

S8.2/S8.3/S8.3D8/S8.5/FM devices

Technical Commands

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S8 supported Command	Description
3D	Start to generate asynchronous events from 3D sensor.
ACCAUTH	Enable feature of checking authorization after Ignition. Can be used with one of available input in S8 device.
ANALOGFILTER	Configures Analogous filter function
ASYNCHFRAME	Configure special telemetry frame mode for F7 frames
AUTOSYNC (ALBAUTOSYNC)	Starts automatic car type configuration in CAN module
CANCMD	Sends raw command to CAN module
CANDIAG	CAN interface diagnostic mode
CANUPDATE	Update CAN module firmware or download configuration file
CANVERSION	Query CAN module current firmware version
CARSET (ALBCARSET)	Changes current car type configuration in CAN module
CARID (ALBCARID)	Query for current car type configuration in CAN module
COMM	Unit communication parameters configuration
CHIPERASE	Clears archive memory
DALLASID	Set and Query Dallas ID codes for driver identification
DALLASMODOE	Set and query Dallas ID algorithm mode
DRVID	Query for driver cards IDs inserted into tachograph
FMILIMITS	Set communication limits for FMI protocol
FUELFLAG	Set fuel flag.
FRAMEFORMAT	Unit frame format configuration
FRIENDROAM	Forces specified network number or country code to be treated as home network
GEOSPEEDEVENT	Configure speed report in specified zone function
GETPOSITION	Query unit current position

GETSERIALNUMBER	Check device factory serial number
IGNITION	Source of ignition information (input, CAN module, main power)
INPUTDELAY	Set delays for device inputs
IMEI	GSM modem IMEI query
LIMITS	Set communication limits
NETLISTADD	Add another GSM operator code to database
NETLISTDELETE	Delete GSM operator code from database
NETLISTREAD	Read GSM operator codes from database
NETLISTENABLE	Enable working of GSM operator list (white list or black list)
OUTS	Set outputs configuration
POWERMODE	Set device power mode
QUST	Unit GSM status query
RESET	
REBOOT	Reboot unit
SET3D	Calibration process of 3D sensor
SETECO	Set Eco driving control parameters
SETGPSKM	Set mileage counter value
SETPOINTS	Set analog fuel characteristics points
SETRTC	Set RTC clock manually in case of lack GPS signal
SLEEPMODE	Sleeping device with accumulator during main power off
SMID	SIM card serial number query
SMSADDINFO	Set form of the SMS report
SMSPREFIX	Set prefix for SMS report
SMSREPORT	Set Event and SMS report configuration
SOFTUPDATE	Update unit software
SPEEDALARM	Alarm according to speed CAN or GPS – with activated output

STATUS	Query unit current status
SUPANALOG	This command replaces VoltageAnalog1 with VoltageAnalog5
SYNCFRAMEMODE	Set synchronization frame format other than standard
TACHOCARDBLOCK	Enable Tachograph card blocking function
TEMPID	Set and query DS18B20 thermometer codes for multiple thermometer support on 1-wire line
TIMER	Enables periodic telemetry reporting
TOW	Set and query towing report settings
TRACKING	Set tracking configuration
TRACKROAM	Unit tracking in roaming configuration
UNPM	Unit primary configuration
VERSION	Query unit software version (communication subsystem)
VOLTDETECT	Enables voltage dropout detection
ZCONFIG	Set various configuration options in I/O processor
ZEROLIMITS	Clear communication limits
ZMASK	Set various configuration masks in I/O processor
ZVALUE	Set various configuration values in I/O processor

3D

Command	3D	
Description	Start to generate asynchronous events from 3D sensor. Event will be generated using algorithm – values from 3 axes > this one configured in command parameter.	
Command Syntax	\$AL+3D+[TAG]=[Password],[Limit_for_accident],[Limit_for_car_towing],[Limit_for_acceleration],[Limit_for_braking],[Limit_for_turning]	
Query Answer Syntax	\$QR:3D+[TAG]=[Limit_for_accident],[Limit_for_car_towing],[Limit_for_acceleration],[Limit_for_braking],[Limit_for_turning]	
Field Description	TAG	Command specific TAG number. If present unit answer must contain the same TAG number. (Max. 5 characters)
	Password	Unit current password. (Max. 4 characters)
	Limit_for_accident	Overload limit for accident. Range: 0 – 128 Value 16 = 1G
	Limit_for_car_towing	Overload limit for car towing. Range: 0 – 128 Value 16 = 1G
	Limit_for_acceleration	Overload limit for acceleration. Range: 0 – 128 Value 16 = 1G
	Limit_for_braking	Overload limit for braking. Range: 0 – 128 Value 16 = 1G
	Limit_for_turning	Overload limit for turning. Range: 0 – 128 Value 16 = 1G
Example Query	Query: \$AL+3D=0000,? Example answer: \$QR:3D=24,2,5,5,6	

Error Answer	\$ER:3D+[TAG]=[ErrorCode]
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ACCAUTH

Command	ACCAUTH	
Description	This command provides possibility to set and query ACC authorization settings. Authorization is performed in the following way. After turning on ACC driver must generate active state on defined input.	
Command Syntax	\$AL+ACCAUTH+[TAG]=[Password],[Enable],[AuthInput],[Time]	
Query Answer Syntax	\$QR+ACCAUTH+[TAG]=[Enable],[AuthInput],[Time]	
Field Description	TAG	Command specific TAG number. If present unit answer must contain the same TAG number. (Max. 5 characters)
	Password	Unit current password. (Max. 4 characters)
	Enable	0 – disable 1 – enable
	AuthInput	1 – JP1-5 2 – JP2-8 4 – JP1-4 5 – JP2-1
	Time	Time to perform authorization (seconds)
Example Query	Query: \$AL+ACCAUTH=0000,? Example answer: \$QR:ACCAUTH=1,5,15	
Error Answer	\$ER:ACCAUTH+[TAG]=[ErrorCode]	

ANALOGFILTER

Command	ANALOGFILTER		
Description	This command provides possibility to set and query Filtration parameters for analog inputs.		
Command Syntax	\$AL+ANALOGFILTER	+[TAG]=[Password],[	Mode],[Ignition],[BlockingVoltage],[SampleTime],[SampleCount]

Query Answer Syntax	\$QR+ANALOGFILTER+[TAG]=[BlockingVoltage],[SampleTime] ,[SampleCount]	
Field Description	TAG	Command specific TAG number. If present unit answer must contain the same TAG number. (Max. 5 characters)
	Password	Unit current password. (Max. 4 characters)
	Mode	0- Median, 1- Average
	Ignition	if the value is set, ignition state drives analog input actualization system.
	BlockingVoltage	Voltage [V]. If main power is under this value, terminal is not reading analog inputs.
	SampleCount	Number of samples used in filtration process
	SampleTime	Time[s] between samples
Example Query	Query: \$AL+ ANALOGFILTER =0000,? Example answer: \$QR: ANALOGFILTER =0,1,1,5,15	
Error Answer	\$ER: ANALOGFILTER +[TAG]=[ErrorCode]	

ASYNCHFRAME

Command	ASYNCHFRAME
Description	This command provides possibility to configure special telemetry frame mode for F7 frames. When function is set and large amount of data is stored in archive memory (eg. after long time in roaming network) currently generated frames are send immediately as F8 frames (identical with F7 frames) and do not require frame confirmation. They will be send later once again, but using standard archive and confirmation mechanism and as usual F7 frames.
Command Syntax	\$AL+ASYNCHFRAME+[TAG]=[Password],[Enable],[Time]
Query command	\$AL+ASYNCHFRAME+[TAG]=[Password],?

Query Answer Syntax	\$QR:ASYNCHFRAME+[TAG]=[Enable],[Time]	
Field Description	TAG	Command specific TAG number. If present unit answer must contain the same TAG number. (Max. 5 characters)
	Password	Unit current password. (Max. 4 characters)
	Enable	0 – function disabled 1 – function enabled
	Time	Enable time in minutes
Example Query	Query: \$AL+ASYNCHFRAME=0000,? \$QR:ASYNCHFRAME=1,30	
Error Answer	\$ER:ASYNCHFRAME+[TAG]=[ErrorCode]	

AUTOSYNC

Command	AUTOSYNC	
Description	This command provides possibility to auto detect car type in CAN BUS. Procedure is similar to operation by pressing button located on CAN module. During car detection ignition must be on.	
Command Syntax	\$AL+AUTOSYNC+[TAG]=Password	
Field Description	TAG	Command specific TAG number. If present unit answer must contain the same TAG number. (Max. 5 characters)
	Password	Unit current password. (Max. 4 characters)
Example Command	\$AL+AUTOSYNC=0000	
Asynchronous report	Unit after performing car auto detection procedure will send asynchronous report with the following syntax: AUTOSYNCH: <result> <result> possible values: 2 – car detection successful 3 – car detection failed (wrong CAN module connection to CAN bus, or car not recognized) 4 – car detection failed (wrong CAN module connection to CAN bus, or no	

	ignition on) NOTE: Report will not be send if CAN module is not present or connected improperly.
Ok Answer	\$OK:AUTOSYNC+[TAG]

CANCMD

Command	CANCMD	
Description	This command provides possibility to send raw binary command directly to CAN module. For detailed CAN module commands and responses description see Can module protocol documentation.	
Command syntax	\$AL+CANCMD+[TAG]=[Password],[CMD_STRING]	
Answer Syntax	\$QR:CANCMD+[TAG]=[CAN_RESPONSE]	
Field Description	TAG	Command specific TAG number. If present unit answer must contain the same TAG number. (Max. 5 characters)
	Password	Unit current password. (Max. 4 characters)
	CMD_STRING	Hexadecimal string (capital letters) containing command to CAN module - see Can module protocol documentation for details
	CAN_RESPONSE	Hexadecimal string containing CAN module response to most recent command sent - see Can module protocol documentation for details
Example Command	Command: \$AL+CANCMD=0000,B3200428 This command query CAN Module II for Total Fuel data frame Example Answer: \$QR:CANCMD=B4250403000000001F NOTE: Answer will not be send if CAN module is not present or connected improperly.	
Error Answer	\$ER:CANCMD+[TAG]=[ErrorCode]	

