User Manual

SmartyCam GP HD Rev. 2.2 Release 1.01







INDEX

1 – SmartyCam GP HD Rev 2.2 in a few words	2
2 – SmartyCam GP HD Rev. 2.2 connections	3
3 – SmartyCam GP HD Rev. 2.2 power, battery charge, ON/OFF	5
4 – SD card management	6
5 – SmartyCam GP HD Rev. 2.2 Start/Stop recording	7
5.1 – Manual Start/Stop recording	7
5.2 – Automatic Start recording in standalone mode	7
5.3 – Automatic start recording in slave mode	8
5.4 – Automatic Stop in standalone/slave mode	8
6 – SmartyCam GP HD Rev. 2.2 MENU	9
6.1 – GPS Status	9
6.2 – Dash	10
6.3 – Settings	11
6.3.1 – Language:	12
6.3.2 – Time Setting	12
6.3.3 – Accel Calibr	13
6.3.4 – Video set	13
6.3.5 – Exposure set	14
6.3.6 – Audio set	14
6.3.7 – Rec Counter	15
6.3.8 – Conf Load	15
6.3.9 – Overlay	15
6.3.10 – Info	15
6.3.11 – Auto Power off	16
6.3.12 – Key Settings	16
6.2.13 – Display T/O	16
6.3.14 – Auto Start REC and Auto Stop REC delay	16
6.4 – Tracks	17
6.5 – Video file	17
7 – SmartyCam GP HD Rev. 2.2 and the PC	18
7.1 – SmartyCam GP HD Rev. 2.2 configuration	18
7.1.1 – Loading an ECU in SmartyCam GP HD Rev 2.2 configuration	19
7.1.2 – Configuring SmartyCam GP HD Rev 2.2 overlay	21
7.2 – Track Management	22
7.3 – Video Management	25
8 – Technical specifications and drawings	27



1 - SmartyCam GP HD Rev 2.2 in a few words

What is SmartyCam GP HD Rev 2.2?

SmartyCam GP HD Rev. 2.2 is the new AiM video recorder with bullet cam developed for motorsport environments that connects directly to the vehicle ECU and automatically overlays the vehicle data to an HD video using graphical items.

Components specifically designed to fit the needs of motorsport environments, like coaxial cable for bullet cam connection, special lenses and CMOS sensor, reliability under vibrations, straight connectivity to the vehicle data and automatic video recording start/stop are among your available features.

What data does it show?

Overlaid data come from your vehicle ECU, from the internal accelerometers, from GPS and from datalogger analog/digital inputs. It also displays the map of the track and personal images (i.e. logos).

Is it possible to configure the graphical overlays?

Of course it is and a wide library of graphical overlays is available as well as the possibility of placing them where wanted on the video. End of scales can be defined using Race Studio 3 software included in the kit.

Can SmartyCam GP HD Rev. 2.2 be connected to other AiM systems?

Of course; through the AiM CAN network SmartyCam GP HD Rev. 2.2 connects to all AiM loggers, to say all MX series, EVO series, MyChron5, Solo series and ECU bridge.

Does it also work in a standalone mode?

Yes. SmartyCam GP HD Rev. 2.2 has an internal battery and can work also without being connected to the AiM CAN network. In this last case, of course, only lateral acceleration coming from SmartyCam GP HD Rev. 2.2 internal sensor can be shown in overlay. If an optional GPS Module is connected, SmartyCam GP HD Rev. 2.2 can show the position on the track, GPS speed and lap times too.

Is it possible to connect more SmartyCam GP HD Rev. 2.2 cameras on the same CAN network?

Yes. Each SmartyCam GP HD Rev. 2.2 has its own configuration and automatically retrieves the data it needs from the network, without interfering with the others.

Is it possible to synchronize video and data recorded by the loggers?

Yes. Race Studio 3 software automatically synchronizes video and data and shows them on the same dedicated view.

Which video format does SmartyCam GP HD Rev. 2.2 generate?

SmartyCam GP HD Rev. 2.2 generates ".mov" files with H264 compression codec. Three different compression levels are available: low, medium and high as well as three different frame rates: 15, 25 and 30 frames per second.

