

APPLICATION NOTES



Model	Chameleon KML Server Application Notes
Revision:	AN #13 -1849.0046 Revision 2.1

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2 Revision Control

Description	Revision	Date
Customer Release	AN #13 -1849.0046 Revision 2.1	22-Aug-2007

3 Chameleon KML Server Real-Time Tracking with Google Earth

This application note describes how to display the real-time GPS position on Google Earth™ with a CTM13x/CTM15x Chameleon GPS enabled wireless data modem using a Chameleon KML Server application program.

The Chameleon KML Server application reads the streaming proprietary NMEA \$PKML (type 115) messages from the UDP port and writes this data dynamically into a KML file. This application is available at www.cypress.bc.ca/support.

Google Earth™ reads a KML file containing GPS position information and displays it. Since the KML file is being dynamically updated by the KML Server, Google Earth™ can update the position at a preset interval.

This application has been tested to work with Google Earth™ (Free) build version 4.1.7087.5048 (beta). Google Earth™ is publicly available at www.earth.google.com.

Compatibility:

CTM 132 firmware version 1.3.0 and above CTM 152 firmware version 1.1.4 and above Windows 98, 2000, XP

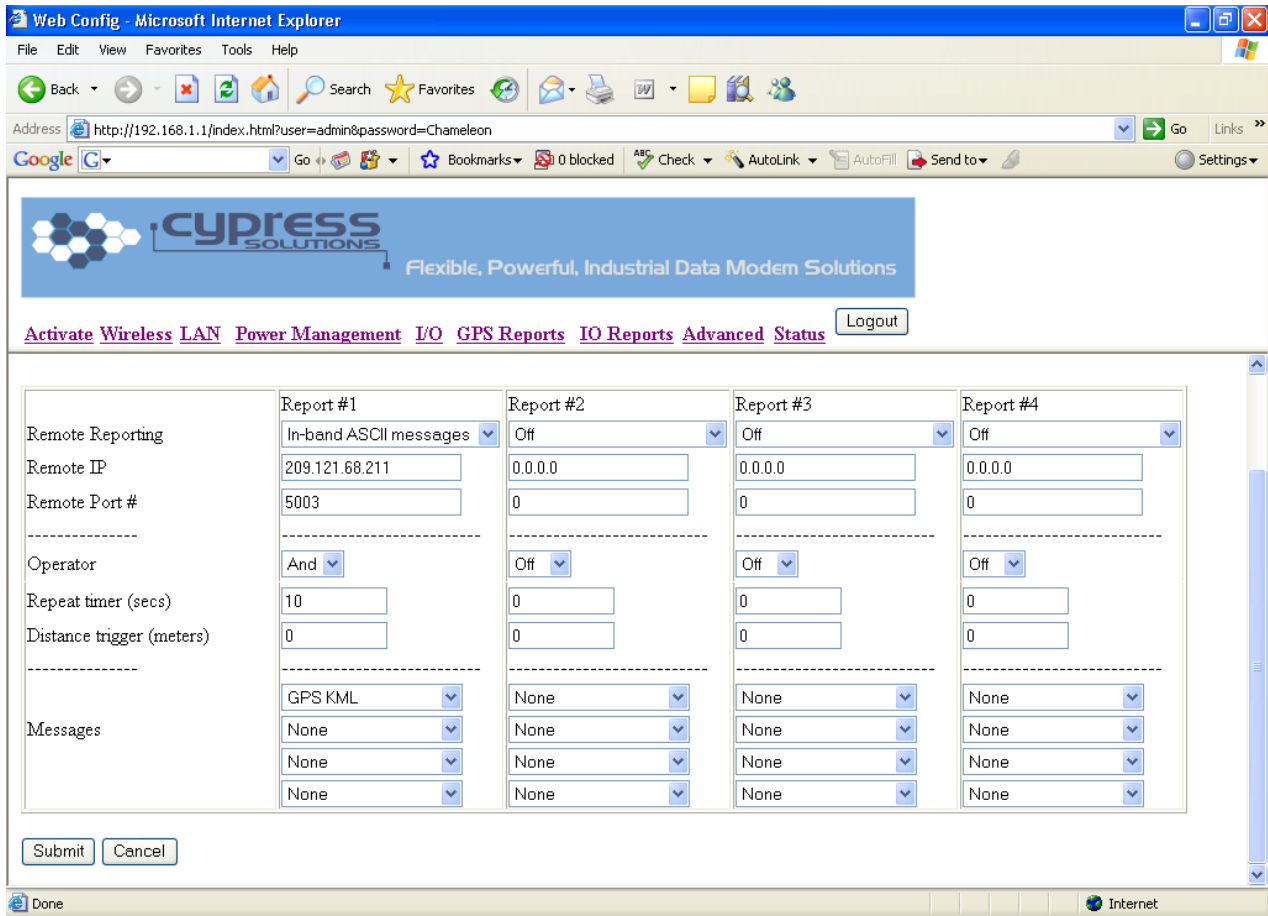
Installation:

