



Overview

The RLVBVID102C (Video VBOX) combines a powerful GPS data logger with a high quality solid-state video recorder.

The Video VBOX takes multiple cameras and combines them with a graphical overlay, with the resulting video streamed onto a flash card or USB stick as a DVD quality MPEG4 file.

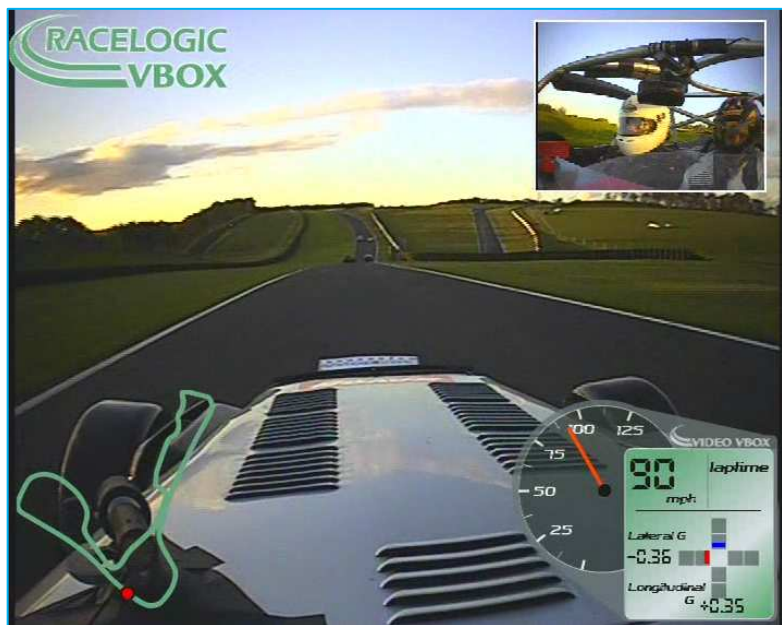
The GPS engine provides speed, lap-time, track position and G-force and more. Other inputs such as CAN bus information can also be used.

All data is logged to the flash card for detailed analysis using the optional Windows analysis package.



Features

- Built in 10Hz GPS engine for speed, distance, acceleration, laptime and position
- 2 camera inputs (cameras supplied as an option) with user configurable picture in picture
- MPEG4 encoding – approximately 2GB per hour DVD quality, PAL or NTSC format
- User configurable graphical overlays – gauges, bar graphs, circuit plots, lap times, distance, text and more
- CAN interface
- USB 2.0 interface
- RS-232 serial interface
- SD Card logging
- 2 x Mono audio input
- Preview over USB for camera and graphics set-up
- Sturdy but lightweight anodised aluminium enclosure



A typical configuration of Video VBOX, showing current Speed, G-Force and track position overlaid onto a DVD quality recording of driver and vehicle, with picture-in-picture configured to record the driver. If required, the event organiser's logo can also be incorporated into the video – perfect for corporate events



Applications:

Video VBOX is a versatile data acquisition system ideal for a multitude of applications including, amongst others:

- Vehicle dynamics testing requiring video data
- Driving schools
- Corporate motorsport applications
- Professional racers
- Trackday enthusiasts
- Police traffic monitoring applications

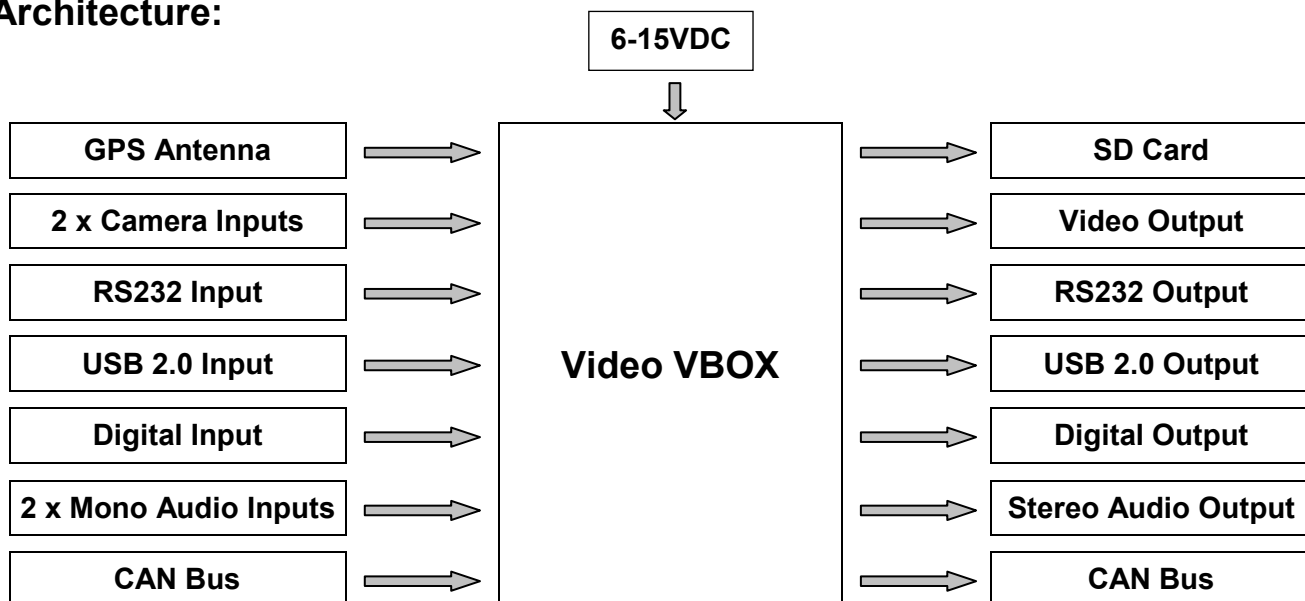
Package Options:

Video VBOX is supplied in 5 packages, as follows:

- RLVBVD10-1*** **Video VBOX with Racelogic Logo on screen**
Two Camera inputs. 10Hz GPS. Supplied with flight case, 2GB SD Card, Cigar lighter power supply, GPS Antenna and USB Cable.
- RLVBVD10-2*** **Video VBOX with User Definable Logo**
Two Camera inputs. 10Hz GPS. Supplied with flight case, 2GB SD Card, Cigar lighter power supply, GPS Antenna and USB Cable.
- RLVBVD102C** **Video VBOX with User Definable Logo and Camera Kit**
Two camera inputs. 10Hz GPS. Supplied with flight case, 2GB SD card, Cigar lighter power supply, mains power supply, GPS Antenna, USB Cable, and 2 x HQ1 bullet cameras with integral microphones.
- RLVBVD10VC*** **Video VBOX with User Definable Logo and CAN logging**
Two Camera inputs. 10Hz GPS. CAN. Supplied with flight case, 2GB SD Card, Cigar lighter power supply, mains power supply, GPS Antenna and USB Cable.
- RLVBVD102CVC** **Video VBOX with User Definable Logo, Camera Kit and CAN Logging**
Two camera inputs. 10Hz GPS. CAN. Supplied with flight case, 2GB SD card, Cigar lighter power supply, mains power supply, GPS Antenna, USB Cable, and 2 x HQ1 bullet cameras with integral microphones.

*Note these package options are NOT supplied with cameras. User will require either a camera adapter cable(s) or Sony HQ1 Camera(s), to be ordered separately.

Architecture:





Specification

Video Standards

MPEG-4 advanced simple profile at level 5 (default)
MPEG-2 main profile at main level
MPEG-1
H.263
JPEG Baseline and M-JPEG

Recording Options

Record only when moving (default)
Continuous record
Record start/stop via front panel
Record start/stop via optional remote switch

Camera Inputs

2 x AV camera inputs (cameras supplied as an option) with integrated 12v power supplies
Picture in picture automatically selected when additional camera is detected
"Camera OK" indicator over each camera input

Graphics

24bit colour plus per pixel alpha blending
Virtually unlimited number of gauges, g-plots, bar graphs, track maps, text and images
Choice of internal GPS parameters, external CAN/Serial parameters, or both simultaneously.
Standard library of gauges, fonts etc.
User definable gauges, fonts etc.
Alerts – text and images can change when a parameter is over/under the desired limit

Resolution Options

DVD 720 x 576 at 25 frames per second PAL (default)
DVD 720 x 480 at 30 frames per second NTSC
CIF 352 x 288
QCIF 176 x 144

Sound

2 x external mono microphone connections, recorded as stereo audio in video file.
MP2 (MPEG1 Layer II) encoded into video stream

Compression Options

User selectable levels of quality
Can support maximum data rate up to 10Mbit/s (variable)

Storage Options

SD card
(For Max and Super quality settings, a fast SD card such as San Disk Extreme III is required.)
Optional waterproof USB adaptor for USB flash drives



GPS Parameters

The Following parameters can be used to drive gauges, bar graphs, circuit maps and text:

- Speed
- Time
- Track Position
- Heading
- Height
- Vertical Velocity
- Longitudinal acceleration
- Lateral acceleration
- Distance
- Radius of Turn

Auxillary Inputs

Digital Input	General purpose event input
CAN	Baud rate and message structures completely user programmable, .dbc files available on request
RS232	Custom streams can be accommodated – send enquiries to Racelogic. Also connects to Racelogic DriftBox to obtain drift angle, scores, etc which can be used as data source for onscreen graphics and logged to .vbo file
USB	For external flash drives, Camera/graphics set-up and preview, SD card reading and setting parameters via PC

Outputs

PAL/NTSC	Composite video output
Audio	Stereo audio output
Digital	Multi purpose output

Accuracies

Update Rate	10Hz
Speed	±0.1km/h
Position	±5m 95% CEP day-to-day; ±0.5m lap-to-lap
Height	±6m
Lateral Acceleration	±0.5%
Longitudinal Acceleration	±0.5%
Radius of Turn	±5cm
Distance	±0.05%

Environmental and Physical

Input Voltage	6-15VDC
Power	11.6W for complete system including cameras
Size	170mm x 122mm x 33mm (excluding cameras)
Weight	Approximately 670 grammes (excluding cameras)
Enclosure	Milled Aluminium
Operating temperature	-10°C to +60°C
Storage temperature	-40°C to +85°C

Software

Windows configuration software for screen layout, custom gauges, recording options, etc.
Windows data analysis software

Hardware/Software Support

One Year Hardware/Lifetime Software Support Contract.	Lifetime Software Support Contract is valid for a minimum of 5 years from the date of purchase and limited to original purchaser. Contract includes telephone/email technical support provided by local VBOX distributor and firmware/software upgrades where applicable.
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