

MonCam Product Specification

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Issue 2



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Revision History

Issue	Author	Date	Reason for Change	Authorised
1	RS	10 Dec 2007	Initial copy	CS
2	RS	19 Aug 2012	Revision page added	CS

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Introduction

MonCam is support product to the Mikros Systems Traffic Data Loggers range of products.

MonCam provides an unambiguous traffic count and classification verification methodology for all the Mikros Systems Traffic Data loggers. MonCam is used to record **independent** video pictures of the traffic stream. The video and the recorded traffic data is synchronized thus allowing for the verification of the recorded traffic on an individual record basis.

Up to two MonCam unit can be synchronized to the data. This eliminates the problem vehicles being obscured behind each other on multiple lanes.

The MonCam system is controlled by the TelWinPro program both for the setup and synchronized playback. During the playback period the TelWinPro program keeps a record of all the user defined events, miss counts, double counts and miss classification. At the end of the playback period a complete summary statistic of the results is immediately available.

The MonCam system is supplied as a complete system that includes cameras (and accessories), Laptop PCs with all the necessary software and drivers, external USB disk drives and extended batteries with invertors to power the Laptop PCs for at least 12 hours of continuous video recording.

MonCam is an essential tool for any professional Quality Assurance procedure.

Typical Installation



Picture 1: Complete MonCam installation at the side of the road.



Picture 2: Two MonCam installations one on each side of a carriage way



Picture 3: MonCam placed on the central reserve (median)

Components



Picture 4: Closed Camera and accessories carry case

Dimensions (mm):

1010 x 420 x 180 @ 14.8 kg

Fitted with easy carry rollers.

Product code:

MS001-81100



Picture 5: Open Camera and accessories carry case

Contents:

- Camera in weather proof housing
- Tri-pod with Velcro fitted eyelets for firm anchoring with tent pegs.
- Tent peg hammer
- Tent pegs
- Camera housing opener
- Signal cable

Note: Camera is equipped with a 5 – 50 mm zoom lens, f stop 1.4



Picture 6: Closed Laptop computer carry case

Dimensions (mm):

630 x 500 x 230 @ 10.3 kg

Product code:

MS001-81200



Picture 7: Open Laptop computer carry case

Contents:

- Laptop PC (Microsoft Vista) 80 G Byte hard drive.
- TelWinPro installed.
- Video drivers installed.
- Portable USB 60 G Byte hard drive for data transfer.
- Power cables.

Note: A typical 12 hour video recording generates a 20 G Byte video file.



Picture 8: Open extended life battery pack

Dimensions (mm):

530 x 285 x 210 @ 20 kg

Product code:

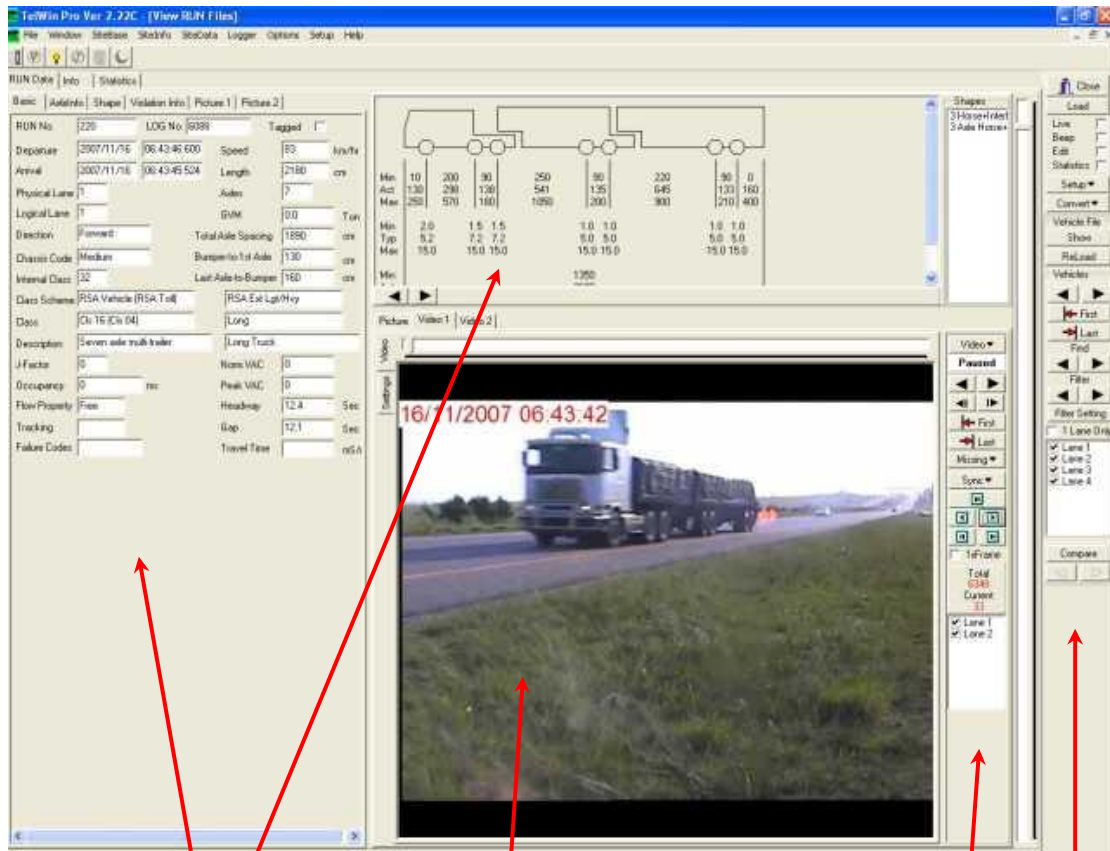
MS001-81300

Contents:

- Lead acid gel battery.
- Power Inverter.
- 12 v power lead for camera.
- Charge input.

Note: A mains inverter powers the Laptop PC.

TelWinPro Screens

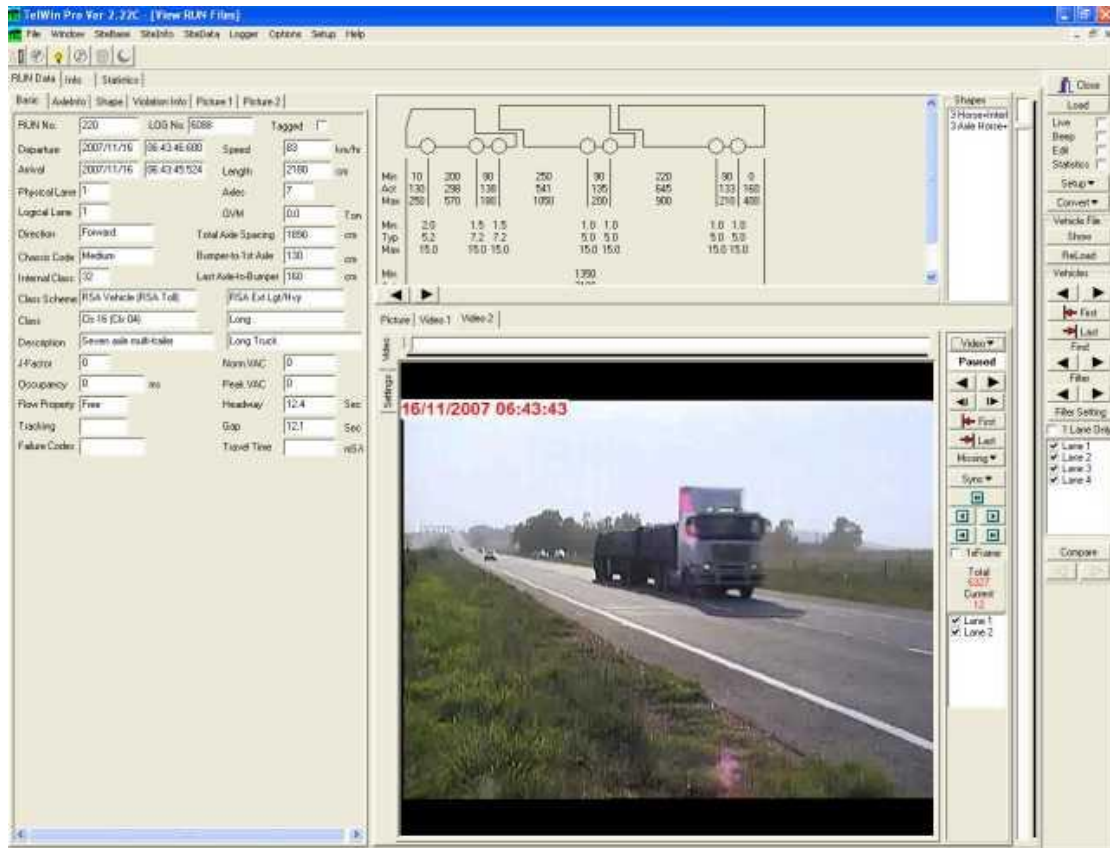


Recorded information, displayed from the run file.
Vehicle profile plus all the detailed information.

Paused video for corresponding vehicle on camera 1

Video playback control

Data record search control



Same vehicle from camera 2, showing that no vehicle is behind the truck on the other lane.

The video pauses for every vehicle in the run file allowing for the verification of the count and classification.