Download and open the Chameleon KML Server zip file and extract the KMLServer.exe file to a directory of your choice. KMLServer is an executable which is run simply by double clicking on the icon (or file name). Some configurations of Windows® may require additional DLLs: these are provided in the zip file – save them to the C:\WINDOWS\SYSTEM32 directory.

Download and install the Google Earth™ application.

4 Configuring your own CTM Modem

The CTM modem must be configured to report a NMEA \$PKML message to a UDP port at a known fixed IP address. See the User Manual and Command Reference documents for more details on configuring the CTM modem.



In the above example, Report #1 is configured to report a GPS KML message every 10 seconds to IP address 209.121.68.211 port #5003. This report was configured using the Chameleon embedded web page configuration.

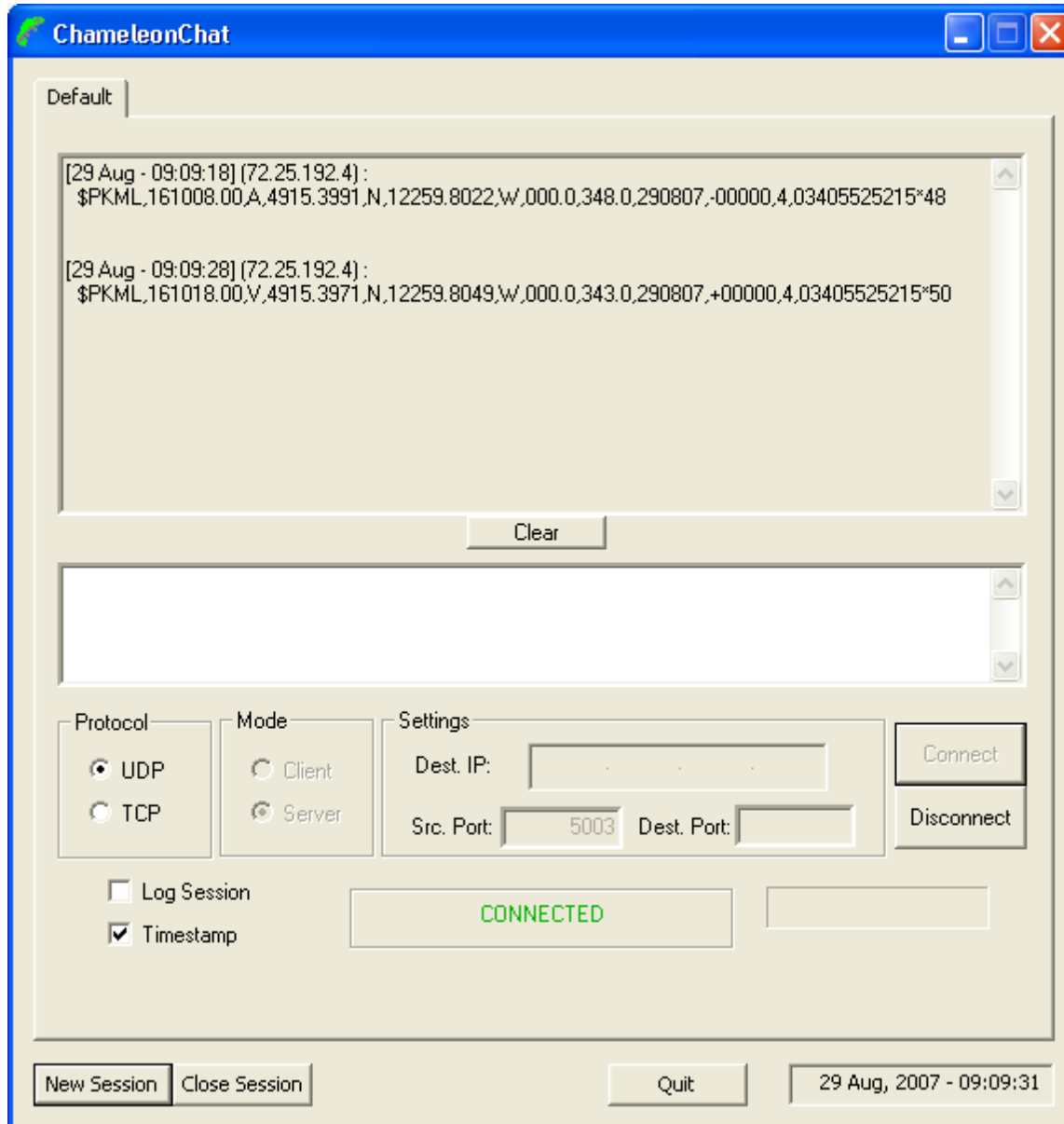
To configure the modem for the GPS reporting with hyper terminal, enter the following commands:

CTM-132	CTM-152
AT^GPSCOND=0,10,1	cmd gpscond 1 1 10
AT^GPSDELMES=0,0	cmd gpsdelmes 1 0
AT^GPSADDMES=0,80	cmd gpsaddmes 1 80
AT^GPSREMIP=0,209.121.68.211	cmd gpsremip 1 209.121.68.211
AT^GPSREMPORT=0,5053	cmd gpsremport 1 5053
AT^GPSREP=0,0,3	cmd gpsrep 1 0 3
AT^MODE=2	cmd mode 2
AT&W	cmd save

4.1 Verifying your Set-up (optional)

The modem should now be configured to send NMEA GPS messages to a UDP port at a fixed IP address of the server computer. To verify that valid UDP packets are being received by the host computer, use the Chameleon Chat utility that is available at www.cypress.bc.ca/support.

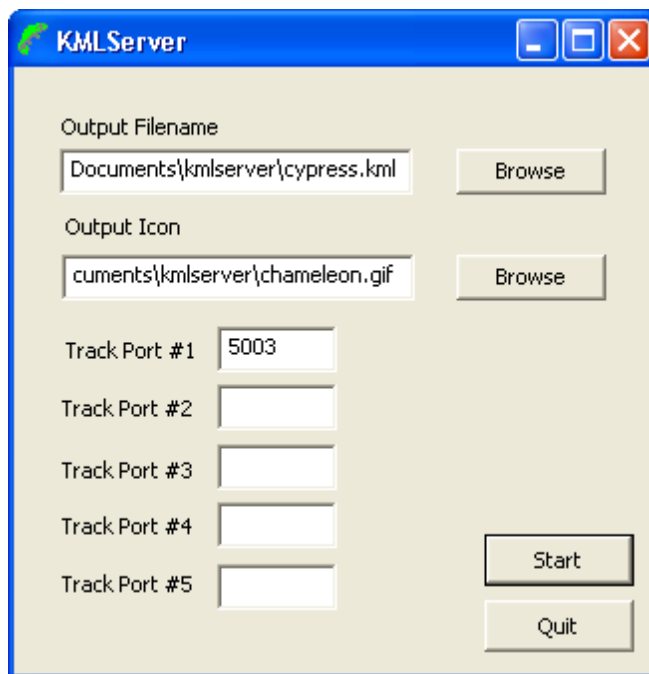
The server computer (where the packets are being sent) should be configured to allow the UDP packet to be received.



In the example above, UDP port 5003 is being monitored and GPS packets are being received on port 5003. Note: To avoid port conflicts please ensure that the Chameleon Chat application is closed before running the KML Server.

