

# VBOX Touch

RLVBTOUCH



VBOX Touch is designed to assist with almost any type of vehicle test and packs in a powerful array of test features all within a rugged metal housing with a bright daylight readable capacitive touch screen.

The VBOX Touch comes ready with several built-in applications for performance testing, braking, lap timing, as well as speedometer and data logging functions.

VBOX Touch apps are written in Python script, allowing new programs to be loaded into the device simply by inserting the script on an SD card. At any time the user can simply revert to the standard functioning of the VBOX Touch by using a different SD card. This flexibility extends to user applications, so you can create your own test script.



If you have an application for VBOX Touch hardware, get in touch with our applications department and we can work with you in customising software to suit your needs, in time frames not possible using traditional methods.

## Features

- 4.3" TFT daylight readable capacitive touch screen
- Built-in applications such as performance testing, braking, lap timing, speedometer and data logging
- Python-based applications, ideal to customise to your own testing needs
- Removable protective rubber cover included
- Connects to Vehicle Can Bus (CAN Interface 2.0)
- Internal GNSS patch antenna
- Internal GPS and GLONASS receiver
- Bluetooth BR/EDR v2.1 Low Energy 4.0
- WiFi 802.11 a/b/g/n
- Analog to Digital Converter on Input (Vehicle) Voltage

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## Interfaces



GNSS Antenna SMA Connector

Digital in and PPS Connector

CAN / Serial Connector

CAN / Serial Connector

Power Connector

Inputs	Outputs
<ul style="list-style-type: none"><li>• 2x CAN 2.0B up to 1 Mbps</li><li>• RS232 Serial</li><li>• 1x Digital input</li><li>• Internal digital microphone</li><li>• Internal ambient light sensor</li></ul>	<ul style="list-style-type: none"><li>• Internal speaker</li><li>• 4x RGB high brightness LEDs to indicate operational status</li><li>• 1x PPS</li></ul>

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## Connector Pin Allocation

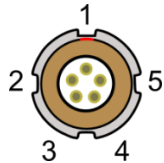
### SMA Connector 1

GNSS Antenna Connector:		
Pin	I/O	Function
Centre	I	RF Signal / Power for active antenna
Chassis	I	Ground



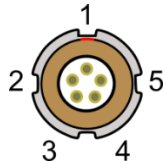
### 5-way LEMO Connector 1

CAN/ Serial Connector:		
Pin	I/O	Function
1	O	Tx-RS232
2	I	Rx-RS232
3	I/O	CAN High
4	I/O	CAN Low
5	I	Power
Chassis	I	Ground



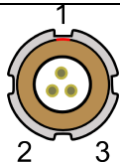
### 5-way LEMO Connector 2

CAN/ Serial Connector:		
Pin	I/O	Function
1	O	Tx-RS232
2	I	Rx-RS232
3	I/O	CAN High
4	I/O	CAN Low
5	I	Power
Chassis	I	Ground



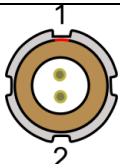
### 3-way LEMO Connector

Digital In and PPS Connector:		
PIN	I/O	Function
1	I	Ground
2	O	PPS
3	I	Event/Brake Trigger



### 2-way LEMO Connector

Power Connector:		
Pin	I/O	Function
1	I	Power
2	I	Ground
Chassis	I	Ground



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## GPS Specifications

### 10 Hz System

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

Position		Acceleration	
<b>2D Position</b>	±2.5 m 95 % CEP <sup>1</sup>	<b>Accuracy</b>	1 %
<b>Height</b>	±10 m 95 % CEP <sup>1</sup>	<b>Maximum</b>	4 g
		<b>Resolution</b>	0.01 g

Heading			
<b>Resolution</b>	0.01°		
<b>Accuracy</b>	0.3°		

#### Definitions

<sup>1</sup> 95 % CEP (Circle of Error Probable) means 95 % of the time the position readings will fall within a circle of the stated radius.

