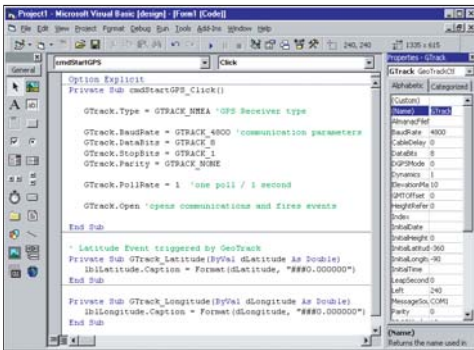


# GeoTrack™

A GPS interface available for your application!



*"GeoTrack is a great way to include GPS functionality into our custom application. We provide a specific view of the ocean floor derived from live GPS information. GeoTrack works flawlessly on our desktop application. I am very impressed with it's ease of use as I had integrated it into my application in 20 minutes after I changing the output settings from my GPS unit."*

Larry Chaisson  
DHGroup



## What is GeoTrack?

GeoTrack is a collection of functions which allows serial communication to your GPS receiver supporting Motorola, NMEA 0183, Trimble TSIP, and Trimble TAIP protocols. An application communicates with GeoTrack DLL via a Dynamic Link Library (DLL) interface. GeoTrack also supports the Component Object Model (COM).

### GeoTrack DLL

- ◆ Open communications with the GPS receiver.
- ◆ Poll the GPS receiver for messages.
- ◆ Process position, time, speed, heading, satellite positions, satellite signal strength and dilution of precision information in GeoTrack defined callback functions.
- ◆ Retrieve precise timing information. The precise one pulse per second (1PPS) timing pulse of Motorola Oncore receivers is used for various time synchronization and frequency control applications. (Motorola only)

### GeoTrack COM Library

- ◆ Specify the receiver type, communications parameters, and the polling rate with GeoTrack properties.
- ◆ Use the Open method to establish communication with the GPS receiver.
- ◆ Process position, time, speed, heading, satellite positions, satellite signal strength, and dilution of precision information in GeoTrack events.
- ◆ Use as much or as little of the GPS information as you need...You're in control!

## How does GeoTrack work?

GeoTrack "talks" to a GPS receiver by using a communication protocol. Your application must initialize the proper protocol for GeoTrack to communicate with a GPS receiver. Our GeoTrack DLL functions are grouped within a clear, conceptual design giving you the flexibility to develop rapid prototypes and powerful integrated applications.

You may also use GeoTrack as a COM control. Once you have opened communication between the GPS receiver and your application, GeoTrack will read the serial port, parse the GPS data, and send data to your application as events. Events are fired in your application. You retrieve GPS information in these events. Implement whatever code you want in these event procedures.

## Flexible Distribution Licensing!

Once you have developed a GeoTrack application, it is simple to license. Our distribution license model provides the flexibility that you demand. Developers must complete a simple, two-page License Agreement specifying the deployment of their application to end users. A reasonable annual fee applies in exchange for unlimited distribution of your GeoObjects application, contact us for details!

## Technical Support

Annual subscription covers your development kit all year long!

## Order Today!

You can order and download GeoTrack from our web site at

[www.bluemarblegeo.com](http://www.bluemarblegeo.com)

You can also order by calling

800.616.2725



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## GPS Protocols

### Trimble Support

- ◆ TSIP (Trimble Standard Interface Protocol)
- ◆ TAIP (Trimble ASCII Interface Protocol)

### NMEA Support

- ◆ NMEA 0183

### Motorola Support

- ◆ Motorola Binary protocol

## Trimble Support

### Trimble TSIP Sentence Support

- ◆ 0x41 - GPS time
- ◆ 0x42 - single precision XYZ
- ◆ 0x43 - velocity, XYZ
- ◆ 0x44 - satellite selection
- ◆ 0x45 - software version
- ◆ 0x46 - health
- ◆ 0x47 - signal levels
- ◆ 0x4A - single precision lat/lon/alt
- ◆ 0x4B - additional status
- ◆ 0x56 - velocity east/north/up
- ◆ 0x5C - satellite tracking status
- ◆ 0x6D - all in view satellite selection
- ◆ 0x83 - double precision XYZ
- ◆ 0x84 - double precision lat/lon/alt

