Ultra eSAM

intercel ™
go anywhere communication and data transfer

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INTRODUCTION

The Ultra eSAM Modem features a GPS Module capable of using the GPS Satellite system to locate the modem anywhere on the earth. This is implemented using the TCP or UDP Protocol, and is designed to work with many different applications.

MODEM CONFIGURATION

1. First, ensure you have connected an external GPS antenna to the eSAM. An antenna is provided with the eSAM Kit.

   Note that GPS signals operate at a lower frequency than 4G or Wi-Fi Signals, and so are more susceptible to being blocked by obstacles, such as metal roofs or metal enclosures. Where possible use an antenna external to your enclosure.

2. Connect to the eSAM Web GUI. By default, this can be done by opening your web browser and enter '192.168.8.1'. When the GUI opens, enter your username and password to log in.

3. Open the Application>GPS window

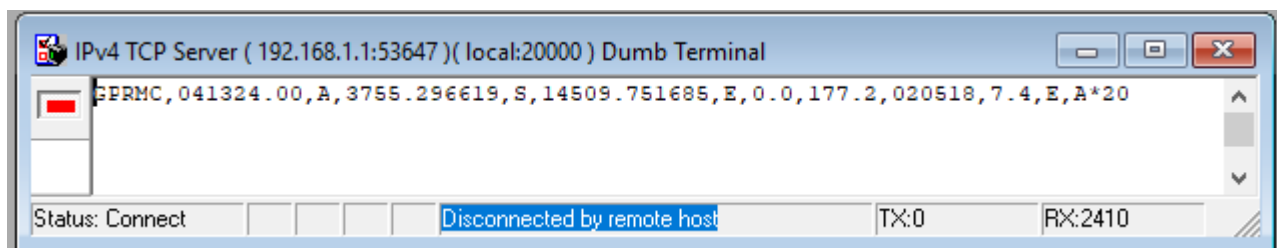   Enable the GPS Application, if it is not enabled already.

4. The eSAM is designed to interface with a TCP or UDP Server. GPS data is sent straight from the embedded GPS Modem, encapsulated in a TCP or UDP header using whichever port you set here.

   This guide will describe how to confirm that the eSAM GPS Feature is functioning, but will not explain how to configure a server to display this information

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5. Enter the following parameters:

| Parameter	Setting
Local Port	The port used by the eSAM for sending GPS Data to your server
Protocol	TCP or UDP (usually TCP)
Server IP	The IP Address or hostname of your GPS Server
Server Port	The port used on your server to receive the Data
Packet header	The data to be appended before the GPS Data (optional)
Packet tailer	The data to be appended after the GPS Data (optional)
GPS report interval	How much time should pass before the eSAM will send an updated GPS Location.

6. Once entered, press 'save' to save your configuration

7. (optional) To confirm that the GPS is functioning, you can use a TCP Server program such as PCCOM to monitor incoming TCP Packets to your server.

IPv4 TCP Server (192.168.1.1:53647)(local:20000) Dumb Terminal

GPRMC,041324.00,A,3755.296619,S,14509.751685,E,0.0,177.2,020518,7.4,E,A*20

Status: Connect   Disconnected by remote host   TX:0   RX:2410

Note: When the signal strength for GPS is very low, it may take several minutes for a GPS lock to be achieved. If the received packets do not contain any co-ordinates, please wait and allow the eSAM time to gain a signal lock.
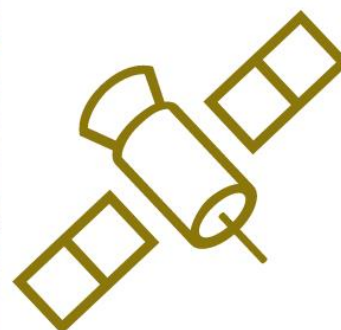
$GPRMC,224900.00,A,3755.301495,S,14509.752113,E,0.0,314.7,020518,7.4,E,A*2D

Decode
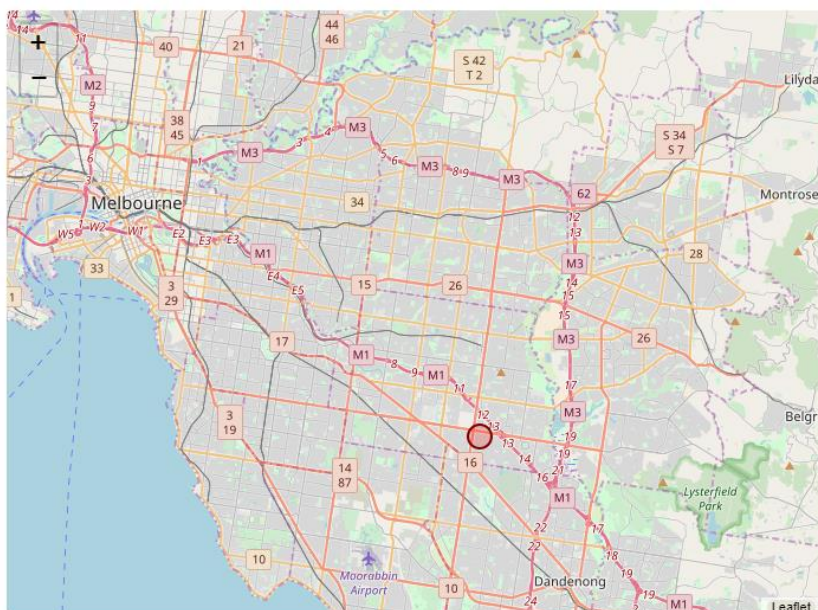
Decoding results

Position	37.921692°S 145.162535°E
Timestamp	Wed, 2 May 2018 22:49:00 UTC
Close to	Notting Hill, Australia
Local time	Thu, 3 May 2018 08:49:00 AEST
Timezone	Australia/Melbourne (UTC +1000)

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