

Exploatare API

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API

API (interfață de programare a aplicațiilor) permite clienților să integreze FMS (Fleet Management System) cu sistemele lor, să extragă și să împingă date despre diferite entități.

Cliantul face cereri HTTP către sistem, furnizând informații despre acțiunea intenționată. Comenzi HTTP utilizate de obicei într-un API:

- **GET** – Citiți resursa;
- **POST** – Schimbați starea resursei;

Conținutul solicitat este furnizat în format **JSON** cu codificare UTF-8. Dacă se folosește alt format, acesta este specificat în descrierea metodei.

Codul de stare HTTP identifică starea cererii – pentru cererile reușite, este returnat codul de stare **200**.

Odată cu acest răspuns, vor fi primite informațiile solicitate de la server. Răspunsurile vor diferi în funcție de tipul de API utilizat. Răspunsurile API pentru diferite tipuri de API sunt descrise în secțiunile corespunzătoare.

Dacă a apărut o eroare la cererea trimisă, sistemul va returna un mesaj de răspuns cu un cod de stare. Coduri de eroare comune:

- **Cod 400** – Solicitare greșită – Solicitarea API nu a fost recunoscută.
- **Cod 401** – Neautorizat – Aceasta înseamnă că acreditările de autentificare lipsesc sau sunt incorecte;
- **Cod 403** – Interzis – Aceasta înseamnă că clientul nu are dreptul de a accesa resursa solicitată sau de a efectua acțiunea solicitată;
- **Cod 404** – Negăsit – Aceasta înseamnă că resursa solicitată nu a fost găsită.
- **Cod 500** – Eroare internă de server – vă rugăm să contactați asistența tehnică a furnizorului dumneavoastră.

Codurile de eroare oferă câteva informații generale despre tipul de eroare, permițând astfel utilizatorului să identifice rădăcina problemei.

Unele API-uri au elemente opționale (parametri) în răspunsul lor, parametrii opționali pot fi săriți de către sistem din diverse motive (fără date, timp de răspuns expirat etc.). Un utilizator nu trebuie să presupună că anumite date opționale vor fi întotdeauna incluse într-un răspuns.

API Limitations

Toate API-urile au o singură limitare:

Nu mai mult de 1000 de cereri pe minut. Această limitare este valabilă pentru toate API-urile FMS existente.

API Authentication

Autentificarea și autorizarea API este necesară pentru a controla utilizarea API pentru diferiți clienți și integrarea acestora cu diferite sisteme. Pentru a face o solicitare autorizată către API-urile de sistem, aplicația care solicită clienții trebuie să obțină mai întâi o **cheie API** în numele utilizatorului web al sistemului.

Clienții pot obține o cheie API doar contactând direct asistența tehnică a furnizorilor lor de servicii. Cheia API constă din litere, numere și simboluri generate aleatoriu.

Exemplu de solicitare folosind o cheie API:

```
1 Any HTTP request made to the system should be appended with created API key.
2 Parameter name: api_key, for example
3 HTTP GET http://exampleHost/example_endPoint?api_key=xxxxxxxxxxxxxxxx
```

Dacă API_key este expirat, eliminat sau pur și simplu dezactivat, sistemul va returna următorul răspuns:

```
1 HTTP/1.1 401 Unauthorized
2 Content-type: application/json;charset=utf-8
```

Notă

Este întotdeauna necesar să specificați o versiune API în toate tipurile de API.

Important!

Din cauza dezvoltării constante atât a API-ului, cât și a sistemului de la care solicită informațiile, utilizatorii pot primi uneori parametri care nu sunt enumerați în descrieri. Se recomandă pur și simplu să ignorați parametrii necunoscuți care nu sunt documentați în descrierea fiecărei API-uri.

Versiune și compatibilitate

Soluția API este actualizată, îmbunătățită și modificată în mod constant, prin urmare este necesar să înțelegem ce înseamnă „Compatibilitate” și cum afectează utilizatorul atunci când folosește soluția API.

Când un API este actualizat, apare una dintre următoarele două opțiuni:

- API-ul compatibil invers – aceasta înseamnă că modificările efectuate nu vor afecta în niciun fel fluxul de lucru al API-ului, prin urmare nu este creată nicio versiune nouă.
- API-ul nu este compatibil cu înapoi - aceasta înseamnă că unele dintre componentele API au fost modificate pentru a nu mai funcționa la fel cum funcționau înainte. În acest caz, este lansată o nouă versiune a API-ului.

Ce este considerată o versiune API compatibilă cu versiunea inversă:

- A fost adăugată o nouă resursă API;
- Noi parametri opționali de solicitare au fost adăugați la API-ul existent
- Au fost adăugate noi proprietăți la răspunsurile API existente.
- Ordinea proprietăților a fost modificată în răspunsurile API existente.
- Modificarea lungimii sau formatului ID-urilor obiectelor sau a altor șiruri opace.

Utilizatorul poate presupune cu siguranță că ID-urile de obiect pe care sistemul le generează nu vor depăși niciodată 255 de caractere, dar utilizatorul ar trebui să poată gestiona ID-uri cu o lungime potențială de 255 de caractere. De exemplu, utilizatorul folosește MySQL, ID-urile ar trebui să fie stocate într-o coloană VARCHAR(255) COLLATE utf8_bin (configurația COLLATE asigură diferențierea între majuscule și minuscule în căutări).

- Adăugarea de noi tipuri ENUM. – orice sistem ar trebui să gestioneze cu grație orice tipuri ENUM nefamiliare. Dacă, de exemplu, tipul se schimbă de la [Privat, Business] la [Privat, Work, Business], nu ar trebui să aibă niciun efect asupra sistemului.

Object Coordinates History API v2

API-ul Object Coordinates History este folosit pentru a scoate date istorice (coordonate, parametri etc.) ale unui obiect. Acest API este în mare parte identic cu Object Coordinates History API v1, principala diferență este că v2 poate returna mult mai mulți parametri. Acest API are două puncte finale, deci există două tipuri de solicitări:

1. Solicitare de date despre obiect pentru o anumită dată și oră. Sunt afișate numai datele înregistrate la data și ora specificate.
2. Solicitare de date despre obiect pentru o perioadă specificată. Sunt afișate toate datele înregistrate în perioada specificată.

Solicitare de date pentru o anumită dată și oră

Structura cererii:

```
GET /objects/{objectId}/coordinates/{datetime}?version=3&api_key=<...>&include_geozones=<...>&include_nearest_geozone=<...> HTTP/1.1
Host: api.fm-track.com
Content-Type: application/json;charset=UTF-8
```

Parametri de solicitare:

Parameter	Type	Description	Required
object_id	String	External object ID	Yes
datetime	Date time	Specified date and time. Date and time format example: "2019-04-17T11:58:48.090Z" in accordance to the ISO-8601 standard	Yes
version	String	API version	Yes
api_key	String	User identification key	Yes
include_geozones	boolean	If true geozones information in the answer will be returned	No
include_nearest_geozone	boolean	If true information about the nearest geozone in the answer will be returned	No

Exemplu de răspuns:

JSON

```
{
  "object_id": "abc123",
```

```

"datetime":"2019-02-11T02:00:00.000Z",
"ignition_status":"OFF",
"position":{
  "altitude" : 0,
  "direction" : 0,
  "latitude" : 0,
  "longitude" : 0,
  "satellites_count" : 0,
  "speed" : 0
},
"inputs":{
  "other":{
    "virtual_gps_odometer":0.0000,
    "country_code_geonames":91
  },
  "device_inputs":{
    "virtual_odometer":5.00,
    "digital_input_4":false,
    "driver_1_state":"DRIVE",
    "input_trigger":0,
    "tco_first_driver_state":"DRIVE",
    "priority":"LOW",
    .....,
    "hdop":"0.0"
  },
  "calculated_inputs":{
    "din4_working_time":0.00,
    "custom_input_3":0.00,
    "custom_input_6":0.00,
    "temperature":0.00,
    "custom_input_1":0.00,
    .....,
    "custom_input_2":0.00,
    "mileage":5000.00
  }
},
  "geozone_ids": [
    "0d5d7bc2",
    "0d5d7bc2"
  ],
  "nearest_geozone":{
    "id":"fde96c01",
    "distance":150
  }
}

```

}

Dacă un parametru a fost introdus incorect, sistemul va răspunde cu un cod de eroare. Toate codurile de eroare sunt descrise în secțiunea [API](#) -uri . Parametrii pentru care nu sunt furnizate date nu sunt incluși în răspuns. O listă completă a parametrilor de răspuns este disponibilă la sfârșitul acestei secțiuni.

