

VBOX HD Lite (RLVBHDL-V1)

VBOX
MOTORSPORT

VBOX HD Lite is an all-in-one video data logging system for motorsport that records 1080p HD video with fully synchronised GNSS data.

HD Lite features RACELOGIC's reliable "only when moving" log strategy, enabling the device to start and stop logging on its own based on vehicle movement, and prevents the microSD card filling up with static video in the paddock.

GNSS data and CAN Bus data is recorded with the video, allowing in depth analysis via our intuitive Circuit Tools data analysis software, enabling the driver to quickly identify where time is being lost and where time can be gained around a circuit.

The VBOX HD Lite is also compatible with our predictive lap timing displays which show live Delta time, enabling the driver to improve whilst on track.



Features

- Compact and weatherproof design
- 1920 x 1080p @30 FPS
- 10 Hz GNSS data recording
- Internal & external GNSS antenna
- Permanent vehicle power feed. No batteries.
- Reliable record only when moving log strategy – no need to worry about pressing record.
- Fully synchronised video & GNSS data
- CAN logging – up to 8 messages
- Compatible with Circuit Tools analysis software to compare video and data and quickly identify where lap times can be improved.
- Compatible with the OLED predictive lap timing display for live delta time.
- Mounting options via 1/4" UNC
- Wide dynamic range - balanced lighting through a windscreen
- Wi-Fi preview
- Lifetime technical support

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Camera Specifications

Image Resolution	2 Megapixels
Video Resolution	1920 (H) x 1080 (V)
FOV	170°
Lens Thread	M12*0.5
Synchronising System	Internal, rolling shutter
Scanning System	Progressive scan 1080p
Video Output	MP4
Wide Dynamic Range	Enabled via preview app (default on)

Inputs & Outputs

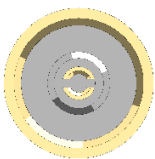
- **Camera**
Resolution: 1920 x 1080p at 30 FPS
Adjustable FOV: 170°, 140°
- **RS232**
for communication with OLED predictive lap timing display.
- **CAN BUS**
Logging capability of up to 8 CAN messages.
- **GNSS**
Via build in antenna or optional external antenna depending on orientation requirements.
- **Micro SD Card**
Fast 32 GB card supplied with device
Fast SD card required – tested up to 64 GB supported.
- **Wi-Fi (dongle)**
For camera preview & downloading videos to a mobile device.
- **Synchronised Video and Data**
For Data analysis in Circuit Tools

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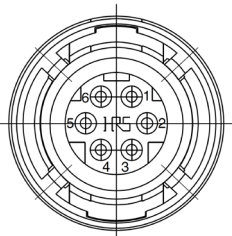
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Connectors

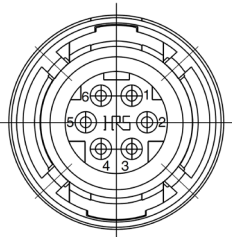
GNSS Antenna Connector - MCX Connector 1

	PIN	I/O	Function
	Centre	I	RF Signal / Power for active antenna
	Chassis	I	Ground

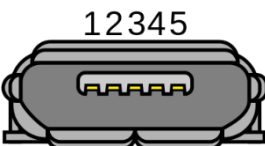
Can, Serial and Power Out - Hirose 1, HR30-6R-6S (71), 8.5-16 V DC To OLED Pin Out

	PIN	I/O	Function
	1	I	RX
	2	O	TX
	3	-	Ground
	4	I/O	CAN LOW
	5	I/O	CAN High
	6	-	Power

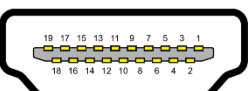
Can, Serial and Power Out - Hirose 2, HR30-6R-6S (71), 8.5-16 V DC To OLED Pin Out

	PIN	I/O	Function
	1	I	RX
	2	O	TX
	3	-	Ground
	4	I/O	CAN LOW
	5	I/O	CAN High
	6	-	Power

USB Micro B Receptacle- USB Micro B Receptacle

	PIN	I/O	Function
	1	I	Power
	2	I	Data -
	3	I/O	Data +
	4	I/O	ID
	5	I/O	Ground
	Chassis	I	Ground

Micro HDMI for video preview via supplied WiFi dongle

	PIN	I/O	Function
	1 - 19	?	Unknown
	Chassis	I	Ground

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GPS Specifications

Velocity		Distance	
Accuracy	0.1 km/h (averaged over 4 samples)	Accuracy	0.05 % (< 50 cm per km)
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	
Accuracy Standalone*	2.5 m	Accuracy	1 %
Accuracy with SBAS*	1 m	Maximum	4 g
Resolution	0.00185 m	Resolution	0.01 g

Heading		Lap Timing (OLED/ Circuit Tools)	
Resolution	0.01°	Resolution	0.01 s
Accuracy	0.3°	Accuracy	0.01 s**

* Specifications will vary depending on the number of satellites used, obstructions, satellite geometry (PDOP), multipath effects, and atmospheric conditions. For maximum system accuracy, always follow best practices for GNSS data collection.

** Crossing the start/finish line at 100 km/h/

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Environmental and Physical

Environmental and Physical	
Input Voltage	8.5 – 16 V DC
Power	< 7W, powered using the supplied cigar plug with 2 m cable
Operating Temperature	-20°C to +50°C
Storage Temperature	-20°C to +80°C
Size (rounded)	81 mm (L) x 52 mm (W) x 37 mm (H)
Weight	140g



Mounting	
Mounting solution	¼" UNC

Basic Package Contents (RLVBHDL-V1)

Description	Product Code
1 x VBOX HD Lite Main Unit	VBHDL-V1
1 x Lightweight windscreen suction mount	RLACS287
1x 32 GB Class 10 U3 Micro SD card	RLACS297
1x Cigar Lighter power supply cable	RLCAB165
1x Wi-Fi Dongle for video preview	RLACS316
1x GNSS Antenna	RLACS284
1x Protective lens cover	RLACS322