

TWIG MPTP RAW DATA
Version 1.0draft
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1 RAW DATA MPTP

1.1 RAW DATA REQUEST

Can use to make a "raw data report" request from the device

1.1.1 G,B,W,S,N (Beacon datablocks)

Specifies the "beacon types" which reported

Beacon data blocks added the end of request command.

Blocks separated with ',' comma character. First character tell the beacon types the rest are prevailing fields. The order of data block fields are freely selectable. If prevailing fields missing then reported all fields

G,Bnr,Wnr,Snr,N

G = GPS

B = Bluetooth **n** = name **r** = rssi

W = Wifi **n** = name **r** = rssi

S = Srd **n** = name **r** = rssi

N = GSM Network

1.1.2 RAW data Location request ?LOX

Format

Command *		Service state		Beacon datablocks
?LOX	—	1	—	G,B,W,S,N

Service state

1 = Make the measurement and report updated data (GPS,SRD,Cell,WiFi,BT)

1.1.3 RAW data Endless tracking request ?TRX

Format

Command*	Trigger type	Service state	Interval (Limit)	Beacon datablocks
?TRX	7	1	60	G,B,W,S,N

Trigger type 7= Endless tracking (only this type supported)

Service state Activity of tracking process. Value 1 should be used; otherwise the process will not be activated.

Interval Time between sending of tracking reports, in minutes. (Range 1....65534min)

Beacon datablocks Defines the types to be reported (More information in section 1.1.1)

1.1.4 RAW data Endless tracking deactivation ?TRX

Format

Command*	Trigger type	Service state
?TRX	7	0

Trigger type 7 Endless tracking

Service state Activity of tracking process. Value 0 should be used; otherwise the process will not be deactivated.

Also trigger type 99 can be use to stop tracking e.g ?TRX_99_0

1.2 RAW DATA REPORT MESSAGES

1.2.1 RAW DATA LOCATION REPORT !LOX

The position report is sent by a device as a sole response to a raw data request command ?LOX . Device can send several report message if all data not fit in one report message.

Sending

This command can only be sent as an automatic response to a position request ?LOX

Format

Command*		Battery capacity		Message timestamp		dataBlocks
4	1	1	1	1	1	
!LOX	—	75	—	20180515100223	—	g,-14,N60.397261,E023.179027,31,,0,0_b,-11,e0d0b71ce513,,0_b,-11,deceb51ae311,,0_b,-11,ecb97ed64b54,,0

Battery capacity = Indicating the battery level in % of the telematics device. If in charger then use '-' character

Message timestamp = Message sending time. If one request generate several replying message then all messages used same timestamp as the first reply message. Format is YYYYMMDDhhmmss

dataBlocks= data blocks is the same order as they are requested. Data blocks are separated with '_' character. Detailed information in section 1.3

1.2.2 RAW data Endless tracking report !TRX

The position report command is sent by a device as a sole response to a raw data tracking request command ?TRX . Device can send several report message if all data not fit in one report message.

Sending

- This command can only be sent as an automatic response to a tracking request ?TRX.

Format

Command*		Battery capacity		Message timestamp		Type	Message number
4	1	1	1	1	1		
!TRX	—	75	—	20180515100223	—	7	1/0

....

dataBlocks
g,-14,N60.397261,E023.179027,31,,0,0_b,-11,e0d0b71ce513,,0_b,-11,deceb51ae311,,0_b,-11,ecb97ed64b54,,0

Battery capacity Indicating the battery level in % of the telematics device. If in charger then use '-' character

Message timestamp Message sending time. If report need send in several message then all messages used same message timestamp as the first reply message. Format is YYYYMMDDhhmmss

Type 7= Endless tracking (only this type supported)

Message number The first number is the report order number and the number after the slash character is the total number of messages to be expected (this case always 0) . Order number is same in messages until all report is send. See example below

dataBlocks data blocks is the same order as they are requested. Different data blocks are separated with '_' character. Detailed information in section 1.3

1.2.3 RAW Data Emergency message !EMX

Message is sent by a device during the SOS cycle if SOS event list have raw data type sos event.

Sending

This send first with last knowing position reports and when device was finalizing measurements then it's can send again with updated reports. (see example end of document)

Format

Command *		Battery capacity		Message timestamp		Emergency message optional data block	
4	1	1	1	1	1		
!EMX	_	100	_	20181023144658	_	e,SOSBUTTON

	dataBlocks
1	
_	w,28,001eab0b7374,TW-EAV510v6-7373,-80_n,-5,3G,244,12,6774423,8,- 99,73,500_r

Battery capacity	Indicating the battery level in % of the telematics device. If in charger then use '-' character
Message timestamp	Message sending time. If report need send in several message then all messages use the same message timestamp as the first reply message. Format is YYYYMMDDhhmmss
Type	7= Endless tracking (only this type supported)
dataBlocks	Data blocks are the same order as they are requested. Different data blocks is separated with '_' character. Detailed information in section 1.3

1.3 dataBlocks

Data blocks can be any order.