Solicitare de date pentru o anumită perioadă

Structura cererii:

```
GET/objects/{objectId}/coordinates?version=3&from_datetime=<...>&to_datetime=<...>&continuation_token=<...>&limit=<...>&api_key=<...>&include_geozones=<...>&include_nearest_geozone=<...> HTTP/1.1
Host: api.fm-track.com
Content-Type: application/json;charset=UTF-8
```

Parametri de solicitare:

Parametru	Tip	Descriere	Necesar
objectId	Șir	ID-ul obiectului extern	da
from_datetime	Data ora	Găsește înregistrări începând de la data și ora specificate. Exemplu de format de dată și oră: „2017-04-13T06:58:48.090Z”	da
to_datetime	Data ora	Găsește înregistrările care se termină la data și ora specificate. Exemplu de format de dată și oră: „2017-04-13T06:58:48.090Z”	Nu
jeton_continuare	Data ora	Afișează de la ce dată și oră sunt afișate datele dacă a fost atinsă limita de înregistrare.	Nu
limită	Întreg	Câte înregistrări vor fi incluse în răspuns (valoarea implicită - 100 de înregistrări, valoarea maximă - 1000 de înregistrări).	Nu
versiune	Șir	Versiunea API	da
api_key	Șir	Cheie de identificare a utilizatorului	da
include_geozones	boolean	Dacă informațiile despre geozone adevărate din răspuns vor fi returnate	Nu
include_nearest_geozone	boolean	Dacă informațiile adevărate despre cea mai apropiată geozonă din răspuns vor fi returnate	Nu

Exemplu de răspuns:

JSON

```
{
  "continuation_token": "2017-04-13T06:58:48.121Z",
  "items": [
    {
      "object_id": "abc123",
```

```

"datetime":"2019-02-11T02:00:00.000Z",
"ignition_status":"OFF",
"business_or_private":"BUSINESS",
"position":{
  "altitude" : 0,
  "direction" : 0,
  "latitude" : 0,
  "longitude" : 0,
  "satellites_count" : 0,
  "speed" : 0
},
"inputs":{
  "other":{
    "virtual_gps_odometer":0.0000,
    "country_code_geonames":91
  },
  "device_inputs":{
    "virtual_odometer":5.00,
    "digital_input_4":false,
    "driver_1_state":"DRIVE",
    "input_trigger":0,
    "tco_first_driver_state":"DRIVE",
    "priority":"LOW",
    .....,

    "hdop":"0.0"
  },
  "calculated_inputs":{
    "din4_working_time":0.00,
    "custom_input_3":0.00,
    "custom_input_6":0.00,
    "temperature":0.00,
    "custom_input_1":0.00,
    .....,
    "custom_input_2":0.00,
    "mileage":5000.00
  }
},
  "geozone_ids": [
    "0d5d7bc2",
    "0d5d7bc2"
  ],
  "nearest_geozone":{
    "id":"fde96c01",
    "distance":150

```



```

    }
},
.....
]
}

```

Dacă un parametru a fost introdus incorect, sistemul va răspunde cu un cod de eroare. Toate codurile de eroare sunt descrise în secțiunea API -uri . Parametrii pentru care nu sunt furnizate date nu sunt incluși în răspuns. O listă completă a parametrilor de răspuns este disponibilă la sfârșitul acestei secțiuni.

Parametrii de răspuns

Name	Type	Array	Description	Units
items	Array		Contains all parameters in accordance to the request	
object_id	String		Object identifier	Text
datetime	Date		Date and time point of coordinate generated in hardware Format: "yyyy-mm-ddThh:mm:sssZ"	Datetime
ignition_status	Enum		Indicates if the object's ignition is on Possible values: ON OFF UNKNOWN	
trip_type	Enum		Trip type Possible values: UNKNOWN NONE PRIVATE BUSINESS WORK	
other	Array		Container for other system parameters	
country_code_geonames	Number	other	Country code numeral	
virtual_gps_odometer	Number	other	Virtual odometer value	km
calculated_inputs	Array	calculated_inputs	Container for parameters calculated in the system from other parameters according to the configuration	
fuel_consumption	Number	calculated_inputs	Fuel consumption	l
fuel_level	Number	calculated_inputs	Fuel level	l
mileage	Number	calculated_inputs	Mileage	km
rpm	Number	calculated_inputs	Engine RPM	RPM

temperature	Number	calculated_inputs	Temperature	°C
custom_input_1	Number	calculated_inputs	Custom input 1	
custom_input_2	Number	calculated_inputs	Custom input 2	
custom_input_3	Number	calculated_inputs	Custom input 3	
custom_input_4	Number	calculated_inputs	Custom input 4	
custom_input_5	Number	calculated_inputs	Custom input 5	
custom_input_6	Number	calculated_inputs	Custom input 6	
custom_input_7	Number	calculated_inputs	Custom input 7	
custom_input_8	Number	calculated_inputs	Custom input 8	
din1_working_time	Number	calculated_inputs	DIN1 working time	
din2_working_time	Number	calculated_inputs	DIN2 working time	
din3_working_time	Number	calculated_inputs	DIN3 working time	
din4_working_time	Number	calculated_inputs	DIN4 working time	
weight	Number	calculated_inputs	Weight	kg
device_inputs	Array	device_inputs	Container for parameters received from hardware	
x_axis	Number	device_inputs	Accelerometer X axis	G
y_axis	Number	device_inputs	Accelerometer Y axis	G
z_axis	Number	device_inputs	Accelerometer Z axis	G
g_peak_x	Number	device_inputs	G peak in X axis	G
g_peak_y	Number	device_inputs	G peak in Y axis	G
g_peak_z	Number	device_inputs	G peak in Z axis	G
x_axis_tilt_angle	Number	device_inputs	X axis tilt angle	Degrees
y_axis_tilt_angle	Number	device_inputs	Y axis tilt angle	Degrees
z_axis_tilt_angle	Number	device_inputs	Z axis tilt angle	Degrees
canbus_distance	Number	device_inputs	CAN high resolution total vehicle distance	km
canbus_engine_coolant_temperature	Number	device_inputs	CAN engine coolant temperature	°C
canbus_fuel_rate	Number	device_inputs	CAN fuel rate	l/h
engine_rpm	Number	device_inputs	CAN engine speed	RPM
engine_hours	Number	device_inputs	CAN engine hours	h
service_dist	Number	device_inputs	CAN service distance	km
pedal_pos	Number	device_inputs	CAN accelerator pedal position	%
fuel_level_can	Number	device_inputs	CAN fuel level	%
fuel_used	Number	device_inputs	CAN engine total fuel used	l
speed_wheel	Number	device_inputs	CAN wheel based speed	km/h
speed_tacho	Number	device_inputs	CAN tachograph vehicle speed	km/h
tacho_status	Enum	device_inputs	CAN tachograph performance Possible values: NORMAL_PERFORMANCE PERFORMANCE_ANALYSIS	
overspeeding_events	Enum	device_inputs	CAN tacho vehicle overspeed Possible values: NO_OVERSPEED OVERSPEED	
axle_count	Number	device_inputs	CAN axle location	
canbus_brake_switch	Enum	device_inputs	CAN brake switch Possible values:	

			RELEASED PRESSED
canbus_clutch_switch	Enum	device_inputs	CAN clutch switch Possible values: RELEASED PRESSED
canbus_pto_state	Enum	device_inputs	CAN PTO state Possible values: OFF_DISABLED SET NOT_AVAILABLE
canbus_cruise_control_state	Enum	device_inputs	CAN cruise control active Possible values: OFF ON
canbus_request_supported	Enum	device_inputs	CAN request supported Possible values: NOT_SUPPORTED SUPPORTED RESERVED DO_NOT_CARE
canbus_diagnostics_supported	Enum	device_inputs	CAN diagnostics supported Possible values: NOT_SUPPORTED SUPPORTED RESERVED DO_NOT_CARE
canbus_diagnostics_supported	Enum	device_inputs	CAN diagnostics supported Possible values: NOT_SUPPORTED SUPPORTED RESERVED DO_NOT_CARE
canbus_vehicle_motion	Enum	device_inputs	CAN tachometer vehicle motion Possible values: NOT_DETECTED DETECTED
canbus_driver_1_time	Enum	device_inputs	CAN tachometer driver 1 time related status Possible values: NORMAL 15_MIN_BEFORE_4,5H 4,5H_REACHED 15_MIN_BEFORE_9H 9H_REACHED 15_MIN_BEFORE_16H 16H_REACHED ERROR NOT_AVAILABLE
canbus_driver_1_card	Enum	device_inputs	CAN tachometer driver 1 card Possible values: CARD_NOT_PRESENT CARD_PRESENT ERROR NOT_AVAILABLE

