9 July 2023
Rev B

Limit Edition Sale of OpenVario

Are you looking for a high-performance flight computer for your glider? If so, you might have heard of OpenVario, a project that aims to create a device that runs XCSoar, a powerful navigation software.

Building your own (as a 1 off) standard OpenVario will be (relatively) very expensive, very time consuming and the end result likely suboptimal. Alternatively, buying one commercially (eg Stefly – btw an excellent product) will cost you over A$2,100 (flight computer c/w stick controller) by the time it is landed here in Australia.

That's why DDSC (as a fund raiser) is proposing to manufacture a strictly limited number of OpenVarios, identical to those installed in its XC fleet upgrade last year. These units have been optimised to reduce complexity and cost of manufacture compared to the opensource variant design. They utilise heat-resistant, commercially 3d-printed polymer case components, replacing some expensive milled aluminium items but retaining the overall aluminium case concept, to reduce cost and simplify assembly. Omitting unnecessary options like integrated audio and air data also help to contain cost. Economies of scale begin to be achieved when at least 10 units are manufactured.

The DDSC OpenVario comes with the standard sunlight readable display, a user input (either a remote stick or a DDSC designed dual-shaft rotary encoder with pushbuttons), FULLY ASSEMBLED and tested.

Don't miss this opportunity to get your own OpenVario for a fraction of the price and support DDSC at the same time. Order yours today!

Please note:

1. the OpenVario hardware design needs to be fed with a GPS, typically a FLARM and/or vario via the available 2xRJ45 (IGC pinned) connectors, or a third RS232 provision via the included sub D15 plug.
2. as part of the DDSC optimisation, our OpenVarios DO NOT have (air) sensor data, thus allowing the case to be made smaller. All(?) modern electronic varios have their own air-data anyway, and this information is fed into the OpenVario, if coms are interconnected. Note: the 'sensor connection' is available iaw original design but never tested/used. A separate sensor board would need to be manufactured.
3. as part of the DDSC optimisation, our OpenVarios DO NOT have audio (for direct speaker connection), as they aren't needed (imo). Many alarms etc may come back through the electronic vario, if coms are interconnected. Note: the 'audio circuit' provision is provided (but breakout board not installed) iaw the original design but never tested.
4. The OpenVario design is opensource hardware. DDSC or its members haven't designed the product but are simply providing an interface between OEM products (ie display, Linux SBC, etc). DDSC cannot provide OEM product warranty support after the working unit has been shipped (ie think of this as DDSC assisting you build your own).
5. The OpenVario uses opensource software (XC Soar). DDSC will provide a sd card with a basic image (ie basically what we are running on DDSC's fleet). Other images are available from the open-source community; simply burn a new SD card. XC Soar is fully customisable. DDSC cannot provide product support (ie again think of this as DDSC assisting you build your own).

Input Controller Options	
 DDSC remote stick in club glider	 instrument panel mounted controller (encoder + 3x pushbuttons) Labelling not applied as yet
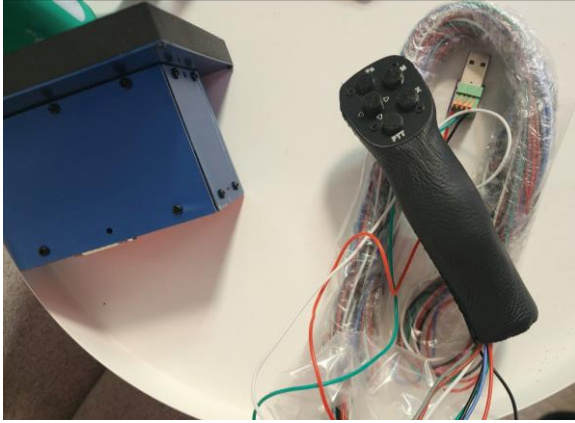
Remote Stick before installation. Note -Aluminium insert not fitted yet as this is made-to-order to suit control column diameter	Aluminium case - painted
Power, coms, usb and sd card connections/interface	5.7 inch screen (7 inch is similar) with nylon bezel and threaded brass inserts.

5.7inch Screen Bezel showing screen size and behind panel space requirement	7 inch Screen Bezel showing screen size and behind panel space requirement

Below is an animation (85MB) from the modelling software
https://www.dropbox.com/s/woy36npssrct43h/OpenVarioCase%20animation%202023-0709.avi?dl=0

If there is enough interest, we will put together some more info, better photos, FAQ, more drawings ,etc.

The proposed process is:

1. Advertise project (to gain interest).
2. Interested parties (must) register by 30 August 2023. There is a minimum (and max) build quantity to be viable. Orders delivered in same order as received. Initially orders will be limited to 20, with a waitlist.
3. DDSC will confirm pricing and availability of components before confirming whether to proceed or not with the project. (September 2023)
4. Obtain payment in full from all registered parties (October 2023).
5. Manufacture pre-paid orders (Nov 2023 – Mar 2024);
6. Deliver orders (April 2024 – all going well).

The DDSC package will include:

- Fully assembled OpenVario (DDSC design) flight computer including:
    - available in either 7" or 5.7" screen size.
    - 2 x serial port (RJ45) with IGC pinout (internally fused with separate pwr)
    - 1 x (useable) serial port on D-Sub 15
    - 2 x USB – 1 is needed for the controller.
    - sunlight readable screen (the Chefree (aka Texim) option)
    - lightweight but strong nylon and aluminium case
    - sd card with basic setup to get you started (ie DDSC profile or similar)
    - usb stick with initial files in the required folder structure to get you started.
- A complete input device, either:
    - Leather wrapped remote stick (to replace control column grip) controller with vario cruise/climb relay. The aluminium insert will be machine to your control-columns diameter (noted at time of payment)
    - instrument panel mounted controller with vario cruise/climb relay (works well with 2 seaters)
- Sub-D 15 plug with power (OpenVario and separate RJ45) and serial coms
- instrument panel cutout template
- an OpenVario manual (originally written for the DDSC members) .

The above package is expected to be

1. $1,395.00 (tbc) for 5.7 inch screen
2. $1,445.00 (tbc) for 7 inch screen

including either input device and delivery within Australia.

DARLING DOWNS SOARING CLUB

Reference and background info:

- Stefly   https://www.stefly.aero/openvario/
- OpenVario Community   https://www.openvario.org/doku.php?id=start

Visa $AU → Euro = 0.583 at the time of writing