



Nvis GPS module MC20GPS is an extension module for Nvis Microcontroller development platforms. The module has been designed for students and practicing engineers to gain invaluable practical experience on the principle and applications of microcontroller & GPS Module. The objective is to have a clear understanding of how GPS module is interfaced and controlled with microcontroller. It has various terminals for connection to external real world applications. Nvis GPS module will provide a basic understanding of the GPS fundamentals, Satellites & Design aspects of GPS receiver by actually connecting to the Satellite by GPS antenna.

Features

- ▶ **12 channel GPS & carrier**
- ▶ **Fast Cold/Warm/Hot start TTFF time of 45/38/8 sec**
- ▶ **Fast requisition time of 0.1 second**
- ▶ **NMEA 0183 Ver 2.2 GGA, GLL, GSA, GSV, RMC and VTG standard output**
- ▶ **SiRf binary protocol output**
- ▶ **On board real time RTCM SC-104 differential**
- ▶ **1PPS (one pulse per second) signal**
- ▶ **USB powered**
- ▶ **USB for PC communication**
- ▶ **GPS Software for analysis**
- ▶ **Expansion connectors for plug in with Microcontroller unit and prototyping area**
- ▶ **2 Year Warranty**

Scope of Learning

- ▶ Understanding the concept of GPS
- ▶ Establishing link between GPS Satellite & GPS platform
- ▶ Measurement of latitude & longitude
- ▶ Study of effect of DOP
- ▶ Study of HDOP & VDOP
- ▶ Analysis of NMEA 0183 Protocols
- ▶ Analysis of Elevation; Azimuth, SNR
- ▶ Study of PRN code
- ▶ Study of common NMEA standard Protocol like, GPGGA, GPGLL, GPGSA, GPGSV, GPRMC, GPVTG
- ▶ Study of other GPS NMEA standard like, GPALM, GPGRS, GPGST, GPMSS, GPZDA
- ▶ Study of UTC date & time
- ▶ Study of useful conversion formulas