### Trimble TAIP Sentence Support

- ◆ LN - position
- ◆ ST - status
- ◆ TM - time

## Motorola Support

### Compatibility with Motorola GPS receivers

- ◆ GT Oncore GPS
- ◆ UT Oncore GPS
- ◆ 8-channel VP
- ◆ Basic and XT Oncore GPS

## NMEA Support

### NMEA 0183 Sentence Support

- ◆ GGA - GPS fix data
- ◆ GLL - Geographic position
- ◆ GSA - DOP and active satellites
- ◆ GSV - Satellites in view
- ◆ RMA - Recommended minimum specific Loran-C data
- ◆ RMC - Recommended minimum specific GPS/Transit data
- ◆ STN - Multiple data ID
- ◆ VTG - Track made good and ground speed
- ◆ ZDA - Time and date
- ◆ DPT - Depth
- ◆ DBT - Depth below transducer

GeoTrack Function	NMEA	Motorola	TSIP	TAIP
GeoTrack_Close				
GeoTrack_GetDefaultCommInfo				
GeoTrack_Open				
GeoTrack_Poll				
GeoTrack_RecordASCIIPositionData				
GeoTrack_RecordBinaryData				
GeoTrack_RecordPositionData				
GeoTrack_RecordTimingData				
GeoTrack_Request				
GeoTrack_Set1PPSCableDelay				
GeoTrack_SetAlmanacDataInput				
GeoTrack_SetAlmanacDataOutput				
GeoTrack_SetASCIIPositionDataRate				
GeoTrack_SetCallback_1PPSCableDelay				
GeoTrack_SetCallback_AlmanacDataInput				
GeoTrack_SetCallback_AlmanacDataOutput				
GeoTrack_SetCallback_ASCIIPositionData				
GeoTrack_SetCallback_Date				
GeoTrack_SetCallback_Depth				
GeoTrack_SetCallback_DOP				
GeoTrack_SetCallback_FixStatus				
GeoTrack_SetCallback_GMTOffset				
GeoTrack_SetCallback_GPSInfo				
GeoTrack_SetCallback_Heading				
GeoTrack_SetCallback_Height				
GeoTrack_SetCallback_HeightGGA				
GeoTrack_SetCallback_Latitude				
GeoTrack_SetCallback_LeapSecondPending				
GeoTrack_SetCallback_Longitude				
GeoTrack_SetCallback_MagVariation				
GeoTrack_SetCallback_NumSats				
GeoTrack_SetCallback_PositionHoldMode				
GeoTrack_SetCallback_PositionHoldPosition				
GeoTrack_SetCallback_PositionStatusData				
GeoTrack_SetCallback_PowerOnFailure				
GeoTrack_SetCallback_ReceiverID				
GeoTrack_SetCallback_SatsInView				
GeoTrack_SetCallback_SatsUsed				
GeoTrack_SetCallback_SelfTest				
GeoTrack_SetCallback_SetToDefaults				
GeoTrack_SetCallback_Speed				
GeoTrack_SetCallback_TalkerID				
GeoTrack_SetCallback_TimeMode				
GeoTrack_SetCallback_TimeOfDay				
GeoTrack_SetCallback_TimeRAIMSetupAndStatus				
GeoTrack_SetDate				
GeoTrack_SetGMTOffset				
GeoTrack_SetHeight				
GeoTrack_SetLatitude				
GeoTrack_SetLongitude				
GeoTrack_SetNMEASettings				
GeoTrack_SetOutputMessageFormat				
GeoTrack_SetPlaybackMode				
GeoTrack_SetPositionHoldMode				
GeoTrack_SetPositionHoldPosition				
GeoTrack_SetPositionStatusDataRate				
GeoTrack_SetTimeMode				
GeoTrack_SetTimeOfDay				
GeoTrack_SetTimeRAIMSetupAndStatus				
GeoTrack_SetTSIPSettings				
GeoTrack_StopRecordingASCIIPositionData				
GeoTrack_StopRecordingBinaryData				
GeoTrack_StopRecordingPositionData				
GeoTrack_StopRecordingTimingData				



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