canbus_driver_2_time	Enum	device_inputs	CAN tachometer driver 2 time related status Possible values: NORMAL 15_MIN_BEFORE_4,5H 4,5H_REACHED 15_MIN_BEFORE_9H 9H_REACHED 15_MIN_BEFORE_16H 16H_REACHED ERROR NOT_AVAILABLE
canbus_driver_2_card	Enum	device_inputs	CAN tachometer driver 2 card Possible values: CARD_NOT_PRESENT CARD_PRESENT ERROR NOT_AVAILABLE
canbus_engine_plcs	Number	device_inputs	CAN engine percent load at current speed %
canbus_tire_location	Number	device_inputs	CAN tire location
canbus_system_event	Enum	device_inputs	CAN system event Possible values: NO_TACHO_EVENT TACHO_EVENT
canbus_handling_information	Enum	device_inputs	CAN tachometer handling information Possible values: NO_HANDLING_INFORMATION HANDLING_INFORMATION
canbus_direction_indicator	Enum	device_inputs	CAN tachometer direction indicator Possible values: FORWARD REVERSE
canbus_ambient_air_temperature	Number	device_inputs	CAN ambient air temperature °C
canbus_fuel_economy	Number	device_inputs	CAN instantaneous fuel economy km/l
canbus_pto	Enum	device_inputs	CAN at least one PTO engaged Possible values: NO_PTO_DRIVER AT_LEAST_ONE_PTO_DRIVER ERROR NOT_AVAILABLE
canbus_hrhc	Number	device_inputs	CAN high resolution engine total fuel used l
vehicle_id	String	device_inputs	CAN vehicle ID
first_driver_id	String	device_inputs	CAN first driver ID
second_driver_id	String	device_inputs	CAN second driver ID
canbus_driver_1_state	Enum	device_inputs	CAN tachometer driver 1 working state Possible values: REST DRIVER_AVAILABLE WORK DRIVE ERROR NOT_AVAILABLE

canbus_driver_2_state	Enum	device_inputs	CAN tachometer driver 2 working state Possible values: REST DRIVER_AVAILABLE WORK DRIVE ERROR NOT_AVAILABLE	
canbus_axle_weight_1	Number	device_inputs	CAN axle 1 weight	kg
canbus_axle_weight_2	Number	device_inputs	CAN axle 2 weight	kg
canbus_axle_weight_3	Number	device_inputs	CAN axle 3 weight	kg
canbus_axle_weight_4	Number	device_inputs	CAN axle 4 weight	kg
canbus_axle_weight_5	Number	device_inputs	CAN axle 5 weight	kg
fuel_level_can_l	Number	device_inputs	CAN fuel level liters	l
fuel_used_diff	Number	device_inputs	CAN fuel used delta	l
canbus_parking_brake_switch	Enum	device_inputs	CAN parking brake switch Possible values: OFF ON	
canbus_battery_power	Number	device_inputs	CAN battery power	%
canbus_distance_until_recharge	Number	device_inputs	CAN distance until recharge	km
canbus_battery_charging	Enum	device_inputs	CAN battery charging Possible values: NO_CHARGING CHARGING	
lcv_hood	Enum	device_inputs	LCV hood Possible values: CLOSE OPEN	
lcv_hood	Enum	device_inputs	LCV hood Possible values: CLOSE OPEN	
lcv_driver_doors	Enum	device_inputs	LCV driver doors Possible values: CLOSE OPEN	
lcv_passenger_doors	Enum	device_inputs	LCV passenger doors Possible values: CLOSE OPEN	
lcv_left_back_doors	Enum	device_inputs	LCV left back doors Possible values: CLOSE OPEN	
lcv_right_back_doors	Enum	device_inputs	LCV right back doors Possible values: CLOSE OPEN	
lcv_trunk	Enum	device_inputs	LCV trunk Possible values: CLOSE OPEN	
canbus_hours_to_service	Number	device_inputs	CAN hours to service	h

can_interface_configuration_can1_interface	Enum	device_inputs	CAN interface configuration CAN1 interface Possible values: NONE FMS LCV OBD TACHO MOBILEYE TRAILERS DXP
can_interface_configuration_can2_interface	Enum	device_inputs	CAN interface configuration CAN2 interface Possible values: NONE FMS LCV OBD TACHO MOBILEYE TRAILERS DXP
can_interface_configuration_can1_status	Enum	device_inputs	CAN interface configuration CAN1 status Possible values: INACTIVE ACTIVE
can_interface_configuration_can1_mode	Enum	device_inputs	CAN interface configuration CAN1 mode Possible values: SILENT ACTIVE
can_interface_configuration_can1_auto_baud_rate	Enum	device_inputs	CAN interface configuration CAN1 auto baud rate Possible values: OFF ON
can_interface_configuration_can1_filters_status	Enum	device_inputs	CAN interface configuration CAN1 filters status Possible values: OFF ON
can_interface_configuration_can2_status	Enum	device_inputs	CAN interface configuration CAN2 status Possible values: INACTIVE ACTIVE
can_interface_configuration_can2_mode	Enum	device_inputs	CAN interface configuration CAN2 mode Possible values: SILENT ACTIVE
can_interface_configuration_can2_auto_baud_rate	Enum	device_inputs	CAN interface configuration CAN2 auto baud rate Possible values: OFF ON
can_interface_configuration_can2_filters_status	Enum	device_inputs	CAN interface configuration CAN2 filters status Possible values: OFF ON
canbus_electric_motor_temperature	Number	device_inputs	CAN electric motor temperature °C
can_lcv_configuration_can2_subgroup	Number	device_inputs	CAN LCV configuration CAN2 subgroup
can_lcv_configuration_can1_subgroup	Number	device_inputs	CAN LCV configuration CAN1 subgroup

can_ignition	Enum	device_inputs	CAN ignition Possible values: OFF ON	
can_lcv_window_state_front_left	Number	device_inputs	CAN LCV window state Front Left	
can_lcv_window_state_front_right	Number	device_inputs	CAN LCV window state Front Right	
can_lcv_window_state_back_left	Number	device_inputs	CAN LCV window state Back Left	
can_lcv_window_state_back_right	Number	device_inputs	CAN LCV window state Back Right	
can_lcv_window_state_sunroof	Number	device_inputs	CAN LCV window state Sunroof	
can_fuel_level_milliliters	Number	device_inputs	CAN fuel level milliliters	ml
can_door_lock_state	Enum	device_inputs	CAN door lock state Possible values: UNLOCKED LOCKED NOT_AVAILABLE	
gsm_signal_strength	Number	device_inputs	GSM signal strength	
operator	Number	device_inputs	GSM operator	
gps_speed	Number	device_inputs	GPS speed	km/h
gsm_umts_signal_strength	Number	device_inputs	GSM/UMTS signal strength	
gsm_umts_operator	Number	device_inputs	GSM/UMTS operator	
umts_enabled	Enum	device_inputs	UMTS enabled status Possible values: DISABLED ENABLED	
gnss_antenna	Enum	device_inputs	GNSS antenna status Possible values: DISABLED ENABLED UNKNOWN	
gsm_umts_jamming	Enum	device_inputs	GSM/UMTS jamming status Possible status: JAMMING_NOT_DETECTED JAMMING_DETECTED	
gprs_errors	Number	device_inputs	GPRS errors	
gprs_status	Enum	device_inputs	GPRS status Possible values: DISCONNECTED CONNECTED	
gps_altitude	Number	device_inputs	GPS altitude	m
dout1_status	Enum	device_inputs	DOUT1 status Possible values: ACTIVE INACTIVE	
dout2_status	Enum	device_inputs	DOUT2 status Possible values: ACTIVE INACTIVE	
dxp_battery_battery_voltage	Number	device_inputs	DXP battery voltage	V
dxp_battery_nominal_capacity_used	Number	device_inputs	DXP battery nominal capacity used	A
dxp_battery_charging_counter	Number	device_inputs	DXP battery charging counter	
dxp_battery_state_of_charge	Number	device_inputs	DXP battery charging state	%
dxp_battery_charging_current	Number	device_inputs	DXP battery charging current	A
dxp_battery_battery_current	Number	device_inputs	DXP battery current	A