Does SmartyCam GP HD Rev. 2.2 start and stop automatically?

Yes. SmartyCam GP HD Rev. 2.2 offers different logics for starting and stopping video recording. Acceleration or speed can be used to trigger when to start/stop. SmartyCam GP HD Rev. 2.2 setting is mainly made using the keyboard.



2 – SmartyCam GP HD Rev. 2.2 connections

SmartyCam GP HD Rev. 2.2 can be connected to GPS Module (optional) using the 5 pins Binder 712 female connector labelled "GPS". It can as well work in slave mode being connected to AiM Dashes and loggers through AiM CAN network supplied by 5 pins Binder 712 female connector labelled "EXP". The images below show some examples of connection.











Ain

User Guide

3 – SmartyCam GP HD Rev. 2.2 power, battery charge, ON/OFF

Although SmartyCam GP HD Rev. 2.2 features an internal Lithium battery it is preferable to power it through the vehicle battery using the external power cable included in the kit. Connect it to the 7 pins Binder 712 female connector.

When SmartyCam GP HD Rev. 2.2 is powered by an external 12V power source a plug icon is shown on the display and the video recorder works in a fully automatic way switching ON/OFF with the external power.

Meanwhile the internal battery too is charged; it can record up to 60-70' and when its level is low a pop up message showing "Battery Low!" appears for a few seconds on the display. In this case the video closes and SmartyCam GP HD Rev. 2.2 shuts down.

To charge SmartyCam GP HD Rev 2.2 internal battery use the battery charger included in the kit.

Battery can also be charged using SmartyCam GP HD Rev 2.2 USB cable included in the kit: plug the mini USB connector in SmartyCam GP HD Rev. 2.2 mini USB port and the USB connector in the PC USB port. The LED right of the mini USB plug is red when battery is charging and turns green when the battery is fully charged.









SmartyCam GP HD Rev. 2.2 can be switched ON/OFF using the central button. The system asks for confirmation.

When SmartyCam GP HD Rev 2.2 is internally powered it also possible to set an automatic shut down after a period of inactivity. To do so follow this path: "MENU>>SETTINGS>> AUTO PWR OFF"

Available options are:

- 30 sec
- 1 min
- 5 min
- 15 min
- 30 min (default value)
- 1h
- 2 h
- 3 h





Please note: **ONLY** in case the recorder locks up you can switch it off pressing the central button for 10 seconds.

4 – SD card management

SmartyCam GP HD Rev. 2.2 can support up to 128 GB SD cards. Its housing is closed by a metal screw to be carefully screwed after insertion.

Moreover, SmartyCam GP HD Rev. 2.2 features an useful microswitch that detects when the slot is open and automatically closes the video in less than one second, allowing safe SD card removal.





5 – SmartyCam GP HD Rev. 2.2 Start/Stop recording

SmartyCam GP HD Rev. 2.2 can start/stop recording in three ways:

- manually
- automatically in standalone mode
- automatically in slave mode

5.1 - Manual Start/Stop recording

To manually start recording press SmartyCam GP HD Rev. 2.2 left button. It will turn to "Stop": press it to stop recording. To make this start/stop recording mode to be set as permanent set it following this path: "MENU ->SETTINGS ->AUTO START REC ->Only Manual"



5.2 - Automatic Start recording in standalone mode

If SmartyCam GP HD Rev. 2.2 works in standalone mode, its internal three axis accelerometer can be used to set start/stop recording function. This way SmartyCam GP HD Rev. 2.2 can start recording according to set speed and acceleration threshold (Th.) values. Follow this path: "MENU –>SETTINGS –>AUTO START REC" and select among these options:

- Spd 10mph-15kmh
- Spd 20mph-35kmh
- Spd 30mph-50kmh
- Accel Th. Low
- Accel Th. Med
- Accel Th. High





5.3 - Automatic start recording in slave mode

If SmartyCam GP HD Rev. 2.2 works in slave mode (connected to an AiM device) it can be set to start recording when the logger gives the signal. Follow this path:

"MENU ->SETTINGS ->AUTO START REC -> Logger Command". This is default setting.



