

## GPS/GSM Development Kit

The GPS/GSM Kit is a one of its kind revolutionary product that will help in clear understanding of GPS & GSM technologies. The intuitive design of GPS/GSM kit guides the student in learning to combine these two technologies and develop cutting edge next generation products & applications.

### What is GPS/GSM Development Kit?

The GPS/GSM Development kit provides a convenient platform for learning of two major technologies-GPS and GSM. It combines the essential hardware for these two technologies together with essential software for accessing and controlling them. In addition, the kit supports real-world interface through ADC and digital I/O, which facilitates development of many meaningful applications.

The heart of the kit is the GPS receiver interconnected to a GSM modem controlled by a Microprocessor. The GPS technology provides positional information while the GSM technology serves as the communication link, the GPS/GSM Development Kit enables design, development testing and simulation of a whole new range of applications where positional information is a key input, thus opening the flood gates of a whole new range of business opportunities.

The GPS/GSM Development Kit has at its core an embedded engine which facilitates codes to be written into the chip directly, alternately it is possible to develop a full blown application in the PC using Visual basic /C++ and downloaded to the kit through RS232 interface.

### Develop & simulate your applications in real time

With the GPS/GSM Development Kit, it is possible to simulate applications in real time. The kit essentially consists of two boards. This arrangement enables one board to serve as the receiving device and the other board as the transmitting device. For example, if an application is developed to track vehicles, then board1 could be connected to the computer through RS232 interface and board2 can be installed in the vehicle. Should the application that is being developed support monitoring of

vehicle parameters such as fuel level, engine temp etc, this board has the provision to acquire data generated from the respective sensors mounted on the moving vehicle and send the same to board1 where the vehicular information can be tracked and displayed on a PC.

The same can be extended to development of various applications in areas ranging from Healthcare, Telematics, Security, Fleet management, Location based services(LBS) etc.

The potential to conceptualize and develop varied applications targeting various fields using this innovative tool is limited only by the imagination of the human mind, opportunities are galore and the potential immense.

### Benefits

- ❖ Embedded application development in Real-time
- ❖ Facilitates design, development and implementation of innovative ideas and concepts.
- ❖ Provides superior learning experience through real-time application development.
- ❖ Reduces Product development life-cycle

### Useful For

Developing Real Time Applications in areas like:

- ❖ Telematics
- ❖ HealthCare
- ❖ Vehicle Monitoring
- ❖ Mobile Force Mgmt.
- ❖ Location based Services(LBS)
- ❖ Asset Tracking
- ❖ Electronic Fencing
- ❖ Security Services

# Product Specifications

## HARDWARE

CPU RCM 2020; Z180 Core CPU @ 18.4MHZ  
 Program Memory 256K Bytes  
 SRAM 128K Bytes with Battery back Up  
 Battery type CR 2330 Compatible; 3V coin type

**KEYPAD** Five Keys ; PCB Mounted

**DISPLAY**  
 LCD 2\* 16 Characters; PCB Mounted

**GPS**  
 Receiver Type Jupiter GPS Receiver-TU 330-D410-041  
 Antenna Active LNA; External; Length-3M

**Tracking Capability** 12 Parallel Channels

**Accuracy**  
 Horizontal accuracy better than 2.8 meters (CEP),  
 4.9 meters 2 dRMS  
 3D accuracy better than 5 meters (CEP)  
 DGPS accuracy better than 1 meter (CEP)  
 Time accuracy better than 100 ns (absolute),  
 40 ns (1 sigma)

**Datums**  
 189 standard datums, 5 user defined, default: WGS-84

## GSM

Module Type Wavecom; Q2403  
 Antenna Passive; External  
 Operating Mode SMS only

## DATA ACQUISITION:

No. Of Digital Inputs Four; Opto Isolated; 5-2 4VDC  
 No. Of Digital Outputs Four; 5-24VDC, 50 ma max  
 No. of Analog inputs TWO; 0-5VDC  
 ADC Resolution 8 bits

## INTERFACE

No of Serial Ports Two RS 232

## SOFTWARE

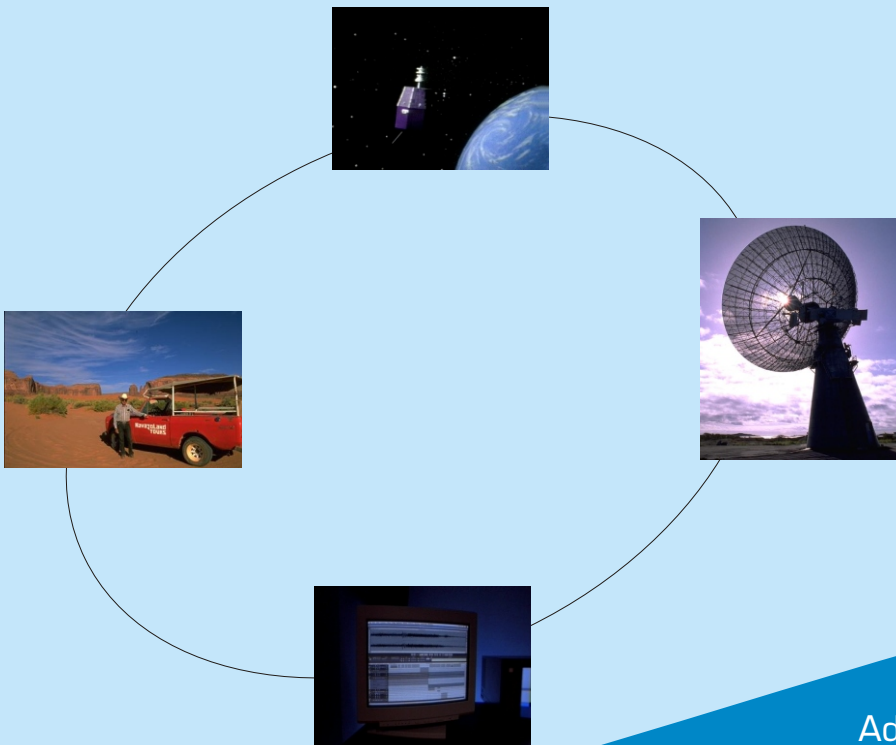
Embedded Software Three modes of operation  
 Selection Through DIP switch  
 Development S/W Dynamic C.

**POWER REQUIREMENT** 9-24VDC; 500ma

**SIZE** 160mm (W) \* 200 mm(H)

## DELIVERABLES

GPS/GSM Development Kit  
 GPS Antenna  
 GSM Antenna  
 RS 232 Connector Cables



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