dxp_battery_battery_temp	Number	device_inputs	DXP battery temperature	°C
dxp_battery_charger_stop_reason	Number	device_inputs	DXP battery charge stop reason	
dxp_switches_switch1	Enum	device_inputs	DXP switch 1 value Possible values: OFF ON	
dxp_switches_switch2	Enum	device_inputs	DXP switch 2 value Possible values: OFF ON	
dxp_switches_switch3	Enum	device_inputs	DXP switch 3 value Possible values: OFF ON	
dxp_switches_switch4	Enum	device_inputs	DXP switch 4 value Possible values: OFF ON	
dxp_switches_switch5	Enum	device_inputs	DXP switch 5 value Possible values: OFF ON	
dxp_switches_switch6	Enum	device_inputs	DXP switch 6 value Possible values: OFF ON	
dxp_switches_switch7	Enum	device_inputs	DXP switch 7 value Possible values: OFF ON	
dxp_switches_switch8	Enum	device_inputs	DXP switch 8 value Possible values: OFF ON	
dxp_switches_parameters_set	Number	device_inputs	DXP switch parameters set	
dxp_other_parameters_chassis_number_nr	Number	device_inputs	DXP chassis number	
dxp_other_parameters_service_odometer	Number	device_inputs	DXP service odometer	
dxp_other_parameters_vcl_version	Number	device_inputs	DXP VCL version	
dxp_other_parameters_parameter_blk_version	Number	device_inputs	DXP parameter BLK version	
dxp_faults1_status1_faults_error_codes	Number	device_inputs	DXP status 1 fault error codes	
dxp_faults1_status2_faults_error_codes	Number	device_inputs	DXP status 2 fault error codes	
dxp_faults1_status3_faults_error_codes	Number	device_inputs	DXP status 3 fault error codes	
dxp_faults1_status4_faults_error_codes	Number	device_inputs	DXP status 4 fault error codes	
dxp_faults1_status5_faults_error_codes	Number	device_inputs	DXP status 5 fault error codes	
dxp_faults1_status6_faults_error_codes	Number	device_inputs	DXP status 6 fault error codes	

dxp_faults1_status7_faults_error_codes	Number	device_inputs	DXP status 7 fault error codes	
dxp_faults1_status8_faults_error_codes	Number	device_inputs	DXP status 8 fault error codes	
dxp_faults2_user_fault_1_error_codes	Number	device_inputs	DXP user fault 1 error codes	
dxp_faults2_user_fault_2_error_codes	Number	device_inputs	DXP user fault 2 error codes	
dxp_faults2_user_fault_2_history_error_codes	Number	device_inputs	DXP user fault 1 history error codes	
dxp_faults2_user_fault_1_history_error_codes	Number	device_inputs	DXP user fault 2 history error codes	
dxp_faults2_kyb_hist_fault_codes	Number	device_inputs	DXP KYB hist fault codes	
dxp_charger_status	Number	device_inputs	DXP charger status	
ecodrive_maximum_speed	Number	device_inputs	Eco-Drive maximum speed	km/h
ecodrive_overspeed	Number	device_inputs	Eco-Drive overspeeding timer	s
ecodrive_rpm_on_red	Number	device_inputs	Eco-Drive RPM in red band timer	s
ecodrive_maximum_rpm	Number	device_inputs	Eco-Drive maximum RPM	RPM
ecodrive_braking_events	Number	device_inputs	Eco-Drive brake counter	
ecodrive_harsh_acceleration	Number	device_inputs	Eco-Drive harsh acceleration counter	
ecodrive_idling_time	Number	device_inputs	Eco-Drive idling counter	s
ecodrive_engine_on	Number	device_inputs	Eco-Drive engine on timer	s
ecodrive_time_cruise_control_could_be_on	Number	device_inputs	Eco-Drive time cruise control could be on	s
ecodrive_time_cruise_control_was_on_when_it_could_be_on	Number	device_inputs	Eco-Drive time cruise control was on when it could be on	s
ecodrive_extreme_braking_count	Number	device_inputs	Eco-Drive extreme braking count	
ecodrive_harsh_braking_count	Number	device_inputs	Eco-Drive harsh braking count	

ecodrive_mileage_in_rpm_green_zone	Number	device_inputs	Eco-Drive mileage in RPM green zone	m
ecodrive_mileage_when_speed_is_below_overspeed	Number	device_inputs	Eco-Drive mileage when speed is below overspeed	m
ecodrive_mileage_when_cruise_control_could_be_on	Number	device_inputs	Eco-Drive mileage when cruise control could be on	m
ecodrive_mileage_when_cruise_control_was_on_when_it_could_be_on	Number	device_inputs	Eco-Drive mileage when cruise control was on when it could be on	m
ecodrive_cornering_counter	Number	device_inputs	Eco-Drive cornering counter	
ecodrive_stops_counter	Number	device_inputs	Eco-Drive stop counter	
ecodrive_fuel_used_at_stops	Number	device_inputs	Eco-Drive fuel used while idling	l
ecodrive_mileage_while_free_rolling	Number	device_inputs	Eco-Drive free rolling distance	m
ecodrive_mileage_while_engine_overloaded	Number	device_inputs	Eco-Drive engine overloaded distance	m
ecodrive_fuel_used_while_engine_overloaded	Number	device_inputs	Eco-Drive engine overloaded fuel used	l
ecodrive_mileage_while_overspeeding	Number	device_inputs	Eco-Drive overspeeding distance	m
ecodrive_fuel_used_while_overspeeding	Number	device_inputs	Eco-Drive overspeeding fuel used	l
ecodrive_mileage_when_cruise_control_was_on	Number	device_inputs	Eco-Drive cruise control on distance	m
ecodrive_fuel_used_when_cruise_control_was_on	Number	device_inputs	Eco-Drive cruise control on fuel used	l
ecodrive_mileage_in_highest_gear	Number	device_inputs	Eco-Drive highest gear distance	m
ecodrive_fuel_used_in_highest_gear	Number	device_inputs	Eco-Drive highest gear fuel used	l
ecodrive_mileage_in_range_1_900_rpm	Number	device_inputs	Eco-Drive RPM range 1 (<900 RPM) distance	m
ecodrive_fuel_used_in_range_1_900_rpm	Number	device_inputs	Eco-Drive RPM range 1 (<900 RPM) fuel used	l
ecodrive_mileage_in_range_900_1300_rpm	Number	device_inputs	Eco-Drive RPM range 2 (900-1300 RPM) distance	m
ecodrive_fuel_used_in_range_900_1300_rpm	Number	device_inputs	Eco-Drive RPM range 2 (900-1300 RPM) fuel used	l
ecodrive_mileage_in_range_1300_1500_rpm	Number	device_inputs	Eco-Drive RPM range 3 (1300-1500 RPM) distance	m
ecodrive_fuel_used_in_range_1300_1500_rpm	Number	device_inputs	Eco-Drive RPM range 3 (1300-1500 RPM) fuel used	l
ecodrive_mileage_in_range_1500_2300_rpm	Number	device_inputs	Eco-Drive RPM range 4 (1500-2300 RPM) distance	m
ecodrive_fuel_used_in_range_1500_2300_rpm	Number	device_inputs	Eco-Drive RPM range 4 (1500-2300 RPM) fuel used	l
ecodrive_idling_state	Enum	device_inputs	Eco-Drive idling state Possible values: NO_IDLING IDLING	
ecodrive_braking_value	Number	device_inputs	Eco-Drive braking value	m/s ²
ecodrive_acceleration_value	Number	device_inputs	Eco-Drive acceleration value	m/s ²
ecodrive_cornering_value	Number	device_inputs	Eco-Drive cornering value	m/s ²
eco_rpm_in_red_band_distance	Number	device_inputs	Eco-Drive RPM in red band distance	m
eco_engine_braking_distance	Number	device_inputs	Eco-Drive engine braking distance	m
eco_braking_distance	Number	device_inputs	Eco-Drive braking distance	m
eco_braking_duration	Number	device_inputs	Eco-Drive braking duration	s

eco_retarder_duration	Number	device_inputs	Eco-Drive retarder duration	s
eco_stops_counter	Number	device_inputs	Eco-Drive stop counter	
thermoking_air_return_temp	Number	device_inputs	ThermoKing air return temperature	°C
thermoking_alarms	Number	device_inputs	ThermoKing alarm code	
thermoking_set_point	Number	device_inputs	ThermoKing temperature setpoint	°C
thermoking_fuel_level	Number	device_inputs	ThermoKing fuel level	%
thermoking_battery_voltage	Number	device_inputs	ThermoKing battery voltage	V
thermoking_total_electric_hours	Number	device_inputs	ThermoKing total electric hours	h
thermoking_vehicle_hours	Number	device_inputs	ThermoKing total vehicle hours	h
thermoking_total_engine_hours	Number	device_inputs	ThermoKing total engine hours	h
thermoking_alarm_type	Enum	device_inputs	ThermoKing alarm type Possible values: NO_ALARM LOG_STORED_OR_ROUTINE_MAINTENANCE LOW_FUEL MAINTENANCE_PAST_DUE RESERVED IMMEDIATE_ATTENTION_REQUIRED SHUTDOWN_OR_CATASTROPHIC_SYSTEM_FAILURE	
thermoking_discharge_temperature	Number	device_inputs	ThermoKing discharge air temperature	°C
thermoking_evaporator_coil_temperature	Number	device_inputs	ThermoKing evaporator coil temperature	°C
thermoking_operating_mode	Enum	device_inputs	ThermoKing operating mode Possible values: POWER_OFF_OR_UNKNOWN COOLING HEATING	

