

(C) 2011 Jackson Labs Technologies, Inc. The included CD contains the following folders:

Specsheet - GPSTCXO board specsheet

UserManual - GPSTCXO eval board user manual, including command interface reference description

Z38xxControlProgram - Windows serial control freeware program for data logging, command interface, and performance evaluation

QUICK START INSTRUCTIONS:

Power Up of GPSTCXO eval board:

- 1) Connect GPS antenna to GPSTCXO eval board MMCX connector, and place antenna into a window or in view of the clear sky

WARNING: FOR OUTSIDE ANTENNA INSTALLATIONS YOU MUST USE A PROPER GPS ANTENNA LIGHTNING PROTECTION DEVICE (NOT SUPPLIED) TO PREVENT DAMAGE, INJURY OR DEATH IN CASE OF A LIGHTNING STRIKE

- 2) Plug USB cable into USB port of Windows or Linux PC, and connect other end of USB cable to GPSTCXO eval board Mini-USB connector. Windows or Linux will automatically install a serial driver for the board. You may need to download the FTDI USB driver from Microsoft Update, or from the FTDI website available under:

www.ftdichip.com/FTDrivers.htm

- 3) Red LED will blink after ~60 seconds if unit is working properly, and GPS Satellites are being received
- 4) Green LED will light up after ~20 to 45 minutes if frequency is within specification and no events are being flagged. 10MHz CMOS output on BNC connector will have typically better than 0.5ppb stability and accuracy when Green LED is lit. Green LED may go off from time to time, this is normal.

USE A 1M Ω INPUT TO CONNECT TO THE 10MHz CMOS OUTPUT, DO NOT TERMINATE 10MHz CMOS OUTPUT WITH 50 OHMS

Installing Z38xx control program on PC:

Copy Z38xxControlProgram files to PC
-RUN Z38XX IN WINDOWS XP COMPATIBILITY MODE -

- 1) Configure the serial port under the Z38xx "Parameters" tab according to the COM port number windows assigned to the GPSTCXO eval board.
COM port parameters may be checked under the Windows CONTROL PANEL/SYSTEM tab, or under the Windows-7 COMPUTER MANAGEMENT/Device Manager window
- 2) Disable Serial Echo using the Z38xx manual command-window as described in the user manual
- 3) Open various Z38xx windows under the "View" tab such as Sattelite Azimuth window, Sat C/No Signal Strength window, EFC statistics window, etc

RECOMMENDATION:

The longer the unit runs the more stable the oscillator will become. It is recommended that the unit runs continuously with GPS lock for best performance. An optional external +5V to +9V DC power-supply may be connected to header block JP2 as explained in the user manual for continuous operation independent of the PC USB port. Make sure not to reverse the optional external power supply polarity, as this will damage the board. The positive wire should be connected to the terminal pin right next to JP1, the ground wire should be connected to the terminal pin right next to the mounting hole. See the user manual for a graphic plot showing the proper external power supply connections.