CANDIAG

Command	CANDIAG	
Description	This command provides possibility to enable CAN interface diagnostic mode	
Command Syntax	\$AL+CANDIAG+[TAG]=[Password],[DiagTime]	
Field Description	TAG	Command specific TAG number. If present unit answer must contain the same TAG number. (Max. 5 characters)
	Password	Unit current password. (Max. 4 characters)
	DiagTime	Time to enable function (s)
Example	Command: \$AL+CANDIAG=0000,20 Answer: \$OK:CANDIAG	
Error Answer	\$ER:CANDIAG+[TAG]=[ErrorCode]	

CANUPDATE

Command	CANUPDATE	
Description	This command provides possibility to update or configure can module firmware.	
Command Syntax	\$AL+CANUPDATE+[TAG]=Password,ftpAdr,ftpUser,ftpPass,file,mode	
Field Description	TAG	Command specific TAG number. If present unit answer must contain the same TAG number. (Max. 5 characters)
	Password	Unit current password. (Max. 4 characters)
	ftpAdr	FTP server address (Max. 29 characters)
	ftpUser	FTP login (Max. 14 characters)
	ftpPass	FTP password (Max. 14 characters)
	file	File containing update or configuration (Max. 29) File must be placed in root directory of ftp account
	mode	1 – firmware update 2 – configuration download 4 – TMR device firmware update
Example	\$AL+CANUPDATE=0000,ftp.com.pl,user,pass,file.frm,1	

Command	
Asynchronous report	Unit after performing update will send asynchronous report with the following syntax: \$QR:CANUPDATESTATUS=[updateCode] updateCode – 0 – update or configuration successful, 1 – update error
Ok Answer	\$OK:CANUPDATE+[TAG]
Error Answer	\$ER:CANUPDATE+[TAG]=[ErrorCode]

CANVERSION

Command	CANVERSION	
Description	This command provides possibility to check current firmware version of the CAN module	
Command Syntax	\$AL+CANVERSION+[TAG]=[Password],?	
Query Answer Syntax	\$QR:CANVERSION+[TAG]=[Version_string]	
Field Description	TAG	Command specific TAG number. If present unit answer must contain the same TAG number. (Max. 5 characters)
	Password	Unit current password. (Max. 4 characters)
	Version_string	Character string representing current version of the CAN module firmware. (Max. 35 characters)
Example Query	Query: \$AL+CANVERSION=0000,? Example answer: \$QR:CANVERSION=2.1.15 NOTE: Answer will not be send if CAN module is not present or connected improperly.	

CARSET

Command	CARSET
Description	This command provides possibility to auto detect car type in CAN module device. Procedure is similar to operation by pressing button located on CAN module. During car detection ignition must be on. Detailed information is provided in can module documentation.

Command Syntax	\$AL+CARSET+[TAG]=Password,type,car_ID	
Field Description	TAG	Command specific TAG number. If present unit answer must contain the same TAG number. (Max. 5 characters)
	Password	Unit current password. (Max. 4 characters)
	type	Command type: 15 – setting car for CAN SEO (only) 16 – setting car from manual selection group 17 – setting car from automatic selection group (possible results of car auto detection) 18 – erase car setting
	car_ID	Car or group specific id – refer to can module documentation for details and car table This field must be 0 in case of car erase (18) command
Example Command	\$AL+CARSET=0000,16,18	
Command result	Unit will send command result using following syntax: \$QR:CARSET+[TAG]=type,result type: command type (16,17 or 18) from corresponding request result: 0 – operation successful 1 – operation failed (unsupported command parameters) NOTE: Answer will not be send if CAN module is not present or connected improperly.	

CARID

Command	CARID	
Description	This command provides possibility to check car type currently set in CAN module device	
Command Syntax	\$AL+CARID+[TAG]=Password	
Field Description	TAG	Command specific TAG number. If present unit

		answer must contain the same TAG number. (Max. 5 characters)
	Password	Unit current password. (Max. 4 characters)
Example Command	\$AL+CARID=0000	
Command result	Unit will send command result using following syntax: \$QR:CARID+[TAG]=type,car_ID type: 0 – no car set 15 – car set from manual selection (CAN SEO only) 16 – car set from manual selection group 17 – car set from automatic selection group (possible results of car auto detection) car_ID: Car or group specific id – refer to can module documentation for details and car table NOTE: Answer will not be send if CAN module is not present or connected improperly.	

COMM

Command	COMM	
Description	This command provides possibility to set and query unit communication parameters. Unit will reboot in 10s. After changing configuration with this command.	
Command Syntax	\$AL+COMM+[TAG]=[Password],[CommType],[SMSBaseNumber],[R],[GPRS_APN],[GPRS_Username],[GPRS_Password],[R],[GPRS_HostAddress],[GPRS_HostPort],[GPRS_SyncInterval],[R]	
Query Answer Syntax	\$QR+COMM+[TAG]=[CommType],[R],[R],[GPRS_APN],[GPRS_Username],[GPRS_Password],[IP_Type],[GPRS_HostAddress],[GPRS_HostPort],[GPRS_SyncInterval],[R]	
Field Description	TAG	Command specific TAG number. If present unit answer must contain the same TAG

		number. (Max. 5 characters)
	Password	Unit current password. (Max. 4 characters)
	CommType	Unit primary communication channel for sending telemetry data. Possible values: 0 – Serial RS232 1 – Reserved 2 – SMS 3 – GPRS
	GPRS_APN	GPRS access point. (Max. 34 characters)
	GPRS_Username	GPRS user name. (Max. 14 characters)
	GPRS_Password	GPRS password. (Max. 14 characters)
	IP_Type	0 – UDP 1 – TCP
	GPRS_HostAddress	Telemetry server address. (Max. 29 characters)
	GPRS_HostPort	Telemetry server port.
	GPRS_SyncInterval	Interval between sending synch packets. (Min. 10, Max. 65535)
	R	Reserved for further use.
Example Query	Query: \$AL+COMM=0000,? Example answer: \$QR:COMM=3,+48602951111,,erainternet,erainternet,erainternet,1,83.3 1.213.119,10873,40,	
Example Command	\$AL+COMM=0000,3,+48602951111,,erainternet,erainternet,erainternet,1,83.31.213.119,10873,40,	
Ok Answer	\$OK:COMM+[TAG]	
Error Answer	\$ER:COMM+[TAG]=[ErrorCode]	

CHIPERASE

Command	CHIPERASE
Description	This command provides possibility to clear internal archive FLASH memory.

	NOTE: Device restarts after completion of erase	
Command Syntax	\$AL+CHIPERASE+[TAG]=[Password]	
Field Description	TAG	Command specific TAG number. If present unit answer must contain the same TAG number. (Max. 5 characters)
	Password	Unit current password. (Max. 4 characters)
Example Command	Command: \$AL+CHIPERASE=0000 Answer: \$OK:CHIPERASE	
Error Answer	\$ER:CHIPERASE+[TAG]=[ErrorCode]	

DALLASID

Command	DALLASID	
Description	This command provides possibility to set and query Dallas IDs authorized for turning ignition on. Authorization checking can be enabled using proper ZCONFIG command setting.	
Command Syntax	\$AL+DALLASID+[TAG]=[Password],[index],[ID] NOTE: Device will respond sending query with selected index. If new ID setting is unsuccessful ID field will be empty or contain old value	
Query command	\$AL+DALLASID+[TAG]=[Password],[index],?	
Query and Command Answer Syntax	\$QR:DALLASID+[TAG]=[index],[ID]	
Field Description	TAG	Command specific TAG number. If present unit answer must contain the same TAG number. (Max. 5 characters)
	Password	Unit current password. (Max. 4 characters)
	index	Number of slot to read/write ID code. Value range: 1-8
	ID	Dallas Button ID code presented in ASCII hex format. Code is always 16 characters (8 bytes)
Example	Command: \$AL+DALLASID=0000,1,3100001375041A01	

Command	Response: \$QR:DALLASID=1,3100001375041A01
Example Query	Query: \$AL+DALLASID=0000,1,? \$QR:DALLASID=1,3100001375041A01

DALLASMODE

Command	DALLSMODE	
Description	This command provides possibility to set and query DALLAS ID authorization algorithm mode	
Command Syntax	\$AL+DALLASMODE+[TAG]=[Password],[Mode],	
Query Answer Syntax	\$QR+DALLASMODE+[TAG]=[Mode]	
Field Description	TAG	Command specific TAG number. If present unit answer must contain the same TAG number. (Max. 5 characters)
	Password	Unit current password. (Max. 4 characters)
	mode	0 – default 1 – Dallas authorization is possible only when ignition is turned on.
Example Query	Query: \$AL+DALLASMODE=0000,? Example answer: \$QR:DALLASMODE=0	
Example Command	\$AL+DALLASMODE=0000,1	
Ok Answer	\$OK: DALLASMODE +[TAG]	
Error Answer	\$ER: DALLASMODE +[TAG]=[ErrorCode]	

DRVID

Command	DRVID
Description	This command provides possibility to query driver cards IDs from tachograph using CAN module. DRVID answer packets are generated asynchronously when card state is changed. DRVID answer packets are also stored in telemetry archive.