DEFROST
 NULL
 PRETRIP
 SLEEP
 RESERVED

thermoking_cycle_mode	Enum	device_inputs	ThermoKing cycle mode Possible values: CYCLE_SENTRY_MODE CONTINUOUS_MODE START_STOP_MODE	
thermoking_high_speed_status	Boolean	device_inputs	ThermoKing high speed status	
thermoking_door_status	Enum	device_inputs	ThermoKing door status Possible values: CLOSED OPEN	
thermoking_diesel_electric_status	Enum	device_inputs	ThermoKing diesel/electric status Possible values: DIESEL_MODE ELECTRIC_MODE	
tk_touchprint_input_1	Number	device_inputs	TK Touchprint input 1	°C
tk_touchprint_input_2	Number	device_inputs	TK Touchprint input 2	°C
tk_touchprint_input_3	Number	device_inputs	TK Touchprint input 3	°C
tk_touchprint_input_4	Number	device_inputs	TK Touchprint input 4	°C
tk_touchprint_input_5	Number	device_inputs	TK Touchprint input 5	°C
tk_touchprint_input_6	Number	device_inputs	TK Touchprint input 6	°C
tk_temperature_sensor1	Number	device_inputs	TK temperature sensor 1	°C
tk_temperature_sensor2	Number	device_inputs	TK temperature sensor 2	°C
tk_temperature_sensor3	Number	device_inputs	TK temperature sensor 3	°C
tk_temperature_sensor4	Number	device_inputs	TK temperature sensor 4	°C
tk_temperature_sensor5	Number	device_inputs	TK temperature sensor 5	°C
tk_temperature_sensor6	Number	device_inputs	TK temperature sensor 6	°C
fuel_counter	Number	device_inputs	Fuel counter 1	
digital_fuel_sensor_a1	Number	device_inputs	Digital fuel sensor A1	
fuel_counter_2	Number	device_inputs	Fuel counter 2	
digital_fuel_sensor_b1	Number	device_inputs	Digital fuel sensor B1	
digital_fuel_sensor_a2	Number	device_inputs	Digital fuel sensor A2	
digital_fuel_sensor_a3	Number	device_inputs	Digital fuel sensor A3	
digital_fuel_sensor_a4	Number	device_inputs	Digital fuel sensor A4	
digital_fuel_sensor_a5	Number	device_inputs	Digital fuel sensor A5	
digital_fuel_sensor_a6	Number	device_inputs	Digital fuel sensor A6	
digital_fuel_sensor_a7	Number	device_inputs	Digital fuel sensor A7	
digital_fuel_sensor_a8	Number	device_inputs	Digital fuel sensor A8	
digital_fuel_sensor_a9	Number	device_inputs	Digital fuel sensor A9	
digital_fuel_sensor_a10	Number	device_inputs	Digital fuel sensor A10	
digital_fuel_sensorc1_temperature	Number	device_inputs	Digital fuel sensor C1 temperature	°C
digital_fuel_sensorc2_temperature	Number	device_inputs	Digital fuel sensor C2 temperature	°C
digital_fuel_sensorc3_temperature	Number	device_inputs	Digital fuel sensor C3 temperature	°C
digital_fuel_sensorc4_temperature	Number	device_inputs	Digital fuel sensor C4 temperature	°C
digital_fuel_sensorc5_temperature	Number	device_inputs	Digital fuel sensor C5 temperature	°C
digital_fuel_sensorc6_temperature	Number	device_inputs	Digital fuel sensor C6 temperature	°C
digital_fuel_sensorc7_temperature	Number	device_inputs	Digital fuel sensor C7 temperature	°C

digital_fuel_sensorc8_temperature	Number	device_inputs	Digital fuel sensor C8 temperature	°C
digital_fuel_sensorc9_temperature	Number	device_inputs	Digital fuel sensor C9 temperature	°C
digital_fuel_sensorc10_temperature	Number	device_inputs	Digital fuel sensor C10 temperature	°C
digital_fuel_sensorc1	Number	device_inputs	Digital fuel sensor C1	
digital_fuel_sensorc2	Number	device_inputs	Digital fuel sensor C2	
digital_fuel_sensorc3	Number	device_inputs	Digital fuel sensor C3	
digital_fuel_sensorc4	Number	device_inputs	Digital fuel sensor C4	
digital_fuel_sensorc5	Number	device_inputs	Digital fuel sensor C5	
digital_fuel_sensorc6	Number	device_inputs	Digital fuel sensor C6	
digital_fuel_sensorc7	Number	device_inputs	Digital fuel sensor C7	
digital_fuel_sensorc8	Number	device_inputs	Digital fuel sensor C8	
digital_fuel_sensorc9	Number	device_inputs	Digital fuel sensor C9	
digital_fuel_sensorc10	Number	device_inputs	Digital fuel sensor C10	
digital_fuel_sensora1_temperature	Number	device_inputs	Digital fuel sensor A1 temperature	°C
fuel_level_sensorb1_temperature	Number	device_inputs	Fuel level sensor B1 temperature	°C
bt_humidity_sensor_0	Number	device_inputs	BT humidity sensor 0	%
bt_humidity_sensor_1	Number	device_inputs	BT humidity sensor 1	%
bt_humidity_sensor_2	Number	device_inputs	BT humidity sensor 2	%
bt_humidity_sensor_3	Number	device_inputs	BT humidity sensor 3	%
bt_humidity_sensor_4	Number	device_inputs	BT humidity sensor 4	%
ibutton	String	device_inputs	iButton driver ID	
rfid_a	String	device_inputs	RFID PortA	
rfid_b	String	device_inputs	RFID PortB	
magnetic_card_id	String	device_inputs	Magnetic card ID	
ds1971_ibutton_internal_8b_driver_id	String	device_inputs	DS1971 iButton internal 8B driver ID	
ds1971_ibutton_internal_16b_driver_id	String	device_inputs	DS1971 iButton internal 16B driver ID	
ds1971_ibutton_internal_8b_passenger_id	String	device_inputs	DS1971 iButton internal 8B passenger ID	
ds1971_ibutton_internal_16b_passenger_id	String	device_inputs	DS1971 iButton internal 16B passenger ID	
ultra_high_frequency_rfid_port_b	String	device_inputs	Ultra High Frequency RFID port B	
ultra_high_frequency_rfid_port_a	String	device_inputs	Ultra High Frequency RFID port A	
digital_input_1	Boolean	device_inputs	DIN1 value	
digital_input_2	Boolean	device_inputs	DIN2 value	
digital_input_3	Boolean	device_inputs	DIN3 value	
digital_input_4	Boolean	device_inputs	DIN4 value	
analog_input_1	Number	device_inputs	AIN1 value	V
analog_input_2	Number	device_inputs	AIN2 value	V
din1_working_time_diff	Number	device_inputs	DIN1 hour counter	s
din2_working_time_diff	Number	device_inputs	DIN2 hour counter	s
din3_working_time_diff	Number	device_inputs	DIN3 hour counter	s
din4_working_time_diff	Number	device_inputs	DIN4 hour counter	s
ot_digital_input_1	Boolean	device_inputs	OT digital input 1	
ot_digital_input_2	Boolean	device_inputs	OT digital input 2	

ot_digital_input_3	Boolean	device_inputs	OT digital input 3
ot_digital_input_4	Boolean	device_inputs	OT digital input 4
frequency_input_1	Number	device_inputs	Frequency input 1 Hz
frequency_input_2	Number	device_inputs	Frequency input 2 Hz
kimax_total_trailer_weight	Number	device_inputs	Kimax total trailer weight kg
kimax_total_truck_weight	Number	device_inputs	Kimax total truck weight kg
moba_netto_weight	Number	device_inputs	MOBA netto weight g
moba_timestamp	Datetime	device_inputs	MOBA timestamp
moba_rfid_id	String	device_inputs	MOBA RFID ID
mobileye_sound_type	Enum	device_inputs	Mobileye sound type Possible values: SILENT LDWL LDWR HW1 TSR UFCW FCW_PCW PEDS_IN_DZ
mobileye_pedestrians_in_dz	Boolean	device_inputs	Mobileye pedestrians in danger zone
mobileye_pedestrians_fcw	Boolean	device_inputs	Mobileye pedestrians forward collision warning
mobileye_night_time_indicator	Enum	device_inputs	Mobileye night time indicator Possible values: DAY NIGHT
mobileye_dusk_time_indicator	Enum	device_inputs	Mobileye dusk time indicator Possible values: DAY DUSK
mobileye_error_code	Number	device_inputs	Mobileye error code
mobileye_error_valid	Boolean	device_inputs	Mobileye error valid
mobileye_zero_speed	Boolean	device_inputs	Mobileye zero speed
mobileye_headway_valid	Boolean	device_inputs	Mobileye headway valid
mobileye_headway_measurement	Number	device_inputs	Mobileye headway measurement
mobileye_ldw_off	Boolean	device_inputs	Mobileye LDW off
mobileye_right_ldw_on	Boolean	device_inputs	Mobileye right LDW on
mobileye_left_ldw_on	Boolean	device_inputs	Mobileye left LDW on
mobileye_maintenance	Enum	device_inputs	Mobileye maintenance Possible values: NO_ERROR ERROR
mobileye_failsafe	Boolean	device_inputs	Mobileye failsafe
mobileye_fcw_on	Boolean	device_inputs	Mobileye forward collision warning on
mobileye_headway_warning_level	Enum	device_inputs	Mobileye headway warning level Possible values: NO_COPV CIPV_WITH_HW_MORE_THAN_HW_CO NFIG CIPV_WITH_LESS_THAN_HW_CONFIG
mobileye_hi_beam	Enum	device_inputs	Mobileye high beam Possible values: OFF ON