1.3.1 GPS data block g

Format

datablock type		Data age		Position		Precision		Altitude		Speed		Heading
4	1	1	1	1	1	1	1	1	1	1	1	
g	,	34	,	N68.12345,E27.23456	,	12	,	2	,	79	,	230

datablock type g=GPS

Data age timestamp offset in seconds between message timestamp and location timestamp

Position Latitude,Longitude (decimal degrees)

Precision position precision (meter)

Altitude Altitude information from gps (meter)

speed speed information (km/h)

heading heading information (degrees)

1.3.1.1 WiFi datablock w

Format

datablock type		Data age		MAC		Name		rsi
	1	1	1	1	1		1	
w	,	34	,	78DA6E7AEC2C	,	TW-EAV510v6-7373	,	-83

datablock type = w=WiFi

Data age timestamp (sec) offset between message timestamp and signal receiving timestamp

MAC = Wifi AP mac address

Name = Wifi AP name

rsssi= received signal rssi (dbm)

1.3.1.2 BLE datablock b

Format

datablock type		Data age		MAC		Name		rsssi
	1		1		1		1	
b	,	-11	,	deceb51ae311	,	Hall1	,	0

datablock type **b=BLE**

Data age timestamp (sec) offset between message sending and BLE signal receiving

MAC BLE MAC address

Name BLE programmed name

rsssi rssi (Not supported at the moment in BLE.value always 0)

1.3.1.3 SRD datablock s

Format

datablock type		Data age		ID		Name		rsssi
	1		1		1		1	
s	,	-11	,	10000011	,	Hall1	,	-95

datablock type **s=SRD**

34= time offset in sec between message sending and signal receiving

10000011=ID

Hall1=Name

-95= RSSI

1.3.1.4 GSM network datablock g

Format

datablock type		Data age		Band		Country	Network	Cell id	rsi	rscp	lac	psc
	1		1		1		1					
n	,	-5	,	3G	,	244	12	6774423	8	-99	73	500

datablock type n= GSM net

data age time offset in sec between report and message sending

Band 2G or 3G

Country country code

Network network identifier

cell id

rsi value is not directly on dbm .See below how rssi value is comparing dBm

0 -113 dBm or less

1 -111 dBm

2..30 -109...-53 dBm (1step in value =2dbm)

31 -51 dBm or greater

99 not known or not detectable

rscp received signal power dBm

lac location area code

psc local cell identifier

1.3.2 Optional data block “end of report” r

End of report last message there added _r data block which indicate that report is ready .

1.3.3 Optional datablock Emergency text e

EMX message

Format

datablock type		SOS text
e	,	SOS BUTTON

1.3.4 Optional datablock “Free text” f

(not in use at the moment)

Format

datablock type		free text
	1	
f	,	free text

2 Example messages:

!EMX (triggered from one “raw data type” sos event)

1.Message

!EMX_100_20181023144658_e,SOS BUTTON_g,19,N60.397216,E023.179254,22,,3,129_b,20,e0d0b71ce513,,0_b,20,ecb97ed64b54,,0_b,20,deceb51ae311,,0

2.message

!EMX_100_20181023144658_w,28,001eab0b7374,TW-EAV510v6-7373,-80_n,-5,3G,244,12,6774423,8,-99,73,500_r (first report with “last known location information” end)

3.Message (second report)

!EMX_100_20181023144658_e,SOS BUTTON_g,-15,N60.397107,E023.179184,36,,3,214_w,-8,001eab0b7374,TW-EAV510v6-7373,-79_w,-8,001eab0b7934,TW-EAV510v6-7933,-84

4Message

!EMX_100_20181023144658_b,-16,deceb51ae311,,0_b,-16,e0d0b71ce513,,0_b,-16,ecb97ed64b54,,0_n,-5,3G,244,12,6774423,8,-99,73,500_r (second report with updated “location information” end)

!TRX (requested with command ?TRX 7 1 5) .

1.Message

!TRX_-20181025061200_7_1/0_g,49550,N60.397069,E023.179093,20,,0,176_w,-2,78da6e7aec24,TWIG-Guest,-74_w,-2,78da6e7aec2c,Twig-WLAN,-80_b,-10,ecb97ed64b54,,0

2.Message

!TRX_-20181025061200_7_1/0_b,-10,ec489521278a,,0_b,-10,deceb51ae311,,0_s,-42,72,Beacon72,-89_s,-43,80000049,Suntrica,-97_s,-43,10000011,PKn Test,-94

2.Message

!TRX_-20181025061200_7_1/0_s,-45,95,Korjaus,-93_s,-44,36234567,PK mess,-100_s,5,80000039,Beacon9,-87_n,-25,3G,244,12,6776032,18,-78,73,58_r (first report end)

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