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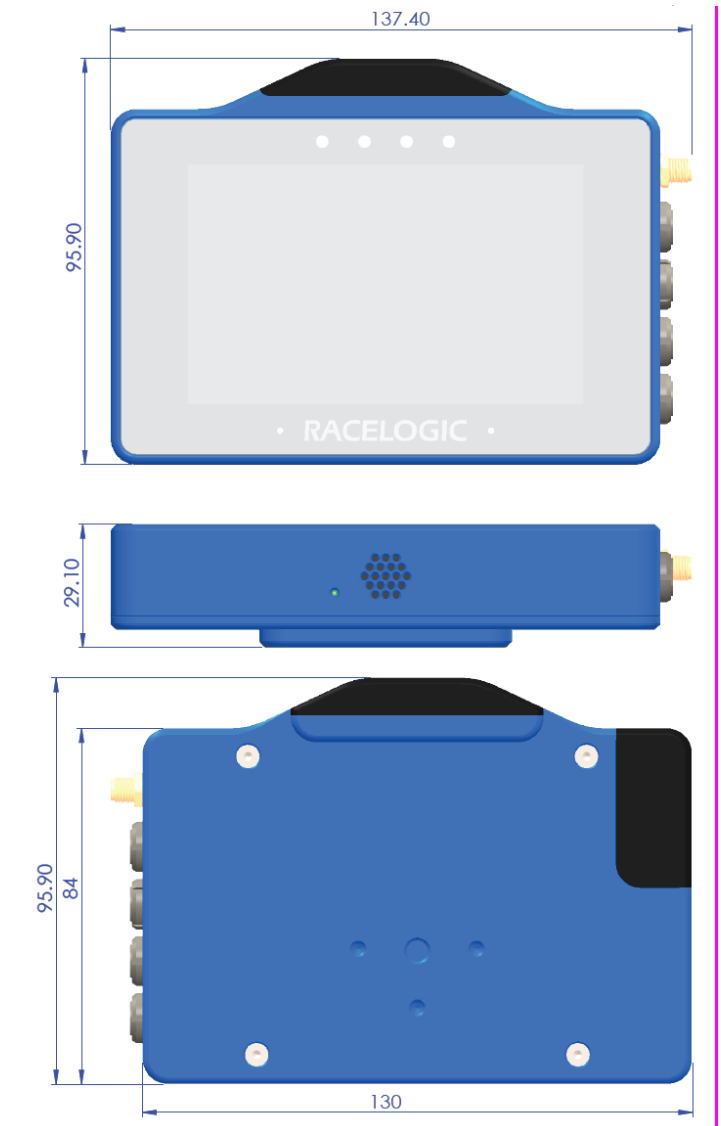


## Environmental and Physical

Environmental and Physical	
<b>Input Voltage</b>	6 – 30 V DC
<b>Power</b>	<7 W
<b>Operating Temperature</b>	-20°C to +60°C
<b>Storage Temperature</b>	-20°C to +80°C
<b>Size (rounded)</b>	
○ Unit	138 x 96 x 29 mm
○ Rubber Cover	142 x 103 x 36 mm
<b>Weight</b>	
○ Unit	375 g
○ Rubber Cover	75 g

Touch Screen	
<b>Size</b>	4.3" TFT Capacitive Touch
<b>Resolution</b>	480*800 pixels
<b>TFT LCD Display Colours</b>	262K colours (18 Bit)

Mounting	
Richter mounting system or ¼ 20TPI UNC	



## Package Contents

Description	Product Code
1x VBOX Touch 10 Hz Unit including Rubber Cover	VBTOUCH-V1
1x Cigar Plug Power Supply (2 m)	RLCAB010LE
1x 8 GB SDHC Card (Class 10)	RLACS259
1x GPS/GLONASS antenna	RLACS262
1x Swivel Neck Richter Suction Mount	RLACS277