Query command	\$AL+DRVID+[TAG]=[Password],?	
Query Answer Syntax	\$QR:DRVID+[TAG]=[Time],[ID1],[ID2]	
Field Description	TAG	Command specific TAG number. If present unit answer must contain the same TAG number. (Max. 5 characters)
	Password	Unit current password. (Max. 4 characters)
	Time	Current date and time (UTC)
	ID1	Driver card ID inserted into first slot (max 30 characters)
	ID2	Driver card ID inserted into second slot (max 30 characters)
Example Query	Query: \$AL+DRVID=0000,? \$QR:DRVID=20100624105054,PL123456789*,PL234567890* NOTE: Reports will not be sending if CAN module is not present or connected improperly.	
Error Answer	\$ER:DRVID+[TAG]=[ErrorCode]	

FMILIMITS

Command	FMILIMITS	
Description	This command provides possibility to set and query unit limits parameters. Setting limits values to 0 disables limits control. ZEROLIMITS command resets counter values.	
Command Syntax	\$AL+FMILIMITS+[TAG]=[Password],[HomeDayBytes],[HomeMonthBytes] ,[RoamDayBytes],[RoamMonthBytes]	
Query Answer Syntax	\$QR:FMILIMITS+[TAG]=[HomeDayBytes],[HomeMonthBytes],[RoamDayBytes],[RoamMonthBytes],[HomeDayBytesSend],[HomeMonthBytesSend] ,[RoamDayBytesSend],[RoamMonthBytesSend]	
Field Description	TAG	Command specific TAG number. If present unit answer must contain the same TAG number. (Max. 5 characters)

	Password	Unit current password. (Max. 4 characters)
	HomeDayBytes	Day limit of FMI data (bytes) send by TerminalS8 in home network
	HomeMonthBytes	Month limit of FMI data (bytes) send by TerminalS8 in home network
	RoamDayBytes	Day limit of FMI data (bytes) send by TerminalS8 in roaming network
	RoamMonthBytes	Month limit of FMI data (bytes) send by TerminalS8 in roaming network
	HomeDayBytesSend	Amount of FMI data bytes send by TerminalS8 during current day in home network.
	HomeMonthBytesSend	Amount of FMI data bytes send by TerminalS8 during current month in home network.
	RoamDayBytesSend	Amount of FMI data bytes send by TerminalS8 during current day in roaming network.
	RoamMonthBytesSend	Amount of FMI data bytes send by TerminalS8 during current month in roaming network.
Example Query	Query: \$AL+FMILIMITS=0000,? Example answer: \$QR:FMILIMITS=20,10,3,0,0,0,0	
Example Command	\$AL+FMILIMITS=0000,20,10,5	

FUELFLAG

Command	FUELFLAG	
Description	This command adds fuel unit indicator to telemetry frames.	
Command Syntax	\$AL+FUELFLAG+[TAG]=[Password],[enable]	
Query command	\$AL+FUELFLAG+[TAG]=[Password],?	
Query Answer Syntax	\$QR:FUELFLAG+[TAG]=[enable]	
Field	TAG	Command specific TAG number. If present unit

Description		answer must contain the same TAG number. (Max. 5 characters)
	Password	Unit current password. (Max. 4 characters)
	enable	0 – Function disabled 1 – Function enabled When enabled function will add to F2 and F4 frames additional field indicating unit of [Total_fuel] field. Values of additional field: P – fuel is in percent's L – fuel is in liters S – fuel is substituted from analog fuel probe empty field – no information
Example Query	Query: \$AL+FUELFLAG=0000,? Example answer: \$QR:FUELFLAG=1	
Error Answer	\$ER:FUELFLAG+[TAG]=[ErrorCode]	

FRAMEFORMAT

Command	FRAMEFORMAT	
Description	This command provides possibility to set and query unit telemetry format settings.	
Command Syntax	\$AL+FRAMEFORMAT+[TAG]=[Password],[TmFormat]	
Query Answer Syntax	\$QR:FRAMEFORMAT+[TAG]=[TmFormat]	
Field Description	TAG	Command specific TAG number. If present unit answer must contain the same TAG number. (Max. 5 characters)
	Password	Unit current password. (Max. 4 characters)
	TmFormat	Possible telemetry formats: F0 – telemetry without CAN data F1 – telemetry with CAN data F2 – telemetry with extended CAN data F4 – extended telemetry with CAN data, 1-wire and

		analog inputs data F7 – more extended telemetry with full range of CAN data, 1-wire analog inputs data, eco driving, 3d sensors, tachograph drivers ID. [device will send F7 data frames over TCP. Via SMS will send F77 data frame. See description of F77 data frame in Telemetry packets chapter] F12 – telemetry the same like in the case of F7 frame format with additional eco driving fields and others See frame format descriptions for telemetry details
Example Query	Query: \$AL+FRAMEFORMAT=0000,? Example answer: \$QR:FRAMEFORMAT=F1	
Example Command	\$AL+FRAMEFORMAT=0000, F0	
Ok Answer	\$OK:FRAMEFORMAT+[TAG]	
Error Answer	\$ER:FRAMEFORMAT+[TAG]=[ErrorCode]	

FRIENDROAM

Command	FRIENDROAM	
Description	This command forces specified network number or country code to be treated as home network	
Command Syntax	\$AL+FRIENDROAM+[TAG]=[Password],[enable],[networkCode]	
Query Answer Syntax	\$QR+FRIENDROAM+[TAG]=[enable],[networkCode]	
Field Description	TAG	Command specific TAG number. If present unit answer must contain the same TAG number. (Max. 5 characters)
	Password	Unit current password. (Max. 4 characters)
	enable	1 – Enable function (single network) 2 – Enable function (all networks matching country code)

		0 – Disable function
	Network Code	For option 1: 5 – digit GSM network code for network that will be treated as home network (e.g. 26001 for PLUS-GSM) For option 2: 3 – digit prefix GSM country code for all networks in country that will be treated as home network (e.g. 260 for Poland)
Error Answer	\$ER:FRIENDROAM+[TAG]=[ErrorCode]	

GEOSPEEDEVENT

Command	GEOSPEEDEVENT	
Description	This command provides possibility to enable and query speed report in specified zone function	
Command Syntax	\$AL+GEOSPEEDEVENT+[TAG]=[Password],[Event_ID][Mode],[Speed_source],[Speed],[output],[X1],[Y2],[X2],[Y2],...,[X10],[Y10]	
Query command	\$AL+GEOSPEEDEVENT+[TAG]=[Password],?	
Query Answer Syntax	\$QR:GEOSPEEDEVENT+[TAG]=[Event_ID][Mode],[Speed_source],[Speed],[output],[X1],[Y2],[X2],[Y2],...,[X10],[Y10]	
Field Description	TAG	Command specific TAG number. If present unit answer must contain the same TAG number. (Max. 5 characters)
	Password	Unit current password. (Max. 4 characters)
	Event_ID	Configurable Event_ID of generated frame Range: 110-150
	Mode	0 – function disabled 1 – function enabled when device is in specified zone
	Speed_source	0 – speed from GPS 1 – speed from CAN

	Speed	Speed value in km/h above which event will be generated
	Output	Output which will be activated when speed limit is crossed 0 – no output activation 1 – activate JP2-1 2 – activate JP2-2
	[X1],[Y2],[X2],[Y2],...,[X10],[Y10]	Up to 10 points defining speed limit zone. Note: all comas must be inserted even when less than 10 points are defined
Example Query	Query: \$AL+GEOSPEEDEVENT=0000,? \$QR:GEOSPEEDEVENT=110,1,1,50,2,20.123456,50.123456,20.223456,50.123456,20.223456,50.23456,20.123456,50.223456,,,,,,,,	
Error Answer	\$ER:GEOSPEEDEVENT+[TAG]=[ErrorCode]	

GETPOSITION

Command	GETPOSITION	
Description	This command provides possibility to query unit current position and other telemetry parameters.	
Command Syntax	\$AL+GETPOSITION+[TAG]=[Password],?	
Field Description	TAG	Command specific TAG number. If present unit answer must contain the same TAG number. (Max. 5 characters)
	Password	Unit current password. (Max. 4 characters)
Example Query	Query: \$AL+GETPOSITION=0000,? Example answer: 2030123457,20100217104434,F1,21.022840,52.205989,0,0,0,8,0,670,0,00.00,00.00,0,,,,,,,,,0	

GETSERIALNUMBER

Command	GETSERIALNUMBER
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Description	This command provides possibility to check device factory serial number	
Command Syntax	\$AL+GETSERIALNUMBER+[TAG]=[Password]	
Answer Syntax	\$QK:GETSERIALNUMBER=[SN]	
Field Description	TAG	Command specific TAG number. If present unit answer must contain the same TAG number. (Max. 5 characters)
	Password	Unit current password. (Max. 4 characters)
	SN	Serial number string
Example	Query: \$AL+GETSERIALNUMBER=0000 \$QK:GETSERIALNUMBER=12345	
Error Answer	\$ER:GETSERIALNUMBER+[TAG]=[ErrorCode]	

IGNITION

Command	IGNITION	
Description	This command provides possibility to read ignition information from different source.	
Command Syntax	\$AL+IGNITION+[TAG]=[Password],[mode],[time_delay],[voltage_value]	
Query Answer Syntax	\$QR:IGNITION+[TAG]= [mode],[time_delay],[voltage_value]	
Field Description	TAG	Command specific TAG number. If present unit answer must contain the same TAG number. (Max. 5 characters)
	Password	Unit current password. (Max. 4 characters)
	mode	0 – default mode. Ignition will be read from ignition wire (JP1-3 ignition input +) 1 – Ignition will be read from CAN BUS. Check supported list to see if ignition should available. 2 – Ignition will be read from main power voltage. Set time of delay and voltage_value.

