VBOX Video HDMI

RLVBVDHD2-H

VBOX HD2 HDMI allows users to stream real-time video and audio to an HDMI compatible monitor, recorder, or streaming device.

This is ideal for live coverage of motorsport events for TV or social media, provides race teams with the ability to give instant driver feedback and allows VBOX HD2 HDMI to be used as a rear-view camera.

The system consists of dual 1080p cameras, allowing for a main view with embedded picture-in-picture. The lenses are wide angle, ensuring that every moment of track action is captured in stunning high definition. Video is recorded at 60 frames per second (30 fps if using HDMI output) to SD card or USB flash drive.

An app for Android and iOS devices connects via the VBOX Video's inbuilt Wi-Fi to allow fine-tuning of camera orientation, with real-time camera output being displayed on the mobile device's screen.

Graphics are overlaid in real-time and high definition. This gives the user great scope for fantastic dashboard and gauge layouts. The graphics are fully customisable, but several default scenes are available.

By default, the system will start and stop logging according to GPS speed. With the addition of the video pre-buffer, this allows every moment of track action – including race starts - to be captured automatically. Optional remote start/stop logging is taken care of via a Bluetooth unit that can be conveniently mounted next to the driver.

An internal battery allows the current file to be correctly closed should power be lost during recording, ensuring that no data loss or corruption occurs.

Features

- Dual Camera 1080p system
- 10 Hz GPS data logging
- HDMI video output
- Records to SD card or USB
- Predictive Lap Timing (with OLED display)
- Real-time, high-definition graphic overlay
- MP4 video & audio recording
- Compatible with AiM dashboards
- Built-in Track database

- VideoSplit - simple to use video editing software to help you share laps and data with friends and on social media
- Internal power backup for reliable recording
- Powerful data analysis software
- Up to 80 CAN channel inputs
- USB 2.0 host interface (for recording to USB flash drive)
- Camera preview over Wi-Fi
- Bluetooth connectivity

Inputs/ Outputs

IN

- **2x Camera Inputs** (CAM 1 / CAM 2)
  Resolution: 1920 x 1080p at 30 or 60
  frames/second; FOV: 148° horizontal, 86°
  vertical, 163° diagonal

- **Audio Input** (MIC)
  Stereo audio recording with automatic gain
  control & line level input option

- **Bluetooth**
  for start/stop logging switch, heart rate
  monitor or OBD dongle

- **RS232** (CAN / SER)
  for communication with OLED Display

- **CAN Bus** (CAN / SER)
  allows user to log up to 80 CAN signals

OUT

- **HDMI video output** (side connector)
  HDMI 1.3 with EIA/CEA-861-D video format
  support, max. pixel rate of 74.25 MHz at
  1080p30

- **SD Card**
  Fast 32 GB card supplied with device
  Fast SD card required – tested up to 512 GB
  supported

- **USB 2.0 Host Interface**
  for recording to USB flash drives
  Fast USB drive required

- **Wi-Fi**
  for camera setup/preview

- **RS232** (CAN / SER)
  for communication with OLED Display

VBOX MOTORSPORT

RACELOGIC Ltd, Unit 10, Swan Business Centre, Osier Way, Buckingham, Bucks MK18 1TB, UK
Tel: +44 (0)1280 823 803   Fax: +44 (0)1280 823 595   Email: sales@vboxmotorsport.co.uk
www.vboxmotorsport.co.uk

10/03/2021

GPS Specifications

Velocity		Distance	
Accuracy	0.1 km/h (averaged over 4 samples)	Accuracy	0.05 % (<50 cm per km)
Units	km/h or mph	Units	metres / feet
Update rate	10 Hz	Resolution	1 cm
Maximum velocity	1600 km/h		
Minimum velocity	0.5 km/h		
Resolution	0.01 km/h		

