

VIDEO VBOX LITE (RLVBVD10LT)



Powerful VBOX data-logging and video technology in a user-friendly, affordable product

Video VBOX Lite is a one box solution, incorporating a solid state video recorder, a VBOX 10Hz GPS data-logger and a real time graphic overlay. This combination allows users to carry out detailed driver training and vehicle analysis without the expense and specialised knowledge involved in professional level data-loggers.

Based on the high end Video VBOX, **Video VBOX Lite** is a more affordable version of what Video VBOX users have called the ultimate track video system. Housed in a rugged plastic box, with a smaller footprint than the **VideoVBOX Pro**, **Video VBOX Lite** shares many of the same features as the top of the range product.



What can Video VBOX Lite do?

Video VBOX Lite takes the video captured from multiple waterproof cameras and combines it with a customisable graphic overlay, streaming the resulting video onto an SD card as a DVD quality MPEG4 file. A 10Hz GPS engine provides information such as circuit position, lap timing, speed (accurate to $\pm 0.2\text{km/h}$) and acceleration, whilst a single CAN channel can retrieve data such as RPM. CAN upgrades are also available to give a total of 2 (only available for systems with one active CAN) or 8 channels.



The data is seamlessly integrated with real time graphics, meaning that video game style dials and gauges can be shown on the multi-camera video, with the option to fully customise the graphics using the included **Video VBOX Lite Setup** software.

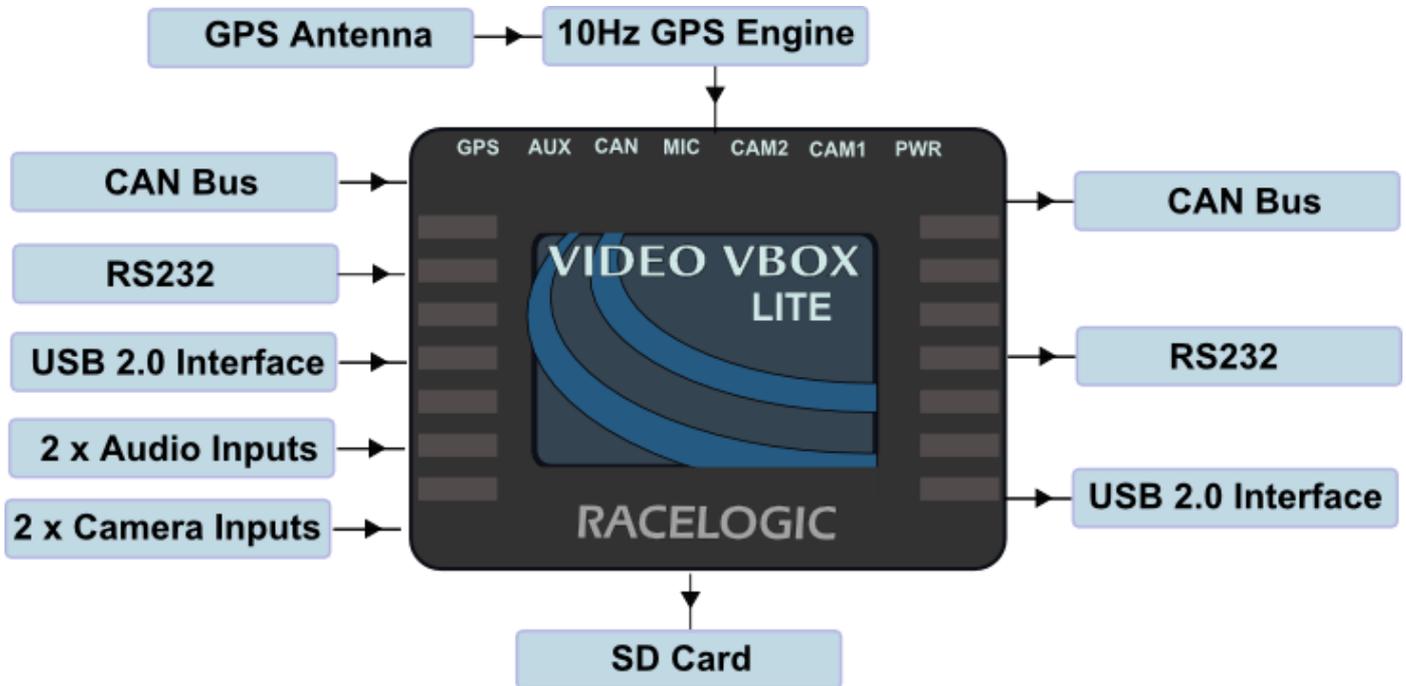
Lap by lap and comparison analysis is performed with the included **Circuit Tools** software. For deeper analysis you can also download **VBOX Tools** software after unit registration. **Video VBOX Lite** is also compatible with the **Micro Input Module**, which provides inputs for 4 analogue voltage channels and an RPM channel.