	Time_delay	Delay value in 100ms, e.g. value 50 = 5000ms (Min = 1, Max = 32767, Default = 7)
	Voltage_value	Voltage value in xx.xx format. E.G. 05.08 (5.08V) 12,50 (12,50V)
Example Command	\$AL+IGNITION=0000,1,0,00.00 \$AL+IGNITION=0000,2,5,12.50	
Example Query	Query: \$AL+IGNITION=0000,? \$QR:IGNITION=1,0,00.00	
Ok Answer	\$OK:IGNITION+[TAG]	
Error Answer	\$ER:IGNITION+[TAG]=[ErrorCode]	

INPUTDELAY

Command	INPUTDELAY	
Description	This command provides possibility to set delay for every input of the device	
Command Syntax	\$AL+INPUTDELAY+[TAG]=[Password],[Input],[Delay]	
Query Answer Syntax	\$QR:INPUTDELAY+[TAG]=[Delay0],[Delay1],[Delay2],[Delay3],[Delay4],[Delay5],[Delay6],[Delay7],[Delay8]	
Field Description	TAG	Command specific TAG number. If present unit answer must contain the same TAG number. (Max. 5 characters)
	Password	Unit current password. (Max. 4 characters)
	Input	Input bit number (see Inputs Field Description for details) Allowed values: 0,1,2,3,4,5,6,7,8
	Delay	Delay value in 100ms, e.g. value 50 = 5000ms (Min = 1, Max = 32767, Default = 7)
Example Command	\$AL+INPUTDELAY=0000,1,35 (3500ms delay on bit number 1 input)	
Example Query	Query: \$AL+INPUTDELAY=0000,? \$QR:INPUTDELAY=7,7,7,7,7,7,7,7,7	

Ok Answer	\$OK:INPUTDELAY+[TAG]
Error Answer	\$ER:INPUTDELAY+[TAG]=[ErrorCode]

IMEI

Command	IMEI	
Description	This command provides possibility to query unit IMEI number	
Command Syntax	\$AL+IMEI+[TAG]=[Password],?	
Field Description	TAG	Command specific TAG number. If present unit answer must contain the same TAG number. (Max. 5 characters)
	Password	Unit current password. (Max. 4 characters)
Example Query	Query: \$AL+IMEI=0000,? Example answer: \$QR:IMEI=356950005005364	

LIMITS

Command	LIMITS	
Description	This command provides possibility to set and query unit limits parameters. Setting limits values to 0 disables limits control. ZEROLIMITS command resets counter values.	
Command Syntax	\$AL+LIMITS+[TAG]=[Password],[HomeGPRS],[RoamGPRS],[SMS]	
Query Answer Syntax	\$QR:LIMITS+[TAG]=[HomeGPRS],[RoamGPRS],[SMS],[HomeGPRSCount],[RoamGPRSCount],[SMSCount],[SMSTotal]	
Field Description	TAG	Command specific TAG number. If present unit answer must contain the same TAG number. (Max. 5 characters)
	Password	Unit current password. (Max. 4 characters)
	HomeGPRS	Day limit of GPRS session open attempts for home network. Max value = 200.
	RoamGPRS	Day limit of GPRS session open attempts for roaming networks. Max value = 200.
	SMS	Day limit of SMS. Max value = 200.
	HomeGPRSCount	GPRS session open attempts counter for home

		network
	RoamGPRSCount	GPRS session open attempts counter for roaming networks
	SMSCount	SMS counter
	SMSTotal	SMS send during current month. Device will not send more than 100 sms within one month.
Example Query	Query: \$AL+LIMITS=0000,? Example answer: \$QR:LIMITS=20,10,3,0,0,0,0	
Example Command	\$AL+LIMITS=0000,20,10,5	
Ok Answer	\$OK:LIMITS+[TAG]	
Error Answer	\$ER:LIMITS+[TAG]=[ErrorCode]	

NETLISTADD

Command	NETLISTADD	
Description	This command provides possibility to add GSM operator codes to white or black lists. To start controlling GSM operators code User need to enable option in command NETLISTENABLE.	
Command Syntax	\$AL+NETLISTADD+[TAG]=[Password],[list_number],[GSMOPERATOR_CODE],[GSMOPERATOR_CODE], [GSMOPERATOR_CODE],....	
Field Description	TAG	Command specific TAG number. If present unit answer must contain the same TAG number. (Max. 5 characters)
	Password	Unit current password. (Max. 4 characters)
	List_number	0 – list with GSM operators that will be blocked (black list) 1 – list with GSM operators whom device will connect to GPRS (white list)
	GSMOPERATOR_CODE	26002 – this is example of GSM operator code – mainly contain 5 digits there three first mean country code. 260 is Poland. 262 Germany and so on....
Example	\$AL+NETLISTADD=0000,1,26001,26002,26003	

Command	
Ok Answer	\$OK:NETLISTADD+[TAG]
Error Answer	\$ER:NETLISTADD+[TAG]=[ErrorCode]

NETLISTDELETE

Command	NETLISTDELETE	
Description	This command provides possibility to delete GSM operator codes from white or black list.	
Command Syntax to delete selected GSM operator code	\$AL+NETLISTADD+[TAG]=[Password],[list_number],[GSMOPERATOR_CODE],[GSMOPERATOR_CODE], [GSMOPERATOR_CODE],....	
Command Syntax to delete all GSM operator codes from list	\$AL+NETLISTADD+[TAG]=[Password],[list_number],0	
Field Description	TAG	Command specific TAG number. If present unit answer must contain the same TAG number. (Max. 5 characters)
	Password	Unit current password. (Max. 4 characters)
	List_number	0 – list with GSM operators that will be blocked (black list) 1 – list with GSM operators whom device will connect to GPRS (white list)
	GSMOPERATOR_CODE	26002 – this is example of GSM operator code – mainly contain 5 digits there three first mean country code. 260 is Poland. 262 Germany and so on....
Example	\$AL+NETLISTDELETE=0000,1,26001,26002,26003	

Command	\$AL+NETLISTDELETE=0000,1,0
Ok Answer	\$OK:NETLISTDELETE+[TAG]
Error Answer	\$ER:NETLISTDELETE+[TAG]=[ErrorCode]

NETLISTREAD

Command	NETLISTREAD	
Description	This command provides possibility to read saved GSM operator codes to white or black lists.	
Command Syntax	\$AL+NETLISTREAD+[TAG]=[Password],[List_number],[Group_of_selected_8_codes]	
Field Description	TAG	Command specific TAG number. If present unit answer must contain the same TAG number. (Max. 5 characters)
	Password	Unit current password. (Max. 4 characters)
	List_number	0 – list with GSM operators that will be blocked (black list) 1 – list with GSM operators whom device will connect to GPRS (white list)
	Group_of_selected_8_codes	0 – first group with 8 GSM codes 1 – second group with 8 GSM codes 2 – third group with 8 GSM codes
Example Command	\$AL+NETLISTREAD=0000,1,1	
Ok Answer	\$OK:NETLISTREAD+[TAG]	
Error Answer	\$ER:NETLISTREAD+[TAG]=[ErrorCode]	

NETLISTENABLE

Command	NETLISTENABLE
Description	This command provides possibility to enable working of white or black list.

	User must select between white or black list. To operate with NETLIST use NETLISTADD or NETLISTDELETE commands. To read actual black or white list use NETLISTREAD command.	
Command Syntax	\$AL+NETLISTENABLE+[TAG]=[Password],[enable],[List_number],[mode]	
Field Description	TAG	Command specific TAG number. If present unit answer must contain the same TAG number. (Max. 5 characters)
	Password	Unit current password. (Max. 4 characters)
	Enable	0 – NETLIST command not working 1 – NETLIST command is working
	List_number	0 – list with GSM operators that will be blocked (black list) 1 – list with GSM operators whom device will connect to GPRS (white list)
	Mode	0 – Device will use full code e.g. 26002 1 – Device will use country codes 26002
Example Command	\$AL+NETLISTENABLE=0000,1,1,1	
Ok Answer	\$OK:NETLISTENABLE+[TAG]	
Error Answer	\$ER:NETLISTENABLE+[TAG]=[ErrorCode]	

OUTS

Command	OUTS	
Description	This command provides possibility to control device outputs	
Command Syntax	\$AL+OUTS+[TAG]=[Password],[OutputID],[OutputControl],[Duration],[ToggleTimes]	
Field Description	TAG	Command specific TAG number. If present unit answer must contain the same TAG number. (Max. 5 characters)
	Password	Unit current password. (Max. 4 characters)
	OutputID	Output number:

		1 – output 1 S8 = JP2-2 2 – output 2 S8 = JP2-1 3 – output 3 S8 not available 4 – output 4 S8 not available
	OutputControl	0 – disabled 1 – enabled
	Duration	Output activation time in 100ms units. Setting to 0 means continuous activation. (Min. 1, Max. 255)
	Toggle Times	Output state toggle times. (Max. 255) – not used
Example Command	\$AL+OUTS=0000,1,1,50,0	
Ok Answer	\$OK:OUTS+[TAG]	
Error Answer	\$ER:OUTS+[TAG]=[ErrorCode]	

POWERMODE

Command	POWERMODE	
Description	This command provides possibility to set device power mode.	
Command Syntax	\$AL+POWERMODE+[TAG]=[Password],[powerMode]	
Query Answer Syntax	\$QR:POWERMODE+[TAG]=[powerMode]	
Field Description	TAG	Command specific TAG number. If present unit answer must contain the same TAG number. (Max. 5 characters)
	Password	Unit current password. (Max. 4 characters)
	Power Mode	0 – ACC OFF causes GPS sleep 1 – GPS never sleeps 2 – ACC OFF causes GPS sleep and modem can

	enter sleep mode.
Example Query	Query: \$AL+POWERMODE=0000,? \$QR:POWERMODE=1
Error Answer	\$ER:POWERMODE+[TAG]=[ErrorCode]

QUST

Command	QUST	
Description	This command provides possibility to query unit connection parameters.	
Command Syntax	\$AL+QUST+[TAG]=[Password],?	
Query Answer Syntax	\$QR+QUST+[TAG]=[OperatorName],[Signal],[ConnectionState]	
Field Description	TAG	Command specific TAG number. If present unit answer must contain the same TAG number. (Max. 5 characters)
	OperatorName	GSM operator name. (Max. 15 characters)
	Signal	GSM signal strength, range 0-31
	ConnectionState	Connection to server state: 0 – disconnected 1 – connected
Example Query	Query: \$AL+QUST=0000,? Example answer: \$QR:QUST="Era",29,1	
Error Answer	\$ER:QUST+[TAG]=[ErrorCode]	