Position		Acceleration	
2D Position	±3 m 95 % CEP[1]	Accuracy	1 %
Height	±10 m 95 % CEP[1]	Maximum	4 g
		Resolution	0.01 g

Heading		Lap Timing (OLED/ Circuit Tools)	
Resolution	0.01°	Resolution	0.01 s
Accuracy	0.3°	Accuracy	0.01 s[2]

Definitions

[1] CEP = Circle of Error Probable – 95 % CEP means 95 % of the time the position readings will fall within a circle of the stated radius

[2] Not using DGPS and crossing the start/finish line at 100 km/h

VBOX MOTORSPORT

RACELOGIC Ltd, Unit 10, Swan Business Centre, Osier Way, Buckingham, Bucks MK18 1TB, UK
Tel: +44 (0)1280 823 803   Fax: +44 (0)1280 823 595   Email: sales@vboxmotorsport.co.uk
www.vboxmotorsport.co.uk   10/03/2021

Graphics, Sound and Storage

Recording Options

- Record only when moving (default)
- Continuous record
- Manual record via front button or Bluetooth remote start/stop button

Video Buffering

- Up to 30 seconds of video pre-buffering provided, configurable in software
- default setting: 10 seconds

Graphics

- 24-bit colour plus 256 levels of alpha transparency
- User-customisable 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, bar graphs, etc.
- User definable gauges, bar graphs etc.
- Alerts: Text and images can change when a parameter is over/under the desired limit

Compression Options

- 3 levels of quality – High, Medium, and Low
- Bit rates: 16 Mb/s (high); 12 Mb/s (medium); 8 Mb/s (low).
  Typical values – can vary according to conditions

Memory usage

Typical values – can vary according to conditions

- 7 GB per hour (high), 5.25 GB per hour (medium), 3.5 GB per hour (low).

Storage Options

- SD card (Fast SD card required) – tested up to 512 GB
- Optional USB adaptor for USB flash drives (fast USB drive required)
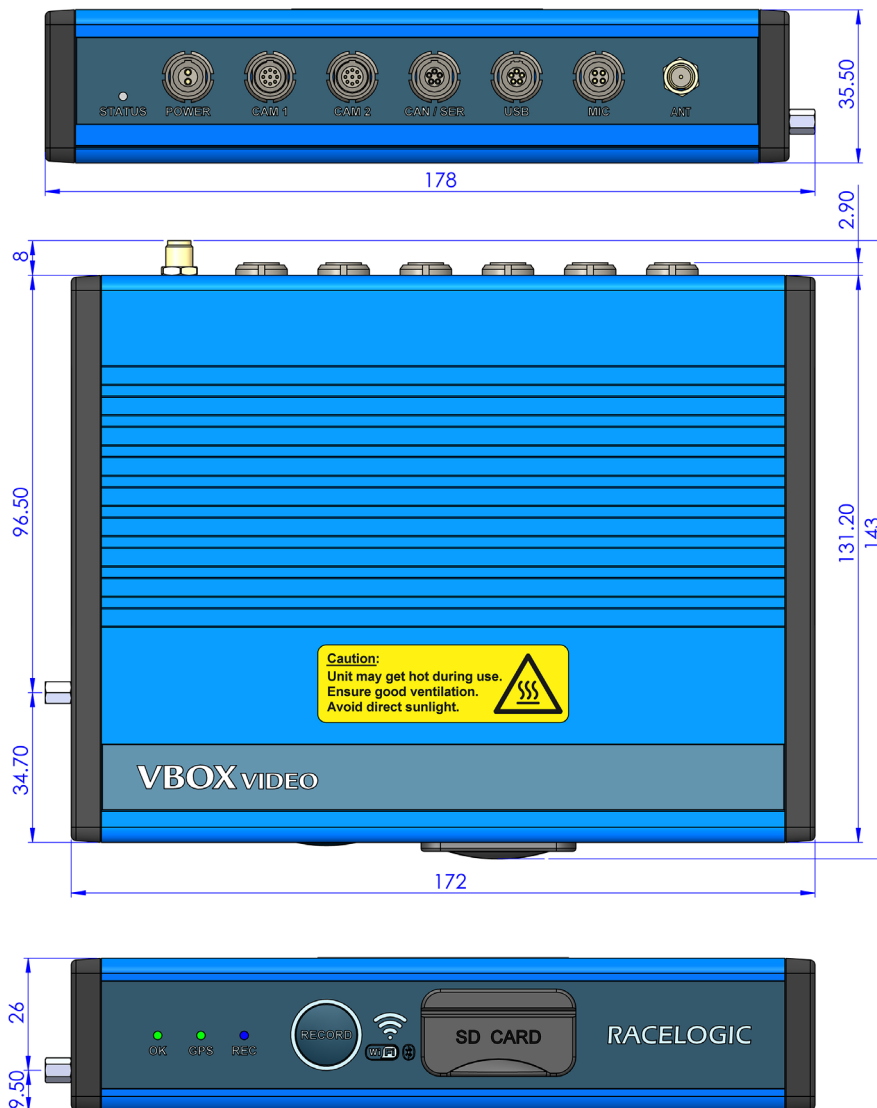
HDMI

