The VPGUIB is the updated VP ONCORE™ Interface Board. This board provides support for the for the VP ONCORE™, GT+ ONCORE™ and the UT+ ONCORE™ GPS engines. The VPGUIB is built and tested with a VP ONCORE and only requires your custom interface wiring (typical wiring hardware provided).

**This board features:**
- Daughter board that is the same size as the GPS Engine
- A highly efficient regulator which provides 5 VDC @ 250 mA from a 7-40 VDC source, without heat sink.
- Direct RS232 connection for input and output control of the GPS engine.
- Second port available to support the DGPS input for the GT+ engines (at solder pad D for input).
- 1PPS output at RS232 levels for DCD signaling connected to DB9 pin 1 (pin 6 on 10 pin header). -- Provides timing signal and needed for TAC32 software from TAPR.
- Provision for adding a lithium backup battery for GPS engines without the rechargeable backup battery.
- Provision for adding the TAC low-Z 1PPS output (at bottom of board) with flashing LED indication.

**Board wiring comments:**
- For DGPS inputs, the input is though RXB (DB9-3), which is the same input for commands to the GPS (the only exception is the GT+ which has it’s own RXB input of DGPS and is at solder pad D). You can use a SPDT switch to switch RXB from DGPS input to PC input, on DB9-3. Or use a mini phone jack with a NC switch. Wire the jack to pass RXB to DB9-3, when the plug is not installed and wire the jack to send DGPS signals to DB9-3, when plug is installed (DGPS connected through plug).

**U PGUIB connection wiring**
- G=Ground (DB9-9)
- T=TXB (DB9-2)
- R=RXB (DB9-3)
- For GT+ ONLY, it is the DGPS input and do the following:
  - (DB9 pin 8 to pad D) used with D
  - (Add jumper J2)
  - Raw 1PPS output of R3 and route to (DB9-1)
  - Use 7-30μdipped wire for B
  - GND= brown wire to power GND

**Adding lithium battery** (Only for GPS without battery)
- Li-batt BR2325 (Digi-Key P2192-NC). Observe polarity:
  - R2= 750k 1/4w
  - Add jumper J1

**Adding TAC hardware**
- IC=74AC4M
- C=8μf SMD axial
- 220μf 1/4w
- RP1= 6.8k (Digi-Key 770-61-R51-ND)
- LED
  - Add jumpers J3 and J4
- Use 1PPS MAX pin 7 to DB9-1 and not RAW 1PPS Low-Z output now available
- LED turns on and off for each 1PPS
- 1PPS is also available from the LOW-Z connection