5.4 - Automatic Stop in standalone/slave mode

Setting SmartyCam GP HD Rev. 2.2 start recording as automatic, stop recording is automatic too. This way SmartyCam GP HD Rev. 2.2 stops recording after a fixed time of inactivity (standalone mode) or after a fixed time period from logger "Stop recording" command. Follow this path:

"MENU ->SETTINGS ->AUTO STOP REC" and select among these options:

- 5 sec
- 20 sec
- 1 min
- 2 min
- 5 min





6 – SmartyCam GP HD Rev. 2.2 MENU

SmartyCam GP HD Rev. 2.2 can be set mainly via the bottom keyboard. Pressing "MENU" this page shows up:

Available options are:

- GPS STATUS
- DASH
- SETTINGS
- TRACKS
- VIDEO FILE

In any situation use "Down" button to scroll the options, "Sel" to select and "Exit" to quit and save



6.1 – GPS Status

Shows the number of connected satellites with the related signal level.





6.2 – Dash

It shows:

- Lateral acceleration
- Longitudinal acceleration
- RPM value
- Speed value
- ECU Manufacturer
- ECU Model (sliding text)

Press "ECU" to enter the ECU page that shows some data provided by the vehicle ECU. Data showed change according to the ECU Manufacturer and Model.

メ Road	America 📶
	52.5
Lat Acc:	0.7 g
Lon Acc:	0.3 g
Rpm:	4721
Speed:	72 kmh
Ecu:	FORD
Model:	MUSTANG 20
ECU	Exit



6.3 – Settings

Pressing "Settings" SmartyCam enters the related page that shows multiple options in a circular way; here it is possible to set some parameters, select some settings etc.





6.3.1 – Language:

Is the first option to set at very first start. Available options are:

- English (default setting)
- Italian
- French
- Spanish
- German
- Portuguese
- Dutch
- Japanese

6.3.2 – Time Setting

To set SmartyCam GP HD Rev. 2.2 Date and Time format as well as GMT option; Daylight saving time option can be enabled/disabled. Use "CHANGE" button to switch among the option of each function and "Next" button to scroll the functions.

×	Road America	al
		52 5
	SET DATE/TIME	02.0
	MM/DD/YY	
	11:16:18 am	
	GMT: +1	
	Daylight ST: NO	
Next	t Exit Cl	nange



6.3.3 – Accel Calibr

To calibrate the internal three axis accelerometer placed in the bullet cam:

- install SmartyCam GP HD Rev. 2.2 and the bullet (paying attention that the serigraphy is visible on top of the bullet)
- fix both in the preferred position
- switch SmartyCam on
- reach this page and press "Calibr".



6.3.4 – Video set

To set SmartyCam GP HD Rev. 2.2 Video output; available options are:

- Video quality: High (default), low, normal
- Frame rate: 30 (default), 25 or 15 fps (frames per second)





6.3.5 – Exposure set

This option is very useful if SmartyCam GP HD Rev. 2.2 is installed on a closed vehicle. Available options are:

- Open Cockpit vehicle (default) no further setting needed
- Close Cockpit Vehicle.

Setting "Close Cockpit Vehicle" the part of the shot to be used as reference to set video light exposure can be decided. With reference to the images below:

- use "Shape" button to resize the part of shot to be used (red rectangle in the images below)
- use "Change" button to displace the red rectangle
- use "Exit" button to save and exit





6.3.6 – Audio set

SmartyCam GP HD Rev. 2.2 comes with an internal microphone but an optional external one is available. To set both microphones.

- Use "Change" button to set the gain
- Use "Next" button to switch between internal and external microphone
- Use "Exit" button to save and exit

×	Road America	al.
		52.5
	AUDIO SETTINGS	;
Mic in	t gain:	
_		+
Mic ex _	kt gain:	+
Next	t Exit C	hange



6.3.7 – Rec Counter

This page shows the number of recording of SmartyCam GP HD Rev. 2.2. Press "Reset" to reset the counter.