RESET

Command	RESET	
Description	This command provides possibility to perform unit reboot procedure. Command causes complete power down of GSM and GPS module for a few seconds. I/O and CAN module is not restarted.	
Command Syntax	\$AL+RESET+[TAG]=[Password]	
Field Description	TAG	Command specific TAG number. If present unit answer must contain the same TAG number. (Max. 5 characters)

	Password	Unit current password. (Max. 4 characters)
Example Command	\$AL+RESET=0000	
Ok Answer	\$OK:RESET+[TAG]	
Error Answer	\$ER:RESET+[TAG]=[ErrorCode]	

REBOOT

Command	REBOOT	
Description	This command provides possibility to perform unit reboot procedure. Command causes complete power down of GSM and GPS module for a few seconds. I/O and CAN module is not restarted.	
Command Syntax	\$AL+REBOOT+[TAG]=[Password]	
Field Description	TAG	Command specific TAG number. If present unit answer must contain the same TAG number. (Max. 5 characters)
	Password	Unit current password. (Max. 4 characters)
Example Command	\$AL+REBOOT=0000	
Ok Answer	\$OK:REBOOT+[TAG]	
Error Answer	\$ER:REBOOT+[TAG]=[ErrorCode]	

SET3D

Command	SET3D	
Description	This command provides possibility to calibrate 3D internal sensor. Just after sending this command 3D sensor will recognize directions while driving – forward, backwards, left and right.	
Command Syntax	\$AL+SET3D+[TAG]=[Password]	
Field Description	TAG	Command specific TAG number. If present unit answer must contain the same TAG number. (Max. 5 characters)
	Password	Unit current password. (Max. 4 characters)
Example Command	\$AL+SET3D=0000	

Ok Answer	\$OK:SET3D+[TAG]
Error Answer	\$ER:SET3D+[TAG]=[ErrorCode]

SETECO

Command	SETECO	
Description	This command configures Eco driving control parameters	
Command Syntax	\$AL+SETECO+[TAG]=[Password],[enable][AT],[AS],[BT],[BS]	
Query command	\$AL+SETECO+[TAG]=[Password],?	
Query Answer Syntax	\$QR:SETECO+[TAG]=[enable][AT],[AS],[BT],[BS]	
Field Description	TAG	Command specific TAG number. If present unit answer must contain the same TAG number. (Max. 5 characters)
	Password	Unit current password. (Max. 4 characters)
	enable	0 – Eco driving default enabled 1 – Dedicated to Customer NOTE: setting ATAS, BT, BS parameters also possible when function disabled (0). This will affect [Rapid_accelerations] and [Rapid_brakings] value counting.
	AT,AS,BT,BS	CAN specific parameters used for rapid accelerations and braking are calculation. Refer to CAN Module documentation for details
Example Command	\$AL+SETECO=0000,1,10,50,10,50	
Ok Answer	\$OK:SETECO+[TAG]	
Error Answer	\$ER:SETECO+[TAG]=[ErrorCode]	

SETGPSKM

Command	SETGPSKM
Description	This command provides possibility to set GPS mileage counter value.

Command Syntax	\$AL+SETGPSKM+[TAG]=[Password],[milValue],[mode]	
Field Description	TAG	Command specific TAG number. If present unit answer must contain the same TAG number. (Max. 5 characters)
	Password	Unit current password. (Max. 4 characters)
	Mil Value	New mileage starting value in kilometers (for mode 1) meters (for mode 3)
	mode	GPS mileage counter mode: 0 – use mileage data from CAN module 1 – use incremental mileage data from GPS (unit: 1km) 2 – use differential mileage data from GPS (unit: 1m) Mileage value is counted from last frame generated. 3 – use incremental mileage data from GPS (unit: 1m) 4 – Use total mileage from CAN in total_distance, in mileageGPS use differential between generated data frames. 5 – Use total mileage from CAN in total_distance, use incremental mileage data from GPS (unit: 1m)
Example Command	\$AL+SETGPSKM=0000,47324,1	
Ok Answer	\$OK:SETGPSKM+[TAG]	
Error Answer	\$ER:SETGPSKM+[TAG]=[ErrorCode]	

SETPOINTS

Command	SETPOINTS
Description	This command provides possibility to set and query fuel analog characteristics points. It is possible to define max 50 points at a time. Defining total 32 points is possible. First 16 points are reserved for analog input 1, while another 16 for Analog input 2. Points are sorted automatically by the system and placed in appropriate order in the internal memory. Defining point with voltage value that currently exists will replace existing

	point.	
Command Syntax	– \$AL+SETPOINTS+[TAG]=[Password],[X1],[Y1],[X2],[Y2]... -sets calibration points – \$AL+SETPOINTS+[TAG]=[Password],[index] - resets stored fuel probe points – \$AL+SETPOINTS+[TAG]=[Password],[index],? - query all calibration data points for fuel probe	
Command Answer	– \$OK:SETPOINTS+[TAG] – \$OK:SETPOINTS+[TAG] – \$QR:SETPOINTS+[TAG]= [X1],[Y1],[X2],[Y2]....	
Field Description	TAG	Command specific TAG number. If present unit answer must contain the same TAG number. (Max. 5 characters)
	Password	Unit current password. (Max. 4 characters)
	X1, Y1, X2, Y2, ...	Pairs of points coordinate (Up to 16 pairs). X1 – point voltage e.g. 1234 means 12,34V Y1 – corresponding percent of fuel level range 0 – 1000 for first input range 2000-3000 for second input (2000 added) e.g. 450 means 45,0% (for first input) 2450 means 45,0% (for second input) Single SETPOINTS command can contain mixed points for both inputs.
	index	Number of fuel tank: 0 – fuel probe connected to JP1-5 9 – fuel probe connected to JP2-8
Error Answer	\$ER:SETPOINTS+[TAG]=[ErrorCode]	

SETRTC

Command	SETRTC
Description	This command provides possibility to set RTC clock manually in case of lack GPS signal.

Command Syntax	\$AL+SETRTC+[TAG]=[Password],[Time]	
Field Description	TAG	Command specific TAG number. If present unit answer must contain the same TAG number. (Max. 5 characters)
	Password	Unit current password. (Max. 4 characters)
	Time	RTC time in format similar to field [DateTime] in data frames (YYYYMMDDHHMMSS). Time is UTC (GMT+0 time zone)
Example Query	Query: \$AL+SETRTC=0000,20141212090823 \$QR:SETRTC	
Error Answer	\$ER:SETRTC+[TAG]=[ErrorCode]	

SLEEPMODE

Command	SLEEPMODE	
Description	Device can go to deep sleep mode, where power consumption is minimum. Device will wake up after time set in command to send one actual data frame (with refreshed GPS position, CAN data...).	
Command Syntax	\$AL+SLEEPMODE+[TAG]=[Password],[enable],[time],[sleep_cause]	
Field Description	TAG	Command specific TAG number. If present unit answer must contain the same TAG number. (Max. 5 characters)
	mode	0 – disabled 1 – Device will generate data frames only according to 3D overloads and in case of sabotage (sabotage means that JP1-5 input is active and data frames will be generated every 30 seconds while this) 2 – Device will generate data frames only at defined time 3 – Device will generate data frames only according to 3D overloads and in case of change state of one of inputs

	time	Time of sleep duration. Value in minutes. Minimum time 10 minutes.
	sleep_cause	0 – Device will go to sleep when the main power will turn off 1 – Device will go to sleep when the ignition will turn off
	Password	Unit current password. (Max. 4 characters)
Example Query	Query: \$AL+SLEEPMODE=0000,? Example answer: \$QR:SLEEPMODE=1,10,1	

SMID

Command	SMID	
Description	This command provides possibility to query SIM card SMID number	
Command Syntax	\$AL+SMID+[TAG]=[Password],?	
Field Description	TAG	Command specific TAG number. If present unit answer must contain the same TAG number. (Max. 5 characters)
	Password	Unit current password. (Max. 4 characters)
Example Query	Query: \$AL+SMID=0000,? Example answer: \$QR:SMID=8948020509036806915	

SMSADDINFO

Command	SMSADDINFO	
Description	This command provides possibility to set and query unit tracking SMS and tracking event reporting.	
Command Syntax	\$AL+SMSADDINFO+[TAG]=[Password],[Enable]	
Query Answer Syntax	\$QR:SMSADDINFO+[TAG]=[Enable]	
Field Description	TAG	Command specific TAG number. If present unit answer must contain the same TAG number. (Max. 5 characters)
	Password	Unit current password. (Max. 4 characters)
	Enable	0 – Disabled

		1 – Enabled 2 – Enabled (sending sms contains event id instead of telemetry frame)
Example Query	Query: \$AL+SMSADDINFO=[Password],? Example answer: \$QR:SMSADDINFO=1	
Example Command	\$AL+SMSADDINFO=0000,0	
Ok Answer	\$OK:SMSADDINFO+[TAG]	
Error Answer	\$ER:SMSADDINFO+[TAG]=[ErrorCode]	

SMSPREFIX

Command	SMSPREFIX	
Description	This command provides possibility to set and query unit tracking SMS and tracking event reporting.	
Command Syntax	\$AL+SMSPREFIX+[TAG]=[Password],[Reserved],[Prefix]	
Query Answer Syntax	\$QR:SMSPREFIX+[TAG]=[Reserved],[Prefix]	
Field Description	TAG	Command specific TAG number. If present unit answer must contain the same TAG number. (Max. 5 characters)
	Password	Unit current password. (Max. 4 characters)
	Prefix	String (max 20 characters)
Example Query	Query: \$AL+SMSPREFIX=[Password],? Example answer: \$QR:SMSPREFIX=0,test1_	
Example Command	\$AL+SMSADDINFO=0000,0,test1_	
Ok Answer	\$OK:SMSADDINFO+[TAG]	
Error Answer	\$ER:SMSADDINFO+[TAG]=[ErrorCode]	