Load		STATISTICAL INFORMATION				
General	Scheme 1	Scheme 2	Toll Scheme			
START	2007/11/16	at	06:00:07			
STOP	2007/11/16	at	17:59:56			
Criteria	Lane 1	Lane 2	Lane 3	Lane 4	Total	
Vehicles (Log)	3801	2715	0	0	6516	
Vehicles (Act)	3809	2725	0	0	6534	
% of Act.Vehicles	99.79%	99.63%			99.72%	
Missed Vehicle	9	10	0	0	19	
% of Act.Vehicles	0.24%	0.37%			0.29%	
Double Counted	0	0	0	0	0	
% of Act.Vehicles	0.00%	0.00%			0.00%	
Ghost Vehicles	1	0	0	0	1	
% of Act.Vehicles	0.03%	0.00%			0.02%	
Scheme 1 - RSA Vehicle						
Lights (Log)	3380	2690	0	0	6070	
Lights (Act)	3377	2704	0	0	6081	
% Dif of Act.Vehicles	0.08%	-0.51%			-0.17%	
% Dif of Light Act.Vehicles	0.09%	-0.52%			-0.18%	
Heavys (Log)	421	25	0	0	446	
Heavys (Act)	432	21	0	0	453	
% Dif of Act.Vehicles	-0.23%	0.15%			-0.11%	
% Dif of Heavy Act.Vehicles	-2.55%	19.05%			-1.55%	
Light as Heavy	9	7	0	0	16	
% of Act.Vehicles	0.24%	0.26%			0.24%	
Heavy as Light	20	3	0	0	23	
% of Act.Vehicles	0.53%	0.11%			0.35%	
Scheme 2 - RSA Ext Lgt/Hvy						
Lights (Log)	3332	2685	0	0	6017	
Lights (Act)	3377	2703	0	0	6080	
% Dif of Act.Vehicles	-1.18%	-0.66%			-0.96%	
% Dif of Light Act.Vehicles	-1.33%	-0.67%			-1.04%	
Heavys (Log)	469	30	0	0	499	
Heavys (Act)	432	22	0	0	454	
% Dif of Act.Vehicles	0.97%	0.29%			0.63%	
% Dif of Heavy Act.Vehicles	8.56%	36.36%			9.91%	
Light as Heavy	56	13	0	0	69	
% of Act.Vehicles	1.47%	0.48%			1.06%	
Heavy as Light	19	5	0	0	24	
% of Act.Vehicles	0.50%	0.18%			0.37%	

Summary statistics accumulated by TelWinPro after the video analysis

STATISTICAL INFORMATION																	
Load																	
General	Scheme 1	Scheme 2	Toll Scheme														
Lane 1	Lane 2	Lane 3	Lane 4	Total													
	Logged	Cls00	Cls01	Cls02	Cls03	Cls04	Cls05	Cls06	Cls07	Cls08	Cls09	Cls10	Cls11	Cls12	Cls13	Cls14	Cls15
Actual		0	0	3220	160	9	134	10	0	18	37	0	0	23	119	0	0
Cls00	0	0															
Cls01	4		0														
Cls02	3213			3204			5										
Cls03	160				156		1				3						
Cls04	15			3		9	3										
Cls05	138			13			125										
Cls06	7							4		1	2						
Cls07	12				2			1	0		8			1			
Cls08	22							5		17							
Cls09	26				2						24						
Cls10	0											0					
Cls11	0												0				
Cls12	22													22			
Cls13	119														119		
Cls14	0															0	
Cls15	0																0
Cls16	69																
Cls17	2																
Total	3809																
Light	3377																
Heavy	432																

Summary statistics accumulated by TeWinPro after the video analysis in tabular format. Actual vs. logger classification.

Features

- Rugged weather proof housings.
- A minimum of 12 hour continuous video recording in a format that is directly compatible with the TelWinPro program.
- Completely independent video monitoring that can be used for verification and professional quality assurance procedures.
- Automatic and synchronized video playback.
 - Fast forward and reverse control
 - Frame rate control
 - Single step frame control (forward and reverse)
 - Time and data synchronization
- Comprehensive statistical reporting.
- Labeling (marking) of special cases and incidents
 - Standard cases such as:
 - Lift axles
 - Missed axles
 - Extra ordinary vehicle types
 - User defined incidents
- Automatic site comparison for tandem logger sites.

Component list

Major component	Sub components	Product code
Camera case	Camera in housing Tri-pod Tent pegs (3) Tent peg hammer Phillips screw driver Signal cable	MS001-81100
Recorder case	Laptop PC Portable USB HDD 60 G Byte USB cable Power cable	MS001-81200
Power pack	12 V seal lead acid gel battery 12 V cable Charge input cable Mains inverter 220V	MS001-81300

Summary of RAKTEL/TEL Communications Software

Item	Range
Recording period	12 Hour minimum
Number cameras	Maximum of two per site
Housing type	IP 65 on all except the battery housing that is IP 55
Power supply	12 DC
Camera case	Dimensions mm: 1010 x 429 x 180 @ 14.8 kg
Recorder case	Dimensions mm: 630 x 500 x 230 @ 10.3 kg
Power pack	Dimensions mm: 530 x 285 x 210 @ 20 kg
Lens	5 – 50 mm zoom 1.4 f
Temperature	Nominally -10 ° C – 65 ° C
Humidity	Max. 95% non condensing

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Mikros Systems reserves the right to change product specification at any time without prior notice.