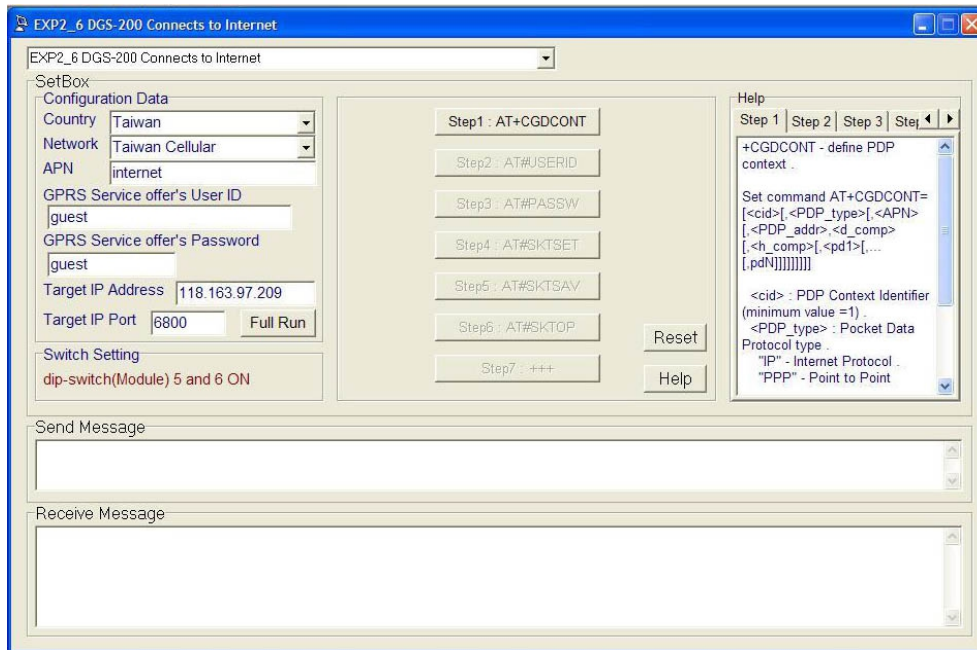
● List of Experiments

Exp1-1 : GPS module baud rate setting
Exp1-2 : GPS module update rate control
Exp2-1 : DGS-200 dials cell phone by AT command
Exp2-2 : DGS-200 answers cell phone by AT command
Exp2-3 : DGS-200 sends message to cell phone by AT command
Exp2-4 : DGS-200 receives cell phone message by AT command
Exp2-5 : DGS-200 checks signal quality by AT command
Exp2-6 : DGS-200 connects to internet
Exp 3 : Micro-controller experiment
Exp 4 : DGS-200 application experiment

● Accessories

1. RS-232 to USB adapter : 1 pce
2. GSM/GPRS antenna : 1pce
   (bandwidth: 850/900/1800/1900)
3. AC adapter : 1pce
   (input AC 100~240V, output DC 9V/1A)
4. Microphone-earphones: 1set
5. Audio line : 1 pce
6. Battery container : 1pce
   (without battery)
7. Experiment manual : 1pce
8. CD-ROM : 1pce

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