5 Running the KML Server

The KML Server reads the NMEA message from a UDP port and writes this data dynamically into a KML file. The KML Server application and Google Earth™ must be running simultaneously. Run the KML Server application,



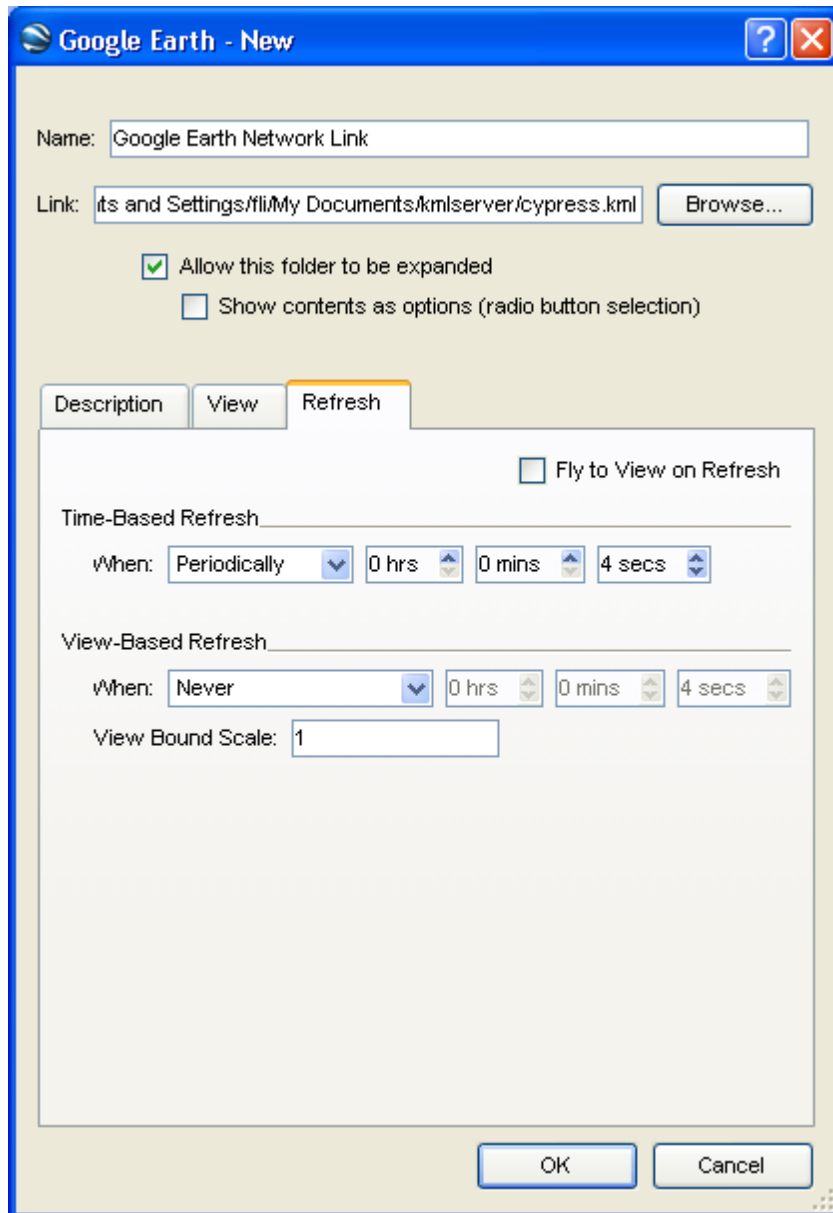
Browse to a location you wish to store the KML file, this file can be given any name with .kml extension

Browse to a location of an icon you wish to use as the marker. A sample „chameleon.gif“ icon is included for reference

Enter the port # of the UDP port where the valid \$PKML NMEA packets are being received
Press the "Start" button