SMSREPORT

Command	SMSREPORT
Description	This command provides possibility to set and query unit tracking SMS and tracking event reporting. See EVENTID [Report ID] Codes Description to

	check meaning of each EVENT.	
Command Syntax	\$AL+SMSREPORT+[TAG]=[Password],[index],[Enable],[SMSHomeEnable],[SMSRoamEnable]	
Query Answer Syntax	\$QR:SMSREPORT+[TAG]=[Enable],[SMSHomeEnable],[SMSRoamEnable]	
Field Description	TAG	Command specific TAG number. If present unit answer must contain the same TAG number. (Max. 5 characters)
	Password	Unit current password. (Max. 4 characters)
	index	Event id (Min. 0, Max. 253)
	Enable	0 – Event is disabled (setting this parameter will cause that event will not generate sending telemetry frame and sms reports) 1 – Event is enabled
	SMSHomeEnable	0 – Disabled 1 – Enabled (sending sms in home network when event [index] appears) SMS is generate only where there is no connection with TCP server 2 – Enabled (sending sms in home network when event [index] appears) SMS from this event is always generated
	SMSRoamEnable	0 – Disabled 1 – Enabled (sending sms in Roaming network when event [index] appears) SMS is generate only where there is no connection with TCP server 2 – Enabled (sending sms in home network when event [index] appears) SMS from this event is always generated
Example Query	Query: \$AL+SMSREPORT=[Password],11,? Example answer: \$QR:SMSREPORT=1,0,0	

Example Command	\$AL+SMSREPORT=0000,11,1,1,1
Ok Answer	\$OK:SMSREPORT+[TAG]
Error Answer	\$ER:SMSREPORT+[TAG]=[ErrorCode]

SOFTUPDATE

Command	SOFTUPDATE	
Description	This command provides possibility to update unit firmware. Parameters in this command are optional and if not provided unit will use default factory settings. For detailed description of software update procedure	
Command Syntax	\$AL+SOFTUPDATE+[TAG]=[Password],[ftpAdr],[ftpUser],[ftpPass]	
Field Description	TAG	Command specific TAG number. If present unit answer must contain the same TAG number. (Max. 5 characters)
	Password	Unit current password. (Max. 4 characters)
	ftpAdr	FTP server address (Max. 29 characters)
	ftpUser	FTP login (Max. 14 characters)
	ftpPass	FTP password (Max. 14 characters)
Example Command	\$AL+SOFTUPDATE=0000,ftp.com.pl,login,haslo	
Asynchronous report	Unit after performing update will send asynchronous report with the following syntax: UPDATESTATUS: w: [ModemUpdate], z: [IOProcUpdate] Modem Update – 1 – successful modem firmware update, 0 – modem firmware update error IOProcUpdate – 1 – successful IO processor update, 0 – IO processor update error After sending Ok answer unit can send another asynchronous error answer with error code (e.g. ftp download timeout, file corrupted, see ErrorCode details)	
Ok Answer	\$OK:SOFTUPDATE+[TAG]	
Error Answer	\$ER:SOFTUPDATE+[TAG]=[ErrorCode]	

SPEEDALARM

Command	SPEEDALARM	
Description	Device is activating output JP2-2 when speed limits is reached. Choose speed source, value and minimum time.	
Command Syntax	\$AL+ SPEEDALARM+[TAG]=[Password],[source],[value],[minimum_time]	
Field Description	TAG	Command specific TAG number. If present unit answer must contain the same TAG number. (Max. 5 characters)
	Password	Unit password
	source	0 – Disabled 1 – Enabled (GPS speed) 2 - Enabled (CAN speed)
	value	Limit in km/h
	Minimum_time	Value set to filter minimum over speed events
Example Query	Command: \$AL+SPEEDALARM=0000,1,100,5 Query: \$AL+ SPEEDALARM=0000,? Example answer: \$QR:SPEEDALARM=1,100,5	

STATUS

Command	STATUS	
Description	This command provides possibility to query unit status.	
Command Syntax	\$AL+STATUS+[TAG]=[Password],?	
Query Answer Syntax	\$QR:STATUS+[TAG]=[ModemSoftware],[GPS],[TCP],[GPRSr],[GPRSm],[Gd],[Ge],[Zs],[Lr],[Gs],[Cs],[Tr],[Ss],[Reg],[Gsup]	
Field Description	TAG	Command specific TAG number. If present unit answer must contain the same TAG number. (Max. 5 characters)
	Password	Unit current password. (Max. 4 characters)
	Modem Software	Modem software compilation data
	GPS	Field describing GPS status. This field is composed of two following fields:

	• GPS FIX indicator: ◦ 1 – FIX ◦ 0 – no FIX • GPS data indicator: ◦ 1 – data ok ◦ 0 – no data from GPS unit
TCP	Connection to server status: • 1 – connected • 0 – disconnected
GPRSr	Number of sequential GPRS session attempts
GPRSm	Current GPRS connectivity mode: • 0 –device is working with mode of continuously connection to GPRS using internal algorithm.
Gd	Number of disconnection events caused by server.
Ge	Number of disconnection events caused by GPRS errors.
Zs	IO processor operation status: • 1 – ok • 0 – IO processor failure, software update required
Lr	Last unit reset source: • 1 – power on or internal unit safety mechanism • 2 – internal software mechanism • 3 – successful modem software update • 4 – unsuccessful modem software update
Gs	GSM signal strength with range 0-31 (31 = best signal)
Cs	CAN module status: • 0 – disconnected

		• 1 – connected (CAN Module) • 2 – connected (CAN SEO)
	Tr	Unit total reset count
	Ss	Unit security status
	Reg	GSM registration status • 0 – searching for network • 1 – registered to home network • 5 – registered to roaming network
	Gsup:	Current network GPRS support 0 – GPRS not supported 1 – GPRS supported 2 – GPRS and EDGE supported
Example Query	Query: \$AL+STATUS=0000,? Example answer: \$QR:STATUS=SV:Feb 25 2010 11:43:17, GPS: 0,1,TCP: 1,GPRSr: 0,GPRSm: 0,Gd: 0,Ge: 0,Zs: 0,Lr: 1,Gs: 27,Cs: 0,Tr: 1186,Ss: 1,Reg: 1,Gsup:2	
Error Answer	\$ER:STATUS+[TAG]=[ErrorCode]	

SUPANALOG

Command	SUPANALOG	
Description	This command replaces VoltageAnalog1 with VoltageAnalog5.	
Command Syntax	\$AL+SUPANALOG+[TAG]=[Password],[enable]	
Field Description	TAG	Command specific TAG number. If present unit answer must contain the same TAG number. (Max. 5 characters)
	Password	Unit current password. (Max. 4 characters)
	enable	0 – disable 1 – enable
Example Command	\$AL+SUPANALOG=0000,1	
Ok Answer	\$OK:SUPANALOG+[TAG]	
Error Answer	\$ER:SUPANALOG+[TAG]=[ErrorCode]	

SYNCFRAMEMODE

Command	SYNCFRAMEMODE				
Description	This command provides possibility to change synchronization frame format.				
		Synchronization Header (16-bit)	Synchronization ID (16-bit)	Unit ID (64-bit)	End Markers (16-bit)
	Received Frame Example	0xFA 0xF9	0x29 0x01	0x93 0x39 0x01 0x79 0x78 0x12	0x13 0x10
Command Syntax	\$AL+SYNCFRAMEMODE+[TAG]=[Password],[enable]				
Field Description	TAG	Command specific TAG number. If present unit answer must contain the same TAG number. (Max. 5 characters)			
	Password	Unit current password. (Max. 4 characters)			
	enable	0 – disable 1 – enable			
Example Command	\$AL+SYNCFRAMEMODE=0000,1				
Ok Answer	\$OK: SYNCFRAMEMODE+[TAG]				
Error Answer	\$ER: SYNCFRAMEMODE+[TAG]=[ErrorCode]				

TACHOCARDBLOCK

Command	TACHOCARDBLOCK	
Description	This command provides possibility to disable inserting tachograph card id in data frame.	
Command Syntax	\$AL+TACHOCARDBLOCK+[TAG]=[Password],[Enabled]	
Query Answer Syntax	\$QR: TACHOCARDBLOCK+[TAG]=[Enabled]	
Field Description	TAG	Command specific TAG number. If present unit answer must contain the same TAG number. (Max. 5 characters)

	Password	Unit current password. (Max. 4 characters)
	Enabled	0 – function disabled- Card Id is inserted in data frame 1 – function enabled
Example Query	Query: \$AL+ TACHOCARDBLOCK =0000,? \$QR: TACHOCARDBLOCK =1	
Error Answer	\$ER: TACHOCARDBLOCK+[TAG]=[ErrorCode]	

TEMPID

Command	TEMPID	
Description	This command provides possibility to set and query DS18B20 thermometer codes for multiple thermometer support on 1-wire line	
Command Syntax	\$AL+TEMPID+[TAG]=[Password],[index],[ID] NOTE: Device will respond sending query with selected index. If new ID setting is unsuccessful ID field will be empty or contain old value	
Query command	\$AL+TEMPID+[TAG]=[Password],[index],?	
Query and Command Answer Syntax	\$QR:TEMPID+[TAG]=[index],[ID]	
Field Description	TAG	Command specific TAG number. If present unit answer must contain the same TAG number. (Max. 5 characters)
	Password	Unit current password. (Max. 4 characters)
	index	Number of slot to read/write thermometer ID code. Value range: 1 – 6 For query also index 0 is possible. This reads currently connected thermometer code if there is only one connected.
	ID	DS18B20 ID code presented in ASCII hex format. Code is always 16 characters (8 bytes)
Example Command	Command: \$AL+TEMPID=0000,1,FB000003293AB428 Response: \$QR:TEMPID=1,FB000003293AB428	

Example Query	Query: \$AL+TEMPID=0000,1,? \$QR:TEMPID=1,FB000003293AB428
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TIMER