mobileye_low_beam	Enum	device_inputs	Mobileye low beam Possible values: OFF ON	
mobileye_wipers	Enum	device_inputs	Mobileye wipers Possible values: OFF ON	
mobileye_right_signal	Boolean	device_inputs	Mobileye right signal	
mobileye_left_signal	Boolean	device_inputs	Mobileye left signal	
mobileye_brake_signal	Boolean	device_inputs	Mobileye brake signal	
mobileye_wipers_available	Boolean	device_inputs	Mobileye wipers available	
mobileye_low_beam_available	Boolean	device_inputs	Mobileye low beam available	
mobileye_hi_beam_available	Boolean	device_inputs	Mobileye high beam available	
mobileye_speed_available	Boolean	device_inputs	Mobileye speed available	
mobileye_speed	Number	device_inputs	Mobileye speed	km/h
mobileye_tamper_alert	Enum	device_inputs	Mobileye tamper alert Possible values: OFF ON	
mobileye_tsr_enabled	Boolean	device_inputs	Mobileye TSR enabled	
mobileye_tsr_warning_level	Number	device_inputs	Mobileye TSR warning level	
mobileye_hw_repeat_enabled	Boolean	device_inputs	Mobileye headway warning repeat enabled	
mobileye_vision_only_sign	Number	device_inputs	Mobileye vision only sign	
mobileye_vision_only_supplementary_sign_type	Number	device_inputs	Mobileye vision only supplementary sign type	
mobileye_sign_position_x	Number	device_inputs	Mobileye sign position X	
mobileye_sign_position_y	Number	device_inputs	Mobileye sign position Y	
mobileye_sign_position_z	Number	device_inputs	Mobileye sign position Z	
mobileye_filter_type	Number	device_inputs	Mobileye filter type	
mobileye_vision_sign_type_display_1	Number	device_inputs	Mobileye vision sign type display 1	
mobileye_vision_only_supplementary_sign_type_display_1	Number	device_inputs	Mobileye vision only supplementary sign type display 1	
mobileye_vision_sign_type_display_2	Number	device_inputs	Mobileye vision sign type display 2	
mobileye_vision_only_supplementary_sign_type_display_2	Number	device_inputs	Mobileye vision only supplementary sign type display 2	
mobileye_vision_sign_type_display_3	Number	device_inputs	Mobileye vision sign type display 3	
mobileye_vision_only_supplementary_sign_type_display_3	Number	device_inputs	Mobileye vision only supplementary sign type display 3	
mobileye_vision_sign_type_display_4	Number	device_inputs	Mobileye vision sign type display 4	
mobileye_vision_only_supplementary_sign_type_display_4	Number	device_inputs	Mobileye vision only supplementary sign type display 4	
obd_kline_dtc_and_mil	Number	device_inputs	OBD DTC and MIL	
obd_kline_rpm	Number	device_inputs	OBD RPM	RPM
obd_kline_vehicle_speed_sensor	Number	device_inputs	OBD vehicle speed	km/h
obd_kline_engine_coolant_temperature	Number	device_inputs	OBD engine coolant temperature	°C
obd_kline_ambient_air_temperature	Number	device_inputs	OBD ambient air temperature	°C
obd_kline_fuel_level_input	Number	device_inputs	OBD fuel level	%

obd_kline_type_of_fuel	Enum	device_inputs	OBD fuel type Possible values: NOT_AVAILABLE GASOLINE METHANOL ETHANOL DIESEL LPG CNG PROPANE ELECTRIC BIFUEL_RUNNING_GASOLINE BIFUEL_RUNNING_METHANOL BIFUEL_RUNNING_ETHANOL BIFUEL_RUNNING_LPG BIFUEL_RUNNING_CNG BIFUEL_RUNNING_PROpane BIFUEL_RUNNING_ELECTRICITY BIFUEL_RUNNING_ELECTRIC_AND_CO MBUSTION_ENGINE HYBRID_GASOLINE HYBRID_ETHANOL HYBRID_DIESEL HYBRID_ELECTRIC HYBRID_RUNNING_ELECTRIC_AND_CO MBUSTION_ENGINE HYBRID_REGENERATIVE BIFUEL_DIESEL	
obd_kline_engine_fuel_rate	Number	device_inputs	OBD engine fuel rate	l/h
obd_kline_actual_engine_percent_torque	Number	device_inputs	OBD actual engine percent torque	%
obd_kline_engine_fuel_rate	Number	device_inputs	OBD engine fuel rate	l/h
obd_kline_actual_engine_percent_torque	Number	device_inputs	OBD actual engine percent torque	%
obd_kline_distance_traveled_while_mil_is_activated	Number	device_inputs	OBD distance traveled while MIL is activated	km
obd_kline_relative_accelerator_pedal_position	Number	device_inputs	OBD accelerator pedal position	%
obd_kline_vin_1	String	device_inputs	OBD VIN 1	
obd_kline_vin_2	String	device_inputs	OBD VIN 2	
obd_kline_vin_3	String	device_inputs	OBD VIN 3	
obd_kline_time_since_engine_start	Number	device_inputs	OBD time since engine start	s
obd_kline_dtc_counted	Number	device_inputs	OBD DTC count	
satellite_messages_sent	Number	device_inputs	Satellite messages sent	
pending_satellite_messages	Number	device_inputs	Pending satellite messages	
spr_spreader_mode	Number	device_inputs	Spreader mode	
spr_spreader_adjustment_of_simulation_driving_speed	Number	device_inputs	Spreader adjustment of simulation driving speed	km/h
spr_spreader_spreading_width	Number	device_inputs	Spreader spreading width	m
spr_spreading_solid_material_dosage_from_reservoir_1	Number	device_inputs	Spreader spreading solid material dosage from reservoir 1	g/m ²
spr_spreading_brine_dosage	Number	device_inputs	Spreader spreading brine dosage	g/m ²
spr_spreader_maximum_button		device_inputs	Spreader maximum button	
spr_spread_solid_material_from_reservoir_1	Number	device_inputs	Spreader spread solid material from reservoir 1	kg
spr_spread_brine_material	Number	device_inputs	Spreader spread brine material	l

spr_driven_hours_while_spreading	Number	device_inputs	Spreader driven hours while spreading	h
spr_error_code	Bitmap	device_inputs	Spreader error code Possible values: RESERVED NO_SALT NO_BRINE MIN_LEVEL_OF_TANK MIN_LEVEL_OF_HOPPER NO_FEEDBACK_FROM_SPINNER NO_FEEDBACK_FROM_CONVEYER NO_FEEDBACK_FROM_CONVEYER_2 NO_FEEDBACK_FROM_PUMP SPINNER_RPM_OUT_OF_RANGE CONVEYER_RPM_OUT_OF_RANGE CONVEYER_2_RPM_OUT_OF_RANGE PUMP_RPM_OUT_OF_RANGE SETTING_OUT_OF_RANGE AUX_ENGINE_CHARGE_CONTROL_FAULT AUX_ENGINE_OIL_PRESSURE_TOO_LOW AUX_ENGINE_WATER_TEMP_TOO_HIGH RESERVED	
spr_liquid_material	String	device_inputs	Spreader liquid material	
spr_solid_material	String	device_inputs	Spreader solid material	
driver_1_state	Enum	device_inputs	Driver 1 state Possible values: REST DRIVER_AVAILABLE WORK DRIVE ERROR NOT_AVAILABLE	
driver_2_state	Enum	device_inputs	Driver 2 state Possible values: REST DRIVER_AVAILABLE WORK DRIVE ERROR NOT_AVAILABLE	
tco_first_driver_state	Enum	device_inputs	TCO first driver state Possible values: REST DRIVER_AVAILABLE WORK DRIVE ERROR NOT_AVAILABLE	
tco_second_driver_state	Enum	device_inputs	TCO second driver state Possible values: REST DRIVER_AVAILABLE WORK DRIVE ERROR NOT_AVAILABLE	
tco_first_driver_card	Enum	device_inputs	TCO first driver card Possible values: NOT_INSERTED INSERTED	
tco_second_driver_card	Enum	device_inputs	TCO second driver card Possible values: NOT_INSERTED INSERTED	
tco_distance	Number	device_inputs	TCO distance	km