Using **Video VBOX Lite** is quick and easy. Simply connect the cameras and the GPS antenna, insert the SD card and drive.

(LEFT: Video VBOX Lite screenshot from the Australian GT)

Features

- Built in 10Hz GPS data logger
- 2 camera inputs with configurable picture in picture
- Powerful yet intuitive graphics customisation and analysis software.
- 580L and 420L Bullet Cameras (optional)
- 4 CAN channels (upgrade for 8 channels available)
- SD Card logging and USB 2.0 interface
- Stereo Audio recording
- MPEG4 encoding – approx 2GB per hour DVD quality, PAL or NTSC format
- Customisable real-time graphics, including gauges, bar graphs, circuit plots, lap times, and text
- Preview over USB for camera and graphics set-up
- Small and rugged plastic enclosure with internal battery: keeps logging even when power lost for up to 10 seconds
- Compatible with Racelogic input modules to log RPM and analogue inputs even in vehicles without CAN

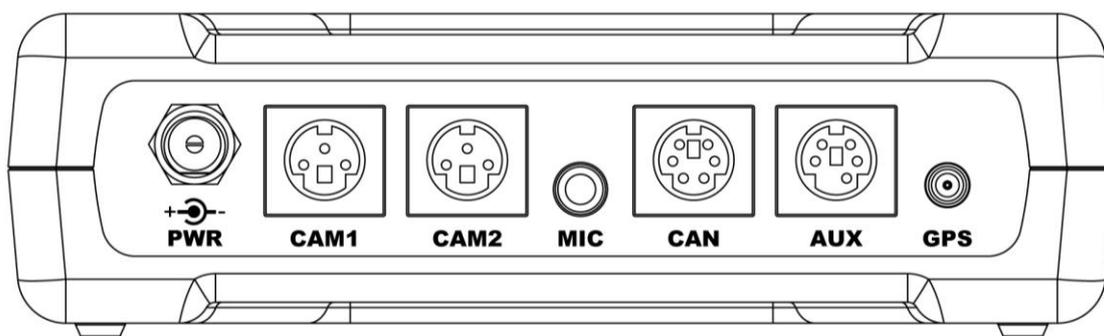
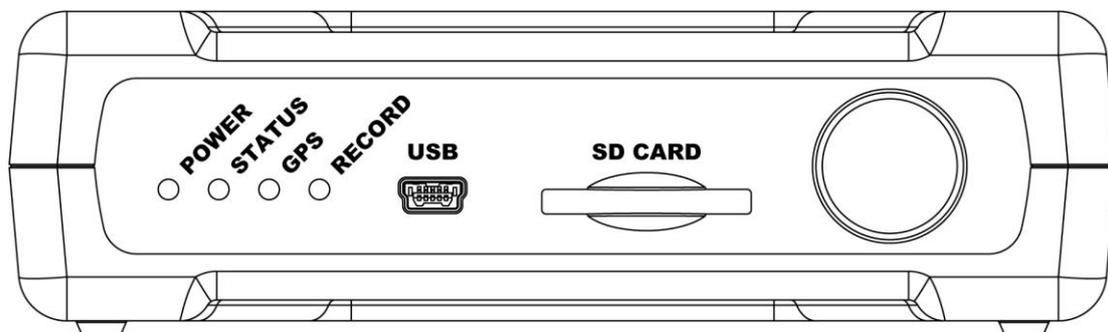