Command	TIMER	
Description	This command provides possibility to enable periodic telemetry reports or heartbeat frames	
Command Syntax	\$AL+TIMER+[TAG]=[Password],[Mode],[Time],[Period]	
Query Answer Syntax	\$QR:TIMER+[TAG]=[Mode],[Time],[Period]	
Field Description	TAG	Command specific TAG number. If present unit answer must contain the same TAG number. (Max. 5 characters)
	Password	Unit current password. (Max. 4 characters)
	Mode	0 – function disabled 1 – periodic timer enabled 2 – periodic timer enabled (uses parameter Period) 3 – mode 2 with blocking updating gps data in TIMER frames
	Time	Time of report generation in format HHMMSS. Used in mode 1
	Period	Period (seconds) for heartbeat frames. Next frame will be generated after specified period from last frame. Used in mode 2
Example Query	Query: \$AL+TIMER=0000,?	
To set heartbeat every 1h	\$QR:TIMER=2,000000,3600	
Error Answer	\$ER:TIMER+[TAG]=[ErrorCode]	

TOW

Command	TOW
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Description	This command provides possibility to enable and query towing report settings. In case of detecting towing unit will generate telemetry report 9.	
Command Syntax	\$AL+TOW+[TAG]=[Password],[Enable],[SatUsed],[MinSpeed],[MaxSpeed],[Duration]	
Query command	\$AL+TOW+[TAG]=[Password],?	
Query Answer Syntax	\$QR:TOW+[TAG]=[Enable],[SatUsed],[MinSpeed],[MaxSpeed],[Duration]	
Field Description	TAG	Command specific TAG number. If present unit answer must contain the same TAG number. (Max. 5 characters)
	Password	Unit current password. (Max. 4 characters)
	Enable	0 – disables report 1 – enables report
	SatUsed	Minimum number of satellites used for measurement
	MinSpeed	Minimum speed [km/h]
	MaxSpeed	Maximum speed [km/h]
	Duration	Duration of vehicle movement [s]
Example Query	Query: \$AL+TOW=0000,? \$QR:TOW=1,5,0,255	
Error Answer	\$ER:TOW+[TAG]=[ErrorCode]	

TRACKING

Command	TRACKING	
Description	This command provides possibility to set and query unit tracking parameters.	
Command Syntax	\$AL+TRACKING+[TAG]=[Password],[Mode],[Time],[Distance],[Times],[Basis],[CommType]	
Query Answer Syntax	\$QR:TRACKING+[TAG]=[Mode],[Time],[Distance],[Times],[Basis],[CommType]	

Field Description	TAG	Command specific TAG number. If present unit answer must contain the same TAG number. (Max. 5 characters)
	Password	Unit current password. (Max. 4 characters)
	Mode	Tracking mode: 1 – Time Mode Telemetry report is sent if the time elapsed from last report is equal or greater then defined time. 2 – Distance Mode Telemetry report is sent if the distance change from last position is equal or greater then defined. 3 – Intelligent Mode Telemetry report is sent if the distance and the time or movement angle change equal or are greater than defined in UNPM and TRACKING commands. 5 – Time Mode + ACC ON The same as mode 1 but additional ignition input active state required. 6 – Distance Mode + ACC ON The same as mode 2 but additional ignition input active state required. 7 – Intelligent Mode + ACC ON The same as mode 3 but additional ignition input active state required. 8 – Sensitive Mode Telemetry report is sent if the distance or the time or movement angle change equal or are greater than defined in UNPM and TRACKING commands.
	Time	Tracking time value [s]. (Min. 0, Max. 65535)
	Distance	Tracking distance value [m]. (Min. 0, Max. 65535)
	Times	Number of packages to be sent. 0 values mean continuous tracking. (Min. 0, Max. 65535)

	Basis	0 – Unit will generate only if GPS acquired proper position data 1 – Unit will generate packets regardless to presence of GPS signal
	CommType	0 – Serial Port 1 – Reserved 2 – SMS 3 – GPRS
Example Query	Query: \$AL+TRACKING=[Password],? Example answer: \$QR:TRACKING=7,15,500,0,1,3	
Example Command	\$AL+TRACKING=0000,7,15,500,0,1,3	
Ok Answer	\$OK:TRACKING+[TAG]	
Error Answer	\$ER:TRACKING+[TAG]=[ErrorCode]	

TRACKROAM

Command	TRACKROAM	
Description	This command provides possibility to set and query unit tracking parameters used in roaming when gprsRoamingMode is set to value 4 or 5.	
Command Syntax	\$AL+TRACKROAM+[TAG]=[Password],[Mode],[Time],[Distance],[Times],[Basis],[CommType]	
Query Answer Syntax	\$QR:TRACKROAM+[TAG]=[Mode],[Time],[Distance],[Times],[Basis],[CommType]	
Field Description	TAG	Command specific TAG number. If present unit answer must contain the same TAG number. (Max. 5 characters)
	Password	Unit current password. (Max. 4 characters)
	Mode	Tracking mode: 1 – Time Mode Telemetry report is sent if the time elapsed from last report is equal or greater than defined time. 2 – Distance Mode

		Telemetry report is sent if the distance change from last position is equal or greater then defined. 3 – Intelligent Mode Telemetry report is sent if the distance and the time or movement angle change equal or are greater than defined in UNPM and TRACKIN commands. 5 – Time Mode + ACC ON The same as mode 1 but additional ignition input active state required. 6 – Distance Mode + ACC ON The same as mode 2 but additional ignition input active state required. 7 – Intelligent Mode + ACC ON The same as mode 3 but additional ignition input active state required. 8 – Sensitive Mode Telemetry report is sent if the distance or the time or movement angle change equal or are greater than defined in UNPM and TRAROAM commands.
	Time	Tracking time value [s]. (Min. 0, Max. 65535)
	Distance	Tracking distance value [m]. (Min. 0, Max. 65535)
	Times	Number of packages to be sent. 0 values mean continuous tracking. (Min. 0, Max. 65535)
	Basis	0 – Unit will generate only if GPS acquired proper position data 1 – Unit will generate packets regardless to presence of GPS signal
	CommType	0 – Serial Port 1 – Reserved 2 – SMS 3 – GPRS
Example	Query: \$AL+TRACKROAM=[Password],?	

Query	Example answer: \$QR:TRACKROAM=6,500,5000,0,1,3
Example Command	\$AL+TRACKROAM=0000,7,15,500,0,1,3
Ok Answer	\$OK:TRACKROAM+[TAG]
Error Answer	\$ER:TRACKROAM+[TAG]=[ErrorCode]

UNPM

Command	UNPM	
Description	This command provides possibility to set and query primary unit configuration parameters. Unit will reboot in 10s. After changing configuration with this command.	
Command Syntax	\$AL+UNPM+[TAG]=[Password],[UnitID],[NewPassword],[simPin],[R],[R],[R],[R],[gprsRoamingMode],[trackingAngle]	
Query Answer Syntax	\$QR:UNPM+[TAG]=[UnitID],[Password],[simPin],[R],[R],[R],[R],[gprsRoamingMode],[trackingAngle]	
Field Description	TAG	Command specific TAG number. If present unit answer must contain the same TAG number. (Max. 5 characters)
	Password	Unit current password. (Max. 4 characters)
	UnitID	Unit current number. (Max. 19 characters)
	NewPassword	Unit new password. If command is not changing password, field "NewPassword" should be the same as "Password". (Max. 4 characters)
	simPin	SIM card pin.(Max. 6 characters)
	R	Reserved for further use.

	gprsRoamingMode	Field defining unit behavior in network roaming mode. Below you can find possible values with description: Not available in GPRS S8 Not available in GPRS S8 Not available in GPRS S8 Not available in GPRS S8 Unit disconnect in roaming and store all data to telemetry archive. Unit will send all telemetry data in chronological order requiring confirmation of delivery of every frame Similar to 4 mode, but additionally unit will operate in Roaming using TRACKROAM settings
	trackingAngle	Decimal angle value. Unit heading change by this value will generate telemetry packet if unit is configured in proper tracking mode. See TRACKING command. (Min. value 5, Max. value 359)
Example Query	Query: \$AL+UNPM=0000,? Example answer: \$QR:UNPM=210000123,0000,9998,7,7,7,7,4,20	
Example Command	\$AL+UNPM=0000,210000123,abcd,9998,7,7,7,7,4,50	
Ok Answer	\$OK:UNPM+[TAG]	
Error Answer	\$ER:UNPM+[TAG]=[ErrorCode]	

VERSION

Command	VERSION	
Description	This command provides possibility to query unit software version (communication subsystem)	
Command Syntax	\$AL+VARSION+[TAG]=[Password],?	
Query Answer Syntax	\$QR:VARSION+[TAG]=[Software Version]	
Field Description	TAG	Command specific TAG number. If present unit answer must contain the same TAG number. (Max. 5 characters)

	Password	Unit current password. (Max. 4 characters)
	Software Version	Software version string (Max. 35 characters)
Example Query	Query: \$AL+VERSION=0000,? Example answer: \$QR:VERSION=Feb 23 2010 08:34:36	
Error Answer	\$ER:RMSK+[TAG]=[ErrorCode]	

VOLTDETECT

Command	VOLTDETECT	
Description	This command enables voltage dropout detection. Voltage drop event generates telemetry frame with reportID = 47	
Command Syntax	\$AL+VOLTDETECT+[TAG]=[Password],[enable],[treshhold],[time],[delay],[send_option]	
Query command	\$AL+VOLTDETECT+[TAG]=[Password],?	
Query Answer Syntax	\$QR:VOLTDETECT+[TAG]=[enable],[treshhold],[time],[delay],[send_option]	
Field Description	TAG	Command specific TAG number. If present unit answer must contain the same TAG number. (Max. 5 characters)
	Password	Unit current password. (Max. 4 characters)
	enable	0 – Function disabled 1 – Function enabled then ignition ON 2 – Function enabled regardless of ignition state
	treshhold	Threshold value below which report is generated (unit: 10mV) example: 800 = 8V 1256 = 12,56V
	time	Minimum duration (seconds) of low voltage to generate report (seconds)
	delay	Delay (seconds) to generate next report in case of

		continuous low voltage Note: value 0 = generate report only once per threshold crossing
	sending	Not supported in S8 (see SMSREPORT command)
Example Query	Query: \$AL+VOLTDETECT=0000,? Example answer: \$QR:VOLTDETECT=1,800,10,0,0	
Error Answer	\$ER:VOLTDETECT+[TAG]=[ErrorCode]	

