Operational Description - Mobile1
GTX Corp, WFRGC226142

Mobile1 Overview

The Mobile1 is a belt worn tracking device which utilizes GPS for location and GSM/GPRS for communication and configuration.

The Mobile1 communicates via a quad-band (850/900/1800/1900) GSM/GPRS wireless data transceiver. The Mobile1 uses signals from the U.S. Government's Global Positioning Satellite (GPS) constellation to determine the geographic location of the device on the Earth. Then, the Mobile1 transmits the device location information over a wireless GPRS network to the GTX Corp Tracking Portal. GTX Corp provides user location information to GTX Corp subscribers, who may access a user's location by logging into the GTX Corp Tracking Portal to view the user's location in real time on a map. The reporting frequency is user configurable. The Mobile1 can be set to report based on elapsed time such as every 2 minutes or incrementally up to 1440 minutes, or distance traveled, such as every mile or incrementally up to every 100 miles traveled.

Mobile1 Configuration

The Mobile1 utilizes the Enfora MLG0208 quad-band (850/900/1800/1900) GSM/GPRS module with an integrated GPS receiver. The GSM and GPS antennas are integrated on a common PCB which connects to the control board via two MMCX connectors. The GSM antenna was designed specifically for the Mobile1 and its intended use. The GPS antenna is the Sarantel GeoHelix-S. It was selected due to its suitability for use close to the human body.

The Mobile1 is capable of transmitting a standard packet or a diagnostic packet configuration. The standard packet is about 50 bytes in length and contains latitude, longitude, speed, bearing, and fix time. The diagnostic packet contains latitude, longitude, speed, bearing, linear distance, altitude, fix type, fix time, DOP, accuracy, satellite count, and battery level. The diagnostic packet is approximately 80 bytes in length and is configurable over the air.

The SIM card is not end user accessible. The internal battery is the only source of power. Power to the Mobile1 is switched by installation and removal of the battery. The battery is charged outside of the Mobile1 via a portable docking charger. The charger requires 5VDC +/- 0.25VDC at 500mA maximum.

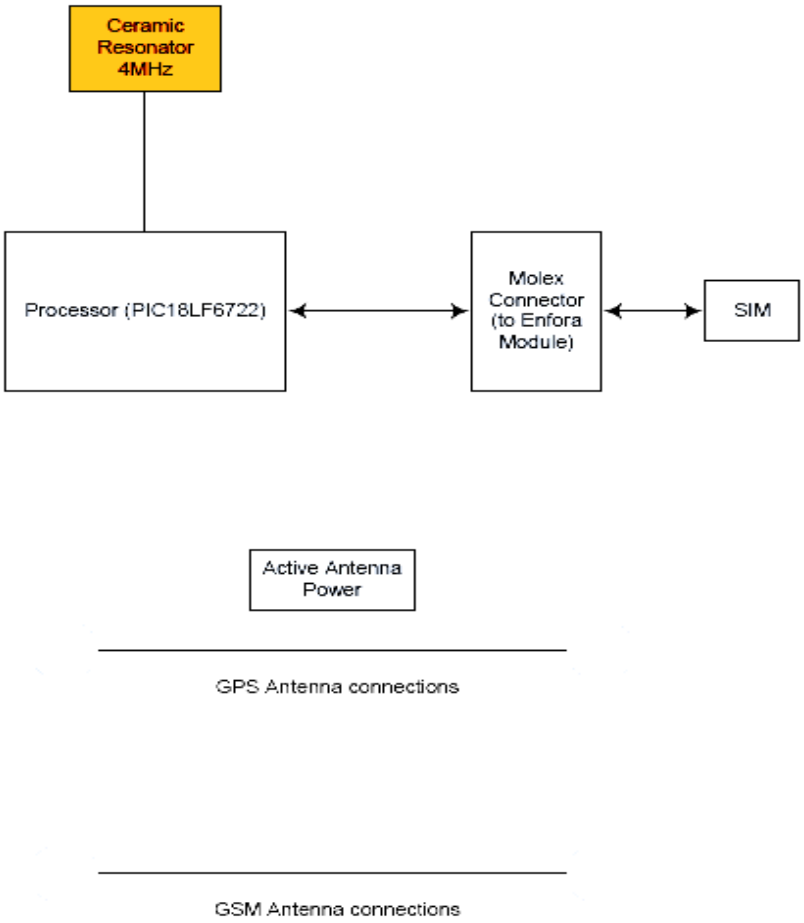

Figure 1 – Mobile1 Block Diagram