- HDMI 1.3 with EIA/CEA-861-D video format support
- Max. pixel rate: 47.25 MHz at output resolution of 1920 x 1080 30 Hz
- Audio Channels: Stereo LPCM 16 bit
- Audio Sample Rate: 48 kHz

Environmental and Physical

Environmental and Physical			
Input Voltage	8 – 30 V DC	Size	178 x 143 x 35.5 mm See diagram below
Power	25 W Max	Weight	870 g (approx.)
Operating temperature	Recorder: 0 – 65°C (for temperatures of 50 – 65°C, the Harsh Environment Fan Accessory is recommended) Camera: -10°C to +60°C **IMPORTANT** - The ambient operating temperature should not exceed 65°C		
Storage temperature	-20°C to +85°C		
IP Rating	IP 50		

RACELOGIC Ltd, Unit 10, Swan Business Centre, Osier Way, Buckingham, Bucks MK18 1TB, UK
Tel: +44 (0)1280 823 803   Fax: +44 (0)1280 823 595   Email: sales@vboxmotorsport.co.uk
www.vboxmotorsport.co.uk

10/03/2021

Software

Windows software
• **VBOX Video Setup:** Configurable software for customising scenes • **Circuit Tools (VBOX Test Suite also available after product 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 Content Example
RLVBVDHD2-H: Two-Camera System

Description	Product Code
1x VBOX Video HD2 HDMI Unit	VBVDHD2-V6
2x VBOX Video 1080p Camera (IP65)	RLACS222
1x VBOX Video mono microphone – 2.5 m	RLACS221
2x Lightweight Windscreen Suction Mount	RLACS287
1x Un-terminated Power Supply Cable – 2 m	RLCAB010LE
1x GPS/GLONASS/Galileo Magnetic Mount Antenna with 3 m Cable	RLACS262
2x VBOX Video HD2 Camera Clamp	RLACS269
1x 32 GB SDHC Card (Class 10)	RLACS231
1x HDMI cable with locking screws (1.8 m)	RLCAB141-1.8

OLED bundle is available.

Optional extras include OLED Display, Bluetooth start/stop logging switch, stereo microphone, stereo mic splitter, CAN/RS232 splitter, roll cage mounts, unterminated power supply cable, tyre temperature sensors, and more.

VBOX
MOTORSPORT

RACELOGIC Ltd, Unit 10, Swan Business Centre, Osier Way, Buckingham, Bucks MK18 1TB, UK
Tel: +44 (0)1280 823 803   Fax: +44 (0)1280 823 595   Email: sales@vboxmotorsport.co.uk
www.vboxmotorsport.co.uk   10/03/2021