Inputs and Outputs

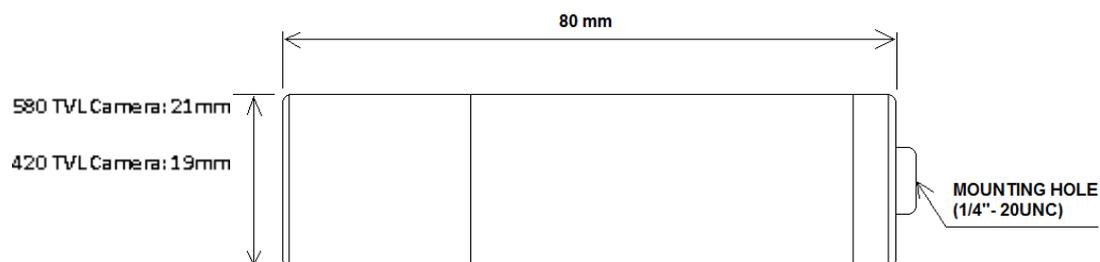
| Inputs | Outputs |
|---|--|
| 2x Camera Inputs (Optional) Integrated 12v power. Picture-in-picture automatically selected when additional camera is detected. | SD Card 4Gb card supplied with device |
| 2x Audio Inputs | Video Output |
| RS232 | Stereo Audio |
| USB Video streaming for camera set-up / preview and for setting parameters via a PC. | USB Video streaming for camera set-up / preview and for setting parameters via a PC. |
| CAN Bus Allows user to log vehicle CAN data: 4 Channels. Upgradeable to 8 CAN Channels. | |



Video VBOX unit



Bullet Cameras





GPS Specifications

| Velocity | | Distance | |
|-------------------------|-----------------------------------|-------------------|-----------------------|
| Accuracy | 0.2 Km/h (average over 4 samples) | Accuracy | 0.05 % (<50cm per Km) |
| Units | Km/h or Mph | Units | Metres / Feet |
| Update rate | 10 Hz | Resolution | 1 cm |
| Maximum velocity | 1600 km/h | | |
| Minimum velocity | 0.1 Km/h | | |
| Resolution | 0.01 Km/h | | |
| Latency | <160ms | | |

| Position | | Acceleration | |
|--------------------|---------------------|-------------------|--------|
| 2D Position | ±5m 95% CEP * | Accuracy | 1 % |
| Height | 10 Metres 95% CEP * | Maximum | 4 G |
| | | Resolution | 0.01 G |

| Heading | | Lap Timing (OLED/ Circuit Tools) | |
|-------------------|--------------------------------|----------------------------------|-----------|
| Resolution | 0.01° (average over 4 samples) | Resolution | 0.01 s |
| Accuracy | 0.2° | Accuracy | 0.01 s ** |

Definitions

* CEP = Circle of Error Probable - 95% CEP means 95% of the time the position readings will fall within a circle of the stated radius

** Not using DGPS and crossing the start/finish line at 100km/h

Graphics, Sound and Storage

Recording Options

Record only when moving (default); Continuous record; Record start/stop button; Record activated by external signal e.g. CAN wheel speed.

Graphics

24bit colour plus 256 levels of alpha transparency

Virtually unlimited number of gauges, g-plots, bar graphs, track maps, text and images

Choose from the internal GPS parameters or external CAN/Serial parameters

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

Compression Options

3 levels of quality – High (default), Medium and Low

Depending on content, rates typically 2MB/s, 0.5MB/s or 0.25MB/s for full frame DVD

Memory usage

For full quality DVD using MPEG-4 set to High quality. Uses approx. 2GB/hr

Environmental and Physical

Environmental and Physical

| | | | |
|------------------------------|----------------|----------------------------|------------------|
| Input Voltage | 9 – 15 V | Size | 130mmx122mmx37mm |
| Power | 7.2 W Max | Weight | 267g |
| Operating temperature | -10°C to +60°C | Storage temperature | -40°C to +85°C |

Software

Windows software

Video VBOX Setup: Configurable software for customising scenes

Circuit Tools (VBOX Tools available after registration): Data analysis software

Support

| | |
|----------|---|
| Hardware | One Year Support Contract |
| Software | Lifetime Support Contract: Valid for a minimum of 5 years from the date of purchase and limited to the original purchaser. Contract includes: telephone/ email technical support provided by local VBOX Distributor and firmware/ software upgrades (where applicable). |



Package Contents

(Two Camera Kit)

| Description | Product Code |
|---|--------------|
| 1 x Video VBOX Lite | RLVBVD10LT |
| 1x Cigar plug power cable (2m) | RLVBVD10LT |
| 1x External GPS Antenna | RLACS070 |
| 1x 4GB SD Card | RLACS137 |
| 1x USB 2 meter lead | RLCAB066-2 |
| 1x Sony 580TVL camera kit – inc. light weight mount | RLACS134 |
| 1x Sony 420TVL camera kit (with Hirose connector) – inc. light weight mount | RLACS135 |
| 2x Dual mono Microphone (2.5m lead) | RLACS133 |
| 1x Forward facing camera mount | RLACS116 |