tco_distance	Number	device_inputs	TCO distance	km
tco_trip	Number	device_inputs	TCO trip distance	km
tco_vehicle_speed	Number	device_inputs	TCO vehicle speed	km/h
tco_rpm	Number	device_inputs	TCO engine speed	RPM
tco_registration_number	String	device_inputs	TCO registration number	
tacho_ddd_available	Enum	device_inputs	Tacho card reader state NOT_AVAILABLE AVAILABLE	
tco_first_driver_driving_time_(prev_and_curr_week)	Number	device_inputs	TCO first driver driving time (prev. and curr. week)	min
tco_second_driver_driving_time_(prev_and_curr_week)	Number	device_inputs	TCO second driver driving time (prev. and curr. week)	min
tco_first_driver_duration_of_selected_activity	Number	device_inputs	TCO first driver duration of selected activity	min
tco_second_driver_duration_of_selected_activity	Number	device_inputs	TCO second driver duration of selected activity	min
tco_first_driver_continuous_driving_time	Number	device_inputs	TCO first driver continuous driving time	min
tco_second_driver_continuous_driving_time	Number	device_inputs	TCO second driver continuous driving time	min
tco_first_driver_cumulated_break_time	Number	device_inputs	TCO first driver accumulated break time	min
tco_second_driver_cumulated_break_time	Number	device_inputs	TCO second driver accumulated break time	min
tco_first_driver_time_related_states	Number	device_inputs	TCO first driver time related states	
tco_second_driver_time_related_states	Number	device_inputs	TCO second driver time related states	
tco_time	Datetime	device_inputs	TCO tacho time	
tco_can_tacho_time	Datetime	device_inputs	TCO CAN tacho Time	

tco_can_tacho_time	Datetime	device_inputs	TCO CAN tacho Time	
temperature_sensor_0	Number	device_inputs	Temperature sensor 0	°C
temperature_sensor_1	Number	device_inputs	Temperature sensor 1	°C
temperature_sensor_2	Number	device_inputs	Temperature sensor 2	°C
temperature_sensor_3	Number	device_inputs	Temperature sensor 3	°C
temperature_sensor_0_id	String	device_inputs	Temperature sensor 0 ID	
temperature_sensor_1_id	String	device_inputs	Temperature sensor 1 ID	
temperature_sensor_2_id	String	device_inputs	Temperature sensor 2 ID	
temperature_sensor_3_id	String	device_inputs	Temperature sensor 3 ID	
ot_temperature_sensor_1	Number	device_inputs	OT temperature sensor 1	°C
ot_temperature_sensor_2	Number	device_inputs	OT temperature sensor 2	°C
ot_temperature_sensor_3	Number	device_inputs	OT temperature sensor 3	°C
ot_temperature_sensor_4	Number	device_inputs	OT temperature sensor 4	°C
ot_temperature_sensor_5	Number	device_inputs	OT temperature sensor 5	°C
ot_temperature_sensor_6	Number	device_inputs	OT temperature sensor 6	°C
bt_temperature_sensor_1	Number	device_inputs	BT Temperature sensor 0	°C
bt_temperature_sensor_2	Number	device_inputs	BT Temperature sensor 1	°C
bt_temperature_sensor_3	Number	device_inputs	BT Temperature sensor 2	°C
bt_temperature_sensor_4	Number	device_inputs	BT Temperature sensor 3	°C
bt_temperature_sensor_5	Number	device_inputs	BT Temperature sensor 4	°C
trailers_vehicle_abs_status	Enum	device_inputs	Trailers vehicle ABS status Possible values: PASSIVE ACTIVE	

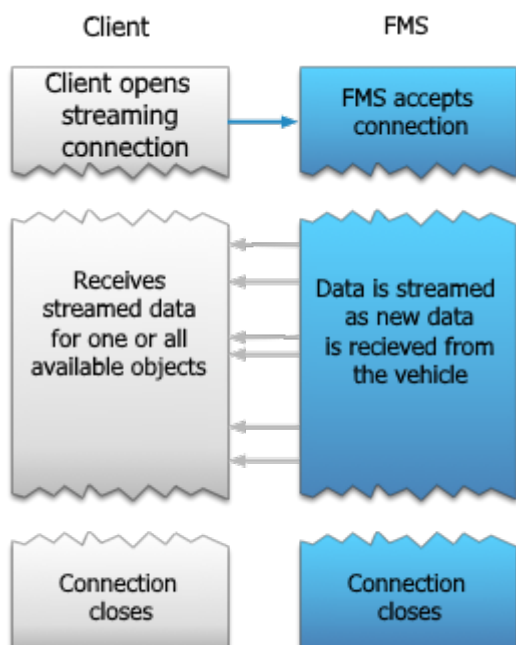
trailers_vehicle_service_brake_status	Enum	device_inputs	Trailers vehicle service brake status Possible values: PASSIVE ACTIVE	
trailers_vdc_active	Enum	device_inputs	Trailers VDC active Possible values: PASSIVE ACTIVE	
trailers_vehicle_electrical_supply_status	Enum	device_inputs	Trailers vehicle electrical supply status Possible values: INSUFFICIENT SUFFICIENT	
trailers_external_brake_request_status	Enum	device_inputs	Trailers external brake request status NO_REQUEST REQUEST_ACTIVE	
trailers_braking_via_electric_control_line_support	Enum	device_inputs	Trailers braking via electric control line support Possible values: NOT_SUPPORTED SUPPORTED	
trailers_electrical_supply_of_non_braking_system_status	Enum	device_inputs	Trailers electrical supply of non-braking system status Possible values: OFF ON	
trailers_electrical_load_proportional_function_installation_status	Enum	device_inputs	Trailers electrical load proportional function installation status Possible values: NOT_INSTALLED INSTALLED	
trailers_vehicle_type	Enum	device_inputs	Trailers vehicle type Possible values: TOWED_VEHICLE CONVERTED_DOLLY_AXLE_LSB	
trailers_stop_lamps_request	Enum	device_inputs	Trailers stop lamps request Possible values: NO_REQUEST REQUEST_ACTIVE	
trailers_red_warning_signal_request	Enum	device_inputs	Trailers red warning signal request Possible values: OFF ON	
trailers_amber_warning_signal_request	Enum	device_inputs	Trailers amber warning signal request Possible values: OFF ON	
trailers_vehicle_pneumatic_supply_status	Enum	device_inputs	Trailers vehicle pneumatic supply status Possible values: OFF ON	
trailers_braking_system_wheel_based_vehicle_speed	Number	device_inputs	Trailers braking system wheel-based vehicle speed	km/h
trailers_wheel_speed_difference_main_axle	Number	device_inputs	Trailers wheel speed difference main axle	km/h
trailers_lateral_acceleration	Number	device_inputs	Trailers lateral acceleration	m/s ²
trailers_axle_load_sum	Number	device_inputs	Trailers axle load sum	kg
trailers_pneumatic_supply_pressure	Number	device_inputs	Trailers pneumatic supply pressure	kPa
trailers_brake_cylinder_pressure_first_axle_left_wheel	Number	device_inputs	Trailers brake cylinder pressure first axle, left wheel	kPa
trailers_brake_cylinder_pressure_first_axle_right_wheel	Number	device_inputs	Trailers brake cylinder pressure first axle, right wheel	kPa

trailers_high_resolution_vehicle_distance	Number	device_inputs	Trailers high resolution vehicle distance	km
trailers_service_distance	Number	device_inputs	Trailers service distance	km
wireless_enabled	Enum	device_inputs	Wireless enabled Possible values: DISABLED ENABLED	
wireless_pair	Boolean	device_inputs	Wireless pair	
wireless_driver_id	Number	device_inputs	Wireless driver ID	
current_profile	Number	device_inputs	Current profile	
power_supply_voltage	Number	device_inputs	Power supply voltage	V
battery_voltage	Number	device_inputs	Battery voltage	V
pcb_temperature	Number	device_inputs	PCB temperature	°C
virtual_odometer	Number	device_inputs	Virtual odometer	km
input_trigger	Number	device_inputs	Input trigger	
priority	Enum	device_inputs	Priority Possible values: LOW HIGH	
battery_current	Number	device_inputs	Battery charge current	mA
movement	Enum	device_inputs	Movement sensor Possible values: STILL MOVING	
hdop	String	device_inputs	HDOP	
modem_temperature	Number	device_inputs	Modem temperature	°C
virtual_odometer_diff	Number	device_inputs	Virtual odometer DIFF	m
ignition_plugtrack	Enum	device_inputs	Virtual ignition Possible values: OFF ON	
sleep_timer	Enum	device_inputs	Sleep timer Possible values: NO_EVENT DEVICE_WAKE_UP_BY_TIMER_EVENT	
custom_ignition	Enum	device_inputs	Custom ignition Possible values: OFF ON	
panic	Boolean	device_inputs	Panic status	
shock_duration	Number	device_inputs	Shock duration	ms
roll_over_alarm	Boolean	device_inputs	Rollover alarm	
position	Array		Container for all record GPS parameters	
altitude	Number	position	Altitude	m
longitude	Number	position	Longitude	Degrees
latitude	Number	position	Latitude	Degrees
direction	Number	position	Direction	Degrees
satellites_count	Number	position	Satellites count	
speed	Number	position	Speed	km/h
geozone_ids	Array		Container for all geozones IDs	

nearest_geozone	Array	Container for the nearest geozone information
id	String	Geozone ID If object is in geozone it will be "null". Geozones detection radius 50km. Historical data will be kept for 1 month.
distance	Number	Distance from object to the nearest geozone edge. If object is in geozone it will be "null". Geozones detection radius 50km. Historical data will be kept for 1 month.

Object Coordinates Streaming API v2

API-ul Object Coordinates Streaming v2 este utilizat pentru a informa utilizatorul despre modificările obiectului. Acest API particular funcționează ca un flux de informații, folosind tehnologia SSE (server send events) . Odată ce utilizatorul a trimis o solicitare API, mai întâi este afișată ultima coordonată cunoscută pentru fiecare obiect, apoi noi date vor fi trimise utilizatorului de îndată ce apare o modificare. Nu este nevoie să retrimiteți solicitarea API decât dacă conexiunea de streaming a fost întreruptă.



Notă

API-ul returnează ultima coordonată cunoscută. În cazurile în care fluxul API a fost în desfășurare și din anumite motive a fost reconectat fără coordonate noi primite în acel timp, utilizatorul va primi ultima coordonată cunoscută, care a fost deja primită o dată, duplicând astfel înregistrarea de coordonate. Acest lucru trebuie reținut, deoarece poate cauza probleme în diferite sisteme.

Object Coordinates Streaming API v2 poate fi inițiat fie pentru un anumit obiect, fie pentru toate obiectele disponibile utilizatorului.

Cerere de date în timp real pentru un anumit obiect

Structura cererii:

```
GET /object-coordinates-stream?version=2&object_id=<...>&api_key=<...>&include_geozones=
<...>&include_nearest_geozone=<...> HTTP/1.1
Host: api.fm-track.com
Content-Type: text/event-stream; charset=UTF-8
```

```
curl -N -http2 "https://api.fm-track.com/object-coordinates-stream?version=2&object_id=
<...>&api_key=<...>"
```

Parameter	Type	Description	Required
object_id	String	External object ID	Yes
version	String	API version	Yes
api_key	String	User identification key	Yes
include_geozones	boolean	If true geozones information in the answer will be returned	No
include_nearest_geozone	boolean	If true information about the nearest geozone in the answer will be returned	No

Solicitare de date în timp real pentru toate obiectele

Structura cererii:

```
GET /object-coordinates-stream?version=2&api_key=<...>&include_geozones=<...>&include_nearest_geozone=<...> HTTP/1.1
Host: api.fm-track.com
Content-Type: text/event-stream; charset=UTF-8
```

```
curl -N -http2 "https://api.fm-track.com/object-coordinates-stream?version=2&api_key=<...>"
```

Parameter	Type	Description	Required
version	String	API version	Yes
api_key	String	User identification key	Yes
include_geozones	boolean	If true geozones information in the answer will be returned	No
include_nearest_geozone	boolean	If true information about the nearest geozone in the answer will be returned	No

Exemplu de răspuns:

JSON

data:

```
{
  "object_id": "abc123",
  "datetime": "2019-02-11T02:00:00.000Z",
  "ignition_status": "OFF",
  "position": {
```

```

    "altitude" : 0,
    "direction" : 0,
    "latitude" : 0,
    "longitude" : 0,
    "satellites_count" : 0,
    "speed" : 0
  },
  "inputs":{
    "other":{
      "virtual_gps_odometer":0.0000,
      "country_code_geonames":91
    },
    "device_inputs":{
      "virtual_odometer":5.00,
      "digital_input_4":false,
      "driver_1_state":"DRIVE",
      "input_trigger":0,
      "tco_first_driver_state":"DRIVE",
      "priority":"LOW",
      .....,
      "hdop":"0.0"
    },
    "calculated_inputs":{
      "din4_working_time":0.00,
      "custom_input_3":0.00,
      "custom_input_6":0.00,
      "temperature":0.00,
      "custom_input_1":0.00,
      .....,
      "custom_input_2":0.00,
      "mileage":5000.00
    }
  },
  "geozone_ids":[
    "fde96c01",
    "9b32bd68",
    "95dcd895"
  ],
  "nearest_geozone":{
    "id":"fde96c01",
    "distance":null
  }
}

```

Dacă un parametru a fost introdus incorect, sistemul va răspunde cu un cod de eroare. Toate codurile de eroare sunt descrise în secțiunea [API](#) -uri . Parametrii pentru care nu sunt furnizate date

nu sunt incluși în răspuns. O listă completă a parametrilor de răspuns este disponibilă la sfârșitul acestei secțiuni.

Parametrii de răspuns:

Name	Type	Array	Description	Units
items	Array		Contains all parameters in accordance to the request	
object_id	String		Object identifier	Text
datetime	Date		Date and time point of coordinate generated in hardware Format: "yyyy-mm-ddThh:mm:ssZ"	Datetime
ignition_status	Enum		Indicates if the object's ignition is on Possible values: ON OFF UNKNOWN	
trip_type	Enum		Trip type Possible values: UNKNOWN NONE PRIVATE BUSINESS WORK	
other	Array		Container for other system parameters	
country_code_geonames	Number	other	Country code numeral	
virtual_gps_odometer	Number	other	Virtual odometer value	km
calculated_inputs	Array	calculated_inputs	Container for parameters calculated in the system from other parameters according to the configuration	
fuel_consumption	Number	calculated_inputs	Fuel consumption	l
fuel_level	Number	calculated_inputs	Fuel level	l
mileage	Number	calculated_inputs	Mileage	km
rpm	Number	calculated_inputs	Engine RPM	RPM

temperature	Number	calculated_inputs	Temperature	°C
custom_input_1	Number	calculated_inputs	Custom input 1	
custom_input_2	Number	calculated_inputs	Custom input 2	
custom_input_3	Number	calculated_inputs	Custom input 3	
custom_input_4	Number	calculated_inputs	Custom input 4	
custom_input_5	Number	calculated_inputs	Custom input 5	
custom_input_6	Number	calculated_inputs	Custom input 6	
custom_input_7	Number	calculated_inputs	Custom input 7	
custom_input_8	Number	calculated_inputs	Custom input 8	
din1_working_time	Number	calculated_inputs	DIN1 working time	
din2_working_time	Number	calculated_inputs	DIN2 working time	
din3_working_time	Number	calculated_inputs	DIN3 working time	
din4_working_time	Number	calculated_inputs	DIN4 working time	
weight	Number	calculated_inputs	Weight	kg
device_inputs	Array	device_inputs	Container for parameters received from hardware	
x_axis	Number	device_inputs	Accelerometer X axis	G
y_axis	Number	device_inputs	Accelerometer Y axis	G
z_axis	Number	device_inputs	Accelerometer Z axis	G
g_peak_x	Number	device_inputs	G peak in X axis	G
g_peak_y	Number	device_inputs	G peak in Y axis	G
g_peak_z	Number	device_inputs	G peak in Z axis	G
x_axis_tilt_angle	Number	device_inputs	X axis tilt angle	Degrees
y_axis_tilt_angle	Number	device_inputs	Y axis tilt angle	Degrees
z_axis_tilt_angle	Number	device_inputs	Z axis tilt angle	Degrees
canbus_distance	Number	device_inputs	CAN high resolution total vehicle distance	km
canbus_engine_coolant_temperature	Number	device_inputs	CAN engine coolant temperature	°C
canbus_fuel_rate	Number	device_inputs	CAN fuel rate	l/h
engine_rpm	Number	device_inputs	CAN engine speed	RPM
engine_hours	Number	device_inputs	CAN engine hours	h