6 Running Google Earth

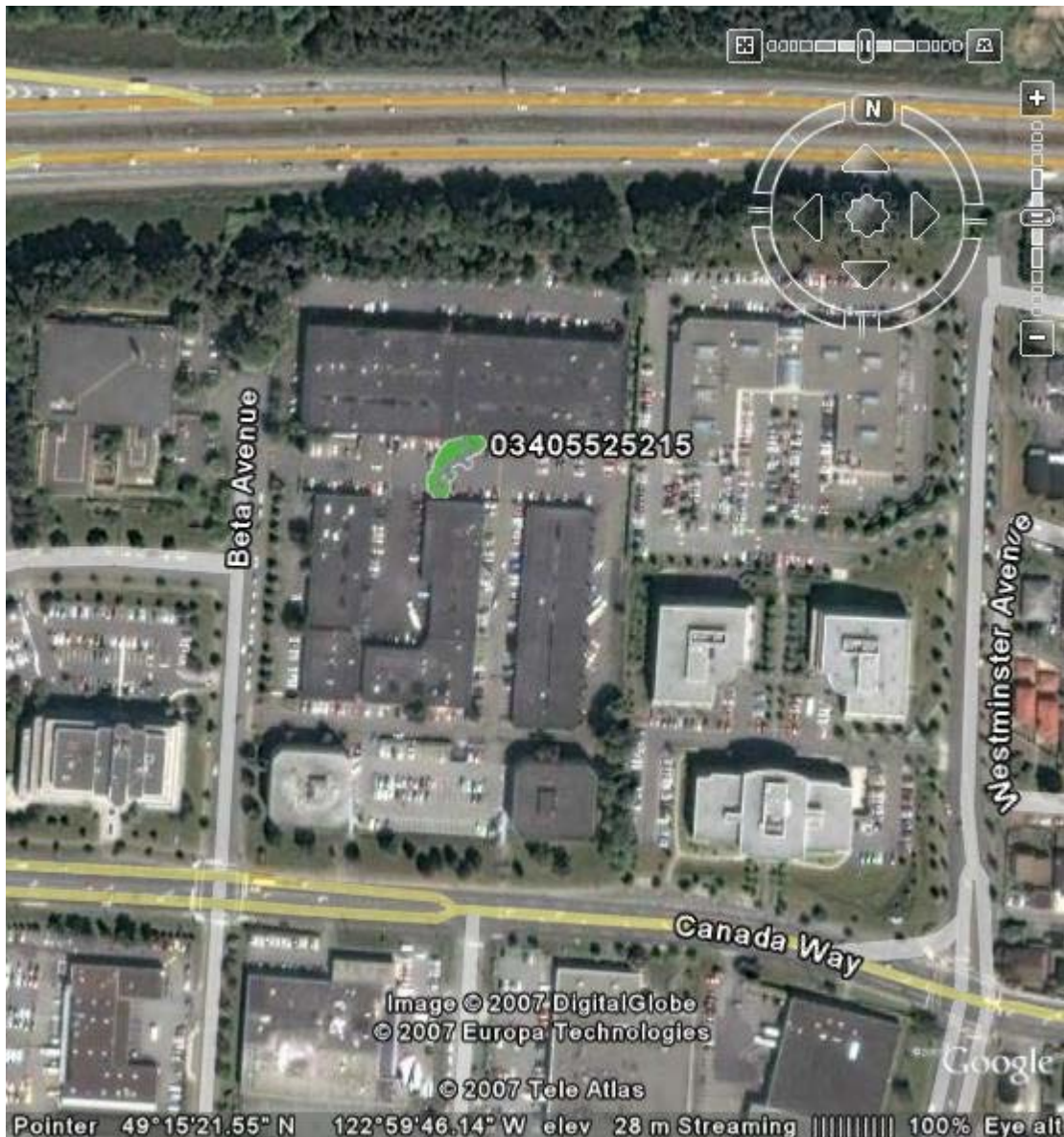
Run the Google Earth™ application. Before you can see the location of your device, you need to open a Network Link with Google Earth™. On the top toolbar select "Add" -> "Network Link..." and the following box will open.



Under “Link” field, browse to the output file location of the KML file that you created in the previous step when you setup the KML server.

Click on the “Refresh” tab. Change the time based refresh to “Periodically”, the refresh interval can be adjusted and is the time between screen refreshes of data.

Click "OK" and the position icon and its modem ID will display on the map.



7 Technical Support/Warranty:

**Cypress Solutions Service
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