ZCONFIG

Command	ZCONFIG	
Description	This command provides possibility to set various configuration options in I/O processor	
Command Syntax	\$AL+ZCONFIG+[TAG]=[Password],[State],[ConfigOption]	
Query command	\$AL+ZCONFIG+[TAG]=[Password],?	
Query Answer Syntax	\$QR:ZCONFIG+[TAG]=[OptionStates]	
Field Description	TAG	Command specific TAG number. If present unit answer must contain the same TAG number. (Max. 5 characters)
	Password	Unit current password. (Max. 4 characters)
	State	0 – disable option 1 – enable option default: all options disabled
	ConfigOption	Number of configuration function: 2 – replace CAN [engine_temp] by Dallas digital thermometer temperature 3 – replace CAN [engine_speed] by value calculated from counting input. 4 – enable CAN units unification (default CAN value units are describes is Telemetry Packets section)

	5 – enable Dallas Immobilizer features 7 – enable CAON [total_distance] conversion to miles 8 – enable verification of Dallas ID defined on DALLASID list 9 – enable GARMIN FMI protocol support (exhibit some other functionality) 10 – enable 3D sensor (if installed on board) 12 – enable CAN [Total_Fuel] [Total_distance] [Fuel_level] values to be buffered by the device 14 – enable CAN asynchronous events blocking 16 – enable support of MOVON/MOBILEYE 17 – dedicated customer feature 18 – counting input mode (0 means that device will count analog engine speed impulses, 1 means that device will work with fuel flow meter analog impulses) 19 – dedicated customer feature 20 – asynch DrVID frame enable (TMR feature) in case of change in status/card device will generate asynch frame DRVID. 22 – replacing total fuel value by analog impulses 23 – CAN speed source(0 - default,1- tachograph) 24 – enable support for Technoton fuel digital probe 25 – RFID function enable 26 – RFID PWSTK - select reader type (0-NORDICID, 1-PWSTK) 27 – Dedicated customer feature 28 – Dallas Immobilizer inv function [In state: authorized and expiring authorized output is disabled. In other cases output is disabled] 29 – VoltageAnalog1 and VoltageAnalog5 are replaced by INPUT1+ and INPUT2+ regardless of calibration state
	OptionStates String containing 0 or 1 values representing states of

		configuration options e.g. 0110000000000000 → Function 2 and 3 enabled
Example Query	Query: \$AL+ZCONFIG=0000,? Example answer: \$QR:ZCONFIG= 0110000000000000	
Example Command	\$AL+ZCONFIG=0000,1,3	
Ok Answer	Command is forwarded do I/O processor and generates no OK answer.	
Error Answer	\$ER:ZCONFIG+[TAG]=[ErrorCode]	

ZEROLIMITS

Command	ZEROLIMITS	
Description	This command provides possibility zero actual limits counters. After executing this command unit will reboot.	
Command Syntax	\$AL+ZEROLIMITS+[TAG]=[Password]	
Field Description	TAG	Command specific TAG number. If present unit answer must contain the same TAG number. (Max. 5 characters)
	Password	Unit current password. (Max. 4 characters)
Example Command	\$AL+ZEROLIMITS=0000	
Ok Answer	\$OK:ZEROLIMITS+[TAG]	
Error Answer	\$ER:ZEROLIMITS+[TAG]=[ErrorCode]	

ZMASK

Command	ZMASK	
Description	This command provides possibility to set various configuration masks in I/O processor	
Command Syntax	\$AL+ZMASK+[TAG]=[Password],[MaskNumber],[Mask]	
Query command	\$AL+ZMASK+[TAG]=[Password],[MaskNumber],?	
Query Answer Syntax	\$QR:ZMASK+[TAG]=[Mask1],[R]	
Field Description	TAG	Command specific TAG number. If present unit

		answer must contain the same TAG number. (Max. 5 characters)
	Password	Unit current password. (Max. 4 characters)
	MaskNumber	Number of configuration mask: 0 and 1 values in mask represents inversion state for corresponding bits in inputs field in data frames. Setting inversion for ignition and unused inputs sets bits in mask not affects bits in data frames.
	Mask	Mask value e.g. 0011000000000000
	Value1	Mask value
	R	Reserved for future parameters
Example Query	Query: \$AL+ZMASK=0000,? Example answer: \$QR:ZMASK=0011000000000000	
Example Command	\$AL+ZMASK=0000,1,0011000000000000 [please notice that You have to insert all 16 bits! In other case device will return with \$ER:ZMASK: 2)	
Ok Answer	Command is forwarded do I/O processor and generates no OK answer.	
Error Answer	\$ER:ZMASK+[TAG]=[ErrorCode]	

ZVALUE

Command	ZVALUE	
Description	This command provides possibility to set various configuration values in I/O processor	
Command Syntax	\$AL+ZVALUE+[TAG]=[Password],[ValueNumber],[Value]	
Query command	\$AL+ZVALUE+[TAG]=[Password],?	
Query Answer Syntax	\$QR:ZVALUE+[TAG]=[Value1],[Value2],[Value3],[Value4],[Value5],[Value6],[Value7],[Value8],[Value9],[Value10],[Value11],[Value12],[Value13],[Value14],[Value15][R]	
Field Description	TAG	Command specific TAG number. If present unit answer must contain the same TAG number. (Max. 5 characters)

Password	Unit current password. (Max. 4 characters)
ValueNumber	Number of configuration value: 1 – Correction multiplier for Total Fuel CAN parameter 3 – Fuel tank capacity for CAN unit unification 6 – Analog fuel tank capacity 8 – Engine RPM threshold for SETECO function 9 – CAN [Total_distance] correction multiplier 10 – Max accelerator pressure threshold for [Rapid_pedal_pressure] counter 11 – Max car speed threshold for [Drive_time_over_speedlimit] counter 12 – Max engine RPM threshold for [Drive_time_over_rpmlimit] counter 13 – Analog probe: Sample per filtration calculation. 14 – Analog probe: Sample period 15 – Divider for counting input 16 – Digital probe address no. 1. 17 – Digital probe address no. 2. 18 – Low Pass filter Treshold [ms] 20 – Correction value for CAN [Vehicle_speed]
Value	Value to set 1) range: 1 – 2000 (0.1% – 200%) default: 0 – correction disabled 3) range: 1 – 9999 (1 – 9999 liters) default: 0 – disabled 6) range: 1 – 9999 (1 – 9999 liters) default: 0 – calculation disabled 8) range: 1 – 9999 (1 – 9999 RPM) default: 0 – disabled

	9) range: 1 – 2000 (0.1% – 200%) default: 0 – correction disabled 10) range: 0 – 100 (0 – 100 %) default: 0 – counting total time above 0% 11) range: 0 – 250 (0 – 250 km/h) default: 0 – counting total drive time over speed limit 12) range: 0 – 9999 (0 – 9999 RPM) default: 0 – counting total time above speed limit 13) range: 0 – 50 (0-50 quantity of samples – filter for analog measure – 10 as default) 14) range: 0 – 50 (0 – 50 time of samples) 15) range: 1 – 100 (impulses will be divided by typed value) 20) range: 1 – 200 (1 – 200%) default: 0 – correction disabled
Value1, Value2, Value3, Value4, Value5, Value6, Value7, Value8, Value9, Value10, Value11, Value12,	Configuration values currently set in device

	Value13, Value14, Value15	
	R	Reserved for future parameters
Example Query	Query: \$AL+ZVALUE=0000,? Example answer: \$QR:ZVALUE=0,0,0,0,0,0,0,0,0,0,0,0,0	
Example Command	\$AL+ZVALUE=0000,3,2000	
Ok Answer	Command is forwarded do I/O processor and generates no OK answer.	
Error Answer	\$ER:ZVALUE+[TAG]=[ErrorCode]	

Remove of device – to use in other vehicle

In case of remove of device there is a necessary to reset CAN data that was read from previous car, to do that send:

RESETCANBUFFER

Command	RESETCANBUFFER	
Description	This command reset data buffer.	
Command Syntax	\$AL+RESETCANBUFFER+[TAG]=[Password]	
Field Description	TAG	Command specific TAG number. If present unit answer must contain the same TAG number. (Max. 5 characters)
	Password	Unit current password. (Max. 4 characters)
Example Command	\$AL+RESETCANBUFFER=0000	
Ok Answer	\$OK:RESETCANBUFFER+[TAG]	
Error Answer	\$ER:RESETCANBUFFER+[TAG]=[ErrorCode]	

CANCMD

Command	CANCMD
Description	This command provides possibility to send raw binary command directly to CAN module. For detailed CAN module commands and responses description see Can module protocol documentation.

Command Syntax	\$AL+CANCMD+[TAG]=[Password],[CMD_STRING]	
Answer Syntax	\$QR:CANCMD+[TAG]=[CAN_RESPONSE]	
Field Description	TAG	Command specific TAG number. If present unit answer must contain the same TAG number. (Max. 5 characters)
	Password	Unit current password. (Max. 4 characters)
	CMD_STRING	B34104FF08 – reset CAN-Logistic data
	CAN_RESPONSE	B442041F00E6 – correct response for finished CAN-Logistic data reset
Example Command	\$AL+CANCMD=0000,B34104FF08	
Ok Answer	\$QR:CANCMD=B442041F00E6	
Error Answer	\$ER:CANCMD+[TAG]=[ErrorCode]	