6.3.8 – Conf Load

Shows a list of all the configurations transmitted to SmartyCam GP HD Rev. 2.2. Select the one to load. Available options are:

- GPS Conf: the tracks included in GPS
- Overlay2 Conf: the overlay transmitted to SmartyCam GP HD Rev 2.2; (the camera can store only one overlay at a time)
- Load all: loads overlay and tracks



6.3.9 - Overlay

In this page you can enable/disable the overlay of your SmartyCam GP HD Rev. 2.2 configuration. Default setting is enabled.

6.3.10 - Info

Here are 4 pages shown in loop mode with all info about SmartyCam GP HD Rev. 2.2 processors, firmware, hardware, etcetera.

🕺 Road America 👊	🔀 Road America 👊	Koad America III	🕺 Road America 👊
52.5	52.5	52.5	52.5
SYSTEM INFO 1	SYSTEM INFO 2	HW INFO	SLAVE INFO
SYSTEM INFO 1SYSTEM INFO 2Main Processor FW: 01.04.02GPS Extern. FW: 35.60Slave Processor FW: 60.03.76SN 4106742		HW Rel:01A Date: 06.03.2019 Restore: 01.03.28	Fw-Rel: 60.03.76 Fw-Date: 02/27/19 Fw-Hour: 16.54 Fw-SN: 4106742
Next Exit	Next Exit	Next Exit	Next Exit



6.3.11 - Auto Power off

See SmartyCam GP HD Rev. 2.2 power, battery charge, ON/OFF chapter (chapter 3).

6.3.12 – Key Settings

SmartyCam GP HD Rev. 2.2 keyboard can be enabled/disabled (default setting) during recording. Use "Change" button to enable/disable.



6.2.13 - Display T/O

Enabling this option SmartyCam GP HD Rev 2.2. display goes to stand-by after 1 minute of inactivity.

×	Road America	ш
		52.5
	DISPLAY T/O	
	DISPLAY T/O: YES	
	Exit C	hange

6.3.14 - Auto Start REC and Auto Stop REC delay

See SmartyCam GP HD Rev. 2.2 Start/Stop recording chapter (chapter 5).



6.4 – Tracks

SmartyCam GP HD Rev. 2.2 can manage tracks in two ways: automatic (default) and manual. "Change" button switches between the two options.

In **AUTO** mode SmartyCam GP HD Rev. 2.2 can detect if a known track is available in a 10 km area, shows its name and the distance from current position (Dst)

In case no track is available this flowing message will be shown on SmartyCam GP HD Rev. 2.2 screen: "NO track for current position, download it" (left image below).

With "Down" button reach "TRACK SHOW" option; "Change" button will then switch to "Sel" and pressing it all Tracks transmitted to SmartyCam GP HD Rev. 2.2 will be shown (second image from the left below). Pressing "Show" button the track map is shown; pressing it again tracks start/finish line coordinates are shown.

S Road America III	🕺 Road America 📶	Koad America 👊	Road America
52.5	52.5	52.5	52.5
TRACK CONF	TRACK SHOW	СОТА	COTA
MODE: AUTO	3S Valley		Lat: 30.1347 N
OVERLAY2 CONF.	AAR Speedway		Lon: 97.6339 W
TRACKS SHOW	AUDI Neuburg	12	Dist: 6487 ml
	Adirondac NY	28	
	Brands Indy	51	
for current position, download it Dst:	СОТА	<u> </u>	
Down Exit Change	Down Exit Show	Next Exit Info	Next Exit

To switch to MANUAL mode press "Change" in Auto mode (left image here above) and "MODE: MANUAL" enables.

If a track has been previously selected it is shown with the related distance form current position (COTA, 5291 miles away in the first image on the left below). To select another track scroll to "MANUAL SEL" and "Change" button switches to "Sel": press it. The list of all tracks loaded in SmartyCam GP HD Rev. 2.2 is shown (second image from the left below). Pressing "Sel" the track map of the selected track (Cota in the example) is shown; pressing it again the track is selected.

🕺 Road America 👊	🔀 Road America 📶	Koad America III	Koad America 📶		
52.5	52.5	52.5	52.5		
TRACK CONF	TRACK SHOW	СОТА			
MODE: MANUAL	<cota></cota>				
MANUAL SEL	CRECalhan CO	Л			
TRACKS SHOW	Caanan NH	/2			
Manual: COTA Dst: 5291 ml	CaananFr NH Cadwell Callahan	<u> </u>	Track Selected		
Down Exit Change	Down Exit Sel	Next Exit Sel	Exit		

6.5 – Video file

This page shows the list of video file stored in SmartyCam GP HD Rev. 2.2 SD card. Press "Del" to delete them.





7 – SmartyCam GP HD Rev. 2.2 and the PC

SmartyCam GP HD Rev. 2.2 connects directly to the vehicle ECU. This function is to be configured using Race Studio 3 software.

7.1 – SmartyCam GP HD Rev. 2.2 configuration

To load the ECU in SmartyCam GP HD Rev 2.2 configuration, set its channels and choose the graphic items to be set on SmartyCam video Race Studio 3 software is needed.

- Run Race Studio 3 software
- select an existing configuration to modify it or press "NEW" to create a new one
- "New configuration" panel appears
- select "SmartyCam GP HD Rev. 2.2"
- SmartyCam GP HD Rev. 2.2 configuration panel appears: fill in configuration name and press OK





7.1.1 – Loading an ECU in SmartyCam GP HD Rev 2.2 configuration

Once the configuration created the software opens SmartyCam GP HD Rev. 2.2 Overlay layer. To set the vehicle ECU press "Use ECU".

💌 RaceStudio3 3.2907				
★ ★ ★ ★ ★ ↓			(ECU (III)
Save Close Transmit Use ECU				
	Background	atio		
	Set 1 Set 2 Set 3	Set 4 Set 5 Set 6 S	Set 7 Set 8 Set 9 Da	shes Airplane
11G.		1.0 1.7 acc	acc short	THROTTLE
	BRAKE brake bar	generic bar	TEMP 35 °C temp bar	8 01:15.55 5 01:01.00 B BestLapNumTime
	LAP: 8 1:05.15	8500 RPM	215 km/h	Goar 4
	LapNumTime dgt	rpm dgt	speed dgt	gear dgt
	170° 54' 39" W	LAT 89° 33' 50" N	02:55:15 am 15/07/2010	15/07/2010
	lon dgt	lat dgt	DateTime dgt	date dgt
Start Live View Snapshot Calibrate	02:55:15 am	ТЕХТ	ТЕХТ	TEXT
	time dgt	s label	m label	label
	2.45	12.456		
	short dgt	long dgt]/	

"Choose ECU Protocol" panel shows up: select ECU Manufacturer and Model (Pectel/Cosworth LoA here below) and press "OK".

🙅 RaceStudio3 3.29.07						3
* * * *	←ô 🙀				<u></u>	
All SmartyCam GP HD 2.2 01 [™]						
Save Close Transi	mit Remove ECU					
Overlay ECU and SmartyCam Stream						
	ECU: Click button to select a ECU	protocol	Change ECU	\$		*
	Choose ECU Protocol		e.			
SmartyCam F	Manufacturer	Model				
Engine RPM	MERCURY	Cosworth LoA	(v. 02.00.03)	(CAN)	\$	
Speed	MICHL_MOTORSPORT	SQ6 FR2000	(v. 02.00.00)	(CAN)		
speed	MICROTEC	SQ6_OMEGA_CAN	(v. 02.00.01)	(CAN)	↓	
Gear	MITSUBISHI				÷	
Water Temp	MOTEC				No available channel	
Head Temp	MUNCH RACING				÷	
Exhaust Ton	MV_AGUSTA					
Exhaust ren	NIRA					н
Oil Temp	NISSAN					
Oil Press	OLSBERGS				No available channel	
Brake Press	OPEL				No available channel	
Theodelin Day	PECTEL					
Inrottle Pos	PEUGEOT					
Brake Pos	POLARIS				No available channel	
Clutch Pos	PORSCHE					
Steering Pos	PROEFI					
	RACETECH	-				
Lambda						
Fuel Level						
Battery Volta	Igi		ОК	Cancel		
Į	1				,	Ŧ



"ECU and SmartyCam Stream " layer shows:

- "SmartyCam function" panel (1) All channels that can be shown on SmartyCam video. Each function can be matched to the corresponding channel. If for any reason the desired channel is not found enable "Enable all channels for function" checkbox and all channels will be shown; **please note**: this setting applies to all panels of this layer
- SmartyCam GPS Function panel (2): if an optional GPS is connected it is possible to set GPS channels as well as the same channels coming from the ECU.
- SmartyCam Lap function panel (3): some ECU provides lap time information and if the ECU installed on the vehicle gives this information it is possible to show them on SmartyCam video.
- SmartyCam GP HD Rev 2.2 can send message to the CAN network (4) enabling the related checkbox; this CAN message contains some configurable parameters; to see its structure press "View Message structure" button; please note: this is a function for expert users only.

RaceStudio3 3.29.07					
* 🍄 🕾	ß ≝ ± *ô ₽				?
All SmartyCam GP HD	0 2.2 01 34				
Save Clos	se Transmit Remove ECU				
Overlay ECU and Sma	artyCam Stream				
	ECU: POR	SCHE - 991 GT3 Cup MK1 (ver. 02.00.00)	Change ECU	\$ (?)	
	Enable A	Il Channels for Functions			
	SmartyCam Function	Channel	SmartyCam Gps Function	Channel	
	Engine RPM	ECU RPM	Latitude	Latitude	\$
	Speed	ECU WheelFL	Longitude	Longitude	÷ 0
	Gear	ECU Gear	Altitude	Altitude	÷ •
	Water Temp	ECU TMot	Master Clock	Not Set	\$
	Head Temp	Not Set 🗘	Sat Number	Sats Number	\$
	Exhaust Temp	Not Set 🗘			
	Oil Temp	Not Set 🗘	SmartyCam Lap Function	Channel	
	Oil Press	Not Set 🗘	Lap Time	ECU Lap Time	÷
	Brake Press	Not Set 🗘	Lap Number	ECU Lap Number	÷ 3
	Throttle Pos	ECU TPS	Best Lap Number	Not Set	\$
	Brake Pos	ECU BrkPerc	Best Lap Time	Not Set	\$
	Clutch Pos	Not Set 🗘			
	Steering Pos	ECU ASteer			
	Lambda	ECU Lambda			
	Fuel Level	Not Set 🗘			
	Battery Voltage	Battery 🗘			
		CAN Output Message 🗸 Enable	-		
		CAN ID (HEX) ID Format Freq.			
		0x0 11 bits 💠 10 Hz	View Message Structure	4	
		Indicated CAN ID is not valid			
					-



7.1.2 – Configuring SmartyCam GP HD Rev 2.2 overlay

"Overlay" layer shows

On the left of the page (1) a preview window shows how the video would be with all graphic items set on it.

On the right of the page (2) are two layers:

- "Set" where all available graphic items are grouped by sets: just drag and drop them in the preview window (1) left of the page
- "Maps & Logos" where track box and all available logos are grouped; to add a new logo press "Add new logo" button in this layer, while to add the map or a logo to SmartyCam video drag and drop it in the preview window (1)

When all controls are placed on the preview window (1) the related control panel appears left bottom the preview window (2) to set all parameters.

- The box right of the control panel (3) allows, pressing the related buttons, to:
- start/stop Live view of SmartyCam GP HD Rev. 2.2
- take a snapshot of the screen
- calibrate SmartyCam GP HD Rev. 2.2 accelerometer

Once all graphic items placed press "Transmit" button on the top left keyboard and the configuration is transmitted to SmartyCam GP HD Rev. 2.2.

Please note: if using SmartyCam GP HD Rev. 2.2 in slave mode **remember** to match channels received by AiM logger with channels shown by SmartyCam GP HD Rev. 2.2 overlay as explained in any AiM logger user manual.





7.2 – Track Management

Track Manager is the Race Studio 3 section dedicated to tracks management. Here is possible to create and delete new tracks, modify the settings, transmit and receive them to/from the AiM devices. To access, press the "Tracks" icon on Race Studio 3 top left keyboard.



The main page is divided in three columns: on the **Left**:

- on top, the filters that allow to collect many tracks following customized criteria; by default all tracks are shown (light blue "All Tracks (3705)" filter in the image below).
- bottom left, the connected devices (in the image, "SmartyCam GP HD Rev. 2.2 ID 4106742")

The column **in the middle** shows:

- on top a fast search bar, that allows to select the tracks which satisfy personal research criteria; pressing "?" a pop-up window explains research criteria (highlighted in red below); to say:
 - long name is the name in bold in each track box
 - o short name is the track name shown top right of each track box
 - $\circ \quad \mbox{track city is the name of the city the track is located in }$
 - all the tracks listed in Race Studio 3 database. It automatically updates at start up if a connection to the Internet is available.

The column on the **Right** shows:

•

• the data sheet of the track you are mousing over.





When SmartyCam GP HD Rev. 2.2 is connected it is shown on the left bottom part of the page as said before. Clicking on it all the tracks it contains are shown in the right column of the page.

Tracks created by the user are labelled "User" and if the track stored in SmartyCam GP HD Rev 2.2 is different from the one stored on AiM database this is notified as shown here below.

RaceStudio3 3.29.08											x
* *	\$									<u></u>	0
5 All Tracks (3705)		New	mport Export	Receive	Transmit	Dele	ete	Tracks			
	?						Trac	k SmartyCam	n GP HD 2.2 ID 4106742		
Nations							R	efresh	Delete Delete All	Save All Load Save	ed
Argentina (110)						^					
Australia (175)			Arge	entina			_		Three Sister Valley Circuit	3S Valley ENG	-
Austria (14)		\sim						[(Ashton In Makerfield, England, Un	ited Kingdom	
Bahrain (7)		\sim	Aeroclub 25 de M 25 De Mayo Buen	layo os Aires, Argentina	25 De Mayo		1		1,1 km Kart Track Paved	h	
Barbados (2)	1		775 m Off Road Di	rt					ACP	ACP	
Belarus (4)		0	Aeroclub 25 de M	layo	25 De Mayo S		2		(*) This track is NEWER than what store	d on PC	
Belgium (12)			25 De Mayo, Bueno 775 m Off Dood Di	os Aires, Argentina				6	Alabama Custom	AL Custom	
Bermuda (1)	2		TTS III OII Road Di		User			3B	Alabama, United States		
Bolivia (5)			Auto Moto Nautio	o Laprida	Laprida		3		1,2 km Race Track Paved	User	
Brazil (135)	3	\square	794 m Kart Track E	Dirt				തി	Arizona Motorsports Park	AMP AZ	
Bulgaria (4)		~	Autodromo Ciuda	ad de Concordia	CiuConcordia		4	j j j	3,6 km Race Track Paved		
Smart Collections		$\left \right\rangle$	Concordia, Argenti	na Paved				00	Atlanta Motorsports Park	AMP GA	
Manual Collections 🔅	4	0		uicu				$ \rangle\rangle$	Dawsonville, Georgia, United State	es	
))	Autodromo Ciuda Dolores, Argentina	ad de Dolores	Dolores		5		2,0 KII Race Hack Paved		
Connected Devices	5	0	1,5 km Kart Track I	Paved					Atlanta Motorsport Park Kart Dawsonville, Georgia, United State	AMP Kart GA	
SmartyCam GP HD 2.2 ID 4106742		Bo	Autodromo Ciuda	ad de Parana	Parana		6	ß	1,2 km Kart Track Paved		
			Parana, Argentina 4.1 km Race Track	Paved			_	R	Atlanta Motorsports Park Main	AMP Main GA	
			Auto da					-VS	Dawsonville, Georgia, United State 2.9 km Race Track Paved	es	
			Concepcion del Uru	uguay, Argentina	ly Concepcion		· '				
	7	LS	2,5 km Race Track	Paved				$ \langle \rangle \rangle$	Riverside, California, United States	AMP Short CA S	
		\sim	Autodromo Dante	e Fuhr	Dante Fuhr		8	\square	422 m Kart Track Paved		
	8	\sim	694 m Race Track	Dirt				R	Audi driving experience cente	r Neuburg AUDI Neuburg	
Trash			Autodromo Dante	e y Torcuato Emilio	ZZİ Olavarria		9	$ \langle S \rangle$	 Neuburg, Germany 2,2 km Race Track Paved 		-
		$\wedge \wedge /$		-						-	

The page keyboards are used to manage the tracks.



The keyboard above the central column allows to:

New	Import	Export	Receive	Transmit	Delete	

- **New**: create a new track
- Import: import one or more tracks stored in SmartyCam GP HD Rev. 2.2 or on another external device
- Export: export one or more tracks to a specific PC folder or to another peripheral device
- Receive: receive from SmartyCam GP HD Rev. 2.2 the tracks created by the user (if no device is connected the button is disabled)
- Transmit: transmit one or more tracks from the PC to SmartyCam GP HD Rev. 2.2 (if no device is connected the button is disabled)
- Delete: delete one or more tracks from Race Studio 3 Database

The keyboard you find above the right column allows to:

Refresh	Delete	Delete All		Save All	Load Saved
			_		

- Refresh: refresh the track list stored in SmartyCam GP HD Rev. 2.2
- Delete: delete one or more tracks from SmartyCam GP HD Rev. 2.2 memory
- Delete All: delete all tracks stored in SmartyCam GP HD Rev. 2.2 memory
- Save all: save all the tracks stored in SmartyCam GP HD Rev. 2.2; it creates a zip file that can be loaded to another AiM device
- Load Saved: load the tracks previously saved in SmartyCam GP HD Rev. 2.2 memory

Please note: for further information about Race Studio 3 Track Management visit www.aim-sportline.com documentation area, software/firmware section where a Track Manager manual is available.



7.3 – Video Management

Once a track session is over it is possible to review SmartyCam GP HD Rev. 2.2 video on a PC. They are recorded in ".mov" format with H264 compression codec. To view them on your PC:

- remove SD card from SmartyCam GP HD Rev. 2.2
- place it in the PC SD Card slot and manage it as an USB peripheral
- press "Video" button on Race Studio 3 top left keyboard



In the page that shows up press "Path Manager" button and browse the PC to find the SD Card and load SmartyCam GP HD Rev. 2.2 Videos.

								le le le	_ _ X
							((:-	ECU	(III)
Path Manager				Movies					
	Name	Racer	Track		Dim	Laps	Best	Da	ite
	Path Manager	Path Manager Name	Path Manager Name Racer	Path Manager Name Racer Track	Path Manager Movies Name Racer Track	Path Manager Movies Name Racer Track Dim	Path Manager Movies Name Racer Track Dim Laps	Path Manager Movies Name Racer Track Dim Laps Best	Path Manager Movies Name Racer Track Dim Laps Best Da



Video page shows up: select the video to see.

🕋 RaceStudio3 3.29.08							- • • ×
* 🕸 🖽 🔂 🖆 📥 😚 🖨						((:-	ECU (III)
6 All Movies	Path Manager				Movies		
AiM Collections		Name	Racer	Track	Dim Laps	Best	Date
Manual Collections		schd0003.mov			8.6 MB		mar 14
		schd0002.mov			5.8 MB	-:	mar 13
Trash							

Once the video opens it is possible to decide to see:

- whole session or
- one single lap as in the example below and select the lap to see.



8 – Technical specifications and drawings

Video format Display resolution Lens Field of view Internal battery Battery charge Internal battery duration External power Support SD Card Memory required

Accelerometer Working temperature range Auto power ON/OFF Auto power OFF Auto Start/Stop recording Body Dimensions

Bullet cable length Weight

Waterproof

H264 - 1280x720 pixels at 30 fps 2.4" 240x320 pixels Telecentric with 6 elements 67° – 84° Rechargeable lithium battery 1.500 mA 700 mA – 12V 60-70 min of recording 9-15V up to 128 Gb - not included 1.5 GB (one hour low quality recording) 2 GB (one hour medium quality recording) 4 GB (one hour high quality recording) three-axial accelerometer +/-5 G -10°C/+60°C Yes if connected to AiM logger Yes Yes Anodized aluminium Recording unit 104.6x79.6x26.6mm Bullet camera: 24 diameterx48.2 mm 2.0m recording unit 320g battery included bullet camera 45g IP67



SmartyCam GP HD Rev 2.2 dimension in mm [inches]





SmartyCam GP HD Rev 2.2 pinout

