

# VBOX Mini LapTimer

(RLVBLAPMINI-V1)



VBOX Mini LapTimer is a 10 Hz GNSS data logger and lap timing display in one. Its miniature design means that it is ideal for applications where there is limited space to mount lap timing devices, such as in a single-seater race car.

The Mini LapTimer provides instant feedback on the screen and via the bright LEDs, indicating where time is being lost and where time can be gained around a circuit.

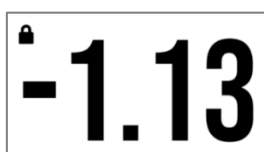


## Display Options

The display has the option to inverse screen colours for use in different light conditions.



Inverted



Normal

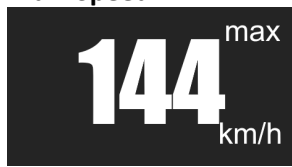
## Display Modes

VBOX Mini LapTimer has different display modes, which can be accessed using the up and down buttons. The data on each screen is always calculated, even if it is not displayed.

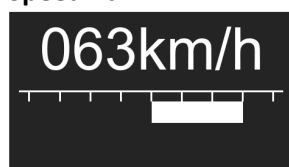
### Live Speed



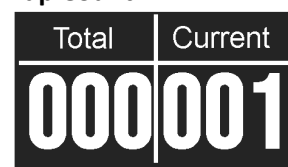
### Max. Speed



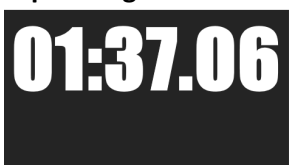
### Speed Bar



### Lap Count



### Lap Timing



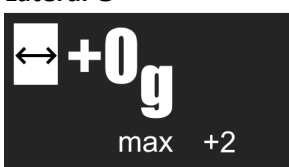
### Lap Timing with Delta-T



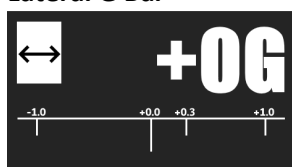
### Predictive Lap Timing



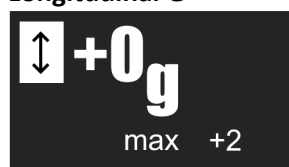
### Lateral G



### Lateral G Bar



### Longitudinal G



### Longitudinal G Bar




# VBOX Mini LapTimer

## (RLVBLAPMINI-V1)

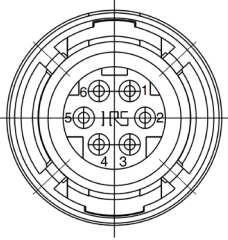


### Connectors

#### GNSS Antenna Connector - SMA

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

#### Can, Serial and Power - Hirose

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



### General Specification

Environmental and Physical	
Unit Connection	1x HR30 6w socket (Power & Data), 1 x SMA socket (GNSS Antenna)
IP Rating	IP65
Operating Temp	-20 to +70°C
Power	<1.5 W
Input Voltage	7 – 30 V DC
Dimensions	50 x 50 x 26.7 mm (exc. connectors)
Weight	103 g (excluding cables and accessories)



# VBOX Mini LapTimer

## (RLVBLAPMINI-V1)



### GPS Specification

Velocity		Position	
Accuracy <sup>1</sup>	0.18 km/h	2D Position <sup>2</sup>	2.5 m
Units	Km/h or mph	Height	±5 m
Update rate	10 Hz		
Maximum velocity	1800 km/h		
Minimum velocity	0.1 km/h		
Resolution	0.01 km/h		

<sup>1</sup> 50% @ 30 m/s

<sup>2</sup> CEP (Circle of Error Probable), 50%, 24 hours static, -130 dBm, > 6 SVs

Acceleration		Heading	
Accuracy	0.5 %	Resolution	0.01°
Maximum	4 G	Accuracy <sup>1</sup>	± 0.3°
Resolution	0.01 G		

Support	
Hardware	One Year hardware warranty
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).

### Software

Windows software
Circuit Tools: Data analysis software

### Package Contents

	Product Code
VBOX Mini LapTimer unit	VBLAPMINI-V1
External GPS/Glonass/Galileo Low Profile Antenna with RG-174 & SMA - 3m	RLACS262
Lightweight camera/display suction mount with thumb nut	RLACS287
Hirose 6W Plug - Cigar Plug - 2m cable	RLCAB165
8 GB SD Ultima Pro UHS-1 Memory Card	RLACS313