



VIDEO VBOX PRO

Technical Specifications

Velocity

- **Accuracy:** 0.1 Km/h (averaged over 4 samples)
- **Units:** Km/h or Mph
- **Update rate:** 20 Hz
- **Minimum velocity:** 0.1 Km/h
- **Maximum velocity:** 1600 km/h
- **Resolution:** 0.01 Km/h
- **Latency:** <41.5 ms

Distance

- **Accuracy:** 0.05 % (<50cm per Km)
- **Units:** Metres / Feet
- **Resolution:** 1 cm

Position

- **2D Position:** $\pm 2.5\text{m}$ 95% CEP*
- **Height:** 6 Metres 95% CEP*
- **Accuracy with SBAS DGPS:** <1m 95% CEP*
- **Accuracy with local DGPS (Base Station):** 40cm 95% CEP*
- **Accuracy with local differential upgrade:** 20cm 95% CEP*

Acceleration

- **Accuracy:** 0.5 %
- **Maximum:** 4 G
- **Resolution:** 0.01 G

Heading

- **Resolution:** 0.01° s (averaged over 4 samples)

- **Accuracy:** 0.1° s

Lap Timing (OLED / Circuit Tools)

- **Resolution:** 0.01° s
- **Accuracy:** 0.01° s **

*95% CEP (Circle of Error Probable) 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.

10Hz system (all data recorded at 10 times per second)

Velocity

- **Accuracy:** 0.1 Km/h (averaged over 4 samples)
- **Units:** Km/h or Mph
- **Update rate:** 10 Hz
- **Minimum velocity:** 0.1 Km/h
- **Maximum velocity:** 1600 km/h
- **Resolution:** 0.01 Km/h
- **Latency:** <160ms

Distance

- **Accuracy:** 0.05 % (<50cm per Km)
- **Units:** Metres / Feet
- **Resolution:** 1 cm

Position

- **2D Position:** ±3m 95% CEP *
- **Height:** 10 Metres 95% CEP *

Acceleration

- **Accuracy:** 1 %
- **Maximum:** 4 G
- **Resolution:** 0.01 G



Heading

- **Resolution:** 0.01° s (averaged over 4 samples)
- **Accuracy:** 0.1° s

Lap Timing (OLED / Circuit Tools)

- **Resolution:** 0.01° s
- **Accuracy:** 0.01° s **

*95% CEP (Circle of Error Probable) 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

Sound

- External microphone connection
- MP2 (MPEG1 Layer II) encoded into video stream
- Stereo audio output with automatic gain control + Line level input

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

Storage Options

- SD card (Fast SD card required for Max and Super quality settings)
- Optional USB adaptor for USB flash drives

Environmental and Physical

- **Input Voltage:** 9 – 15 V
- **Size:** 170mm x 122mm x 33mm
- **Power:** 7.2 W Max
- **Weight:** 700g
- **Operating temperature:** -10°C to +60°C
- **Storage temperature:** -40°C to +85°C

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:

VBOX MOTORSPORT

telephone/ email technical support provided by local VBOX Distributor and
firmware/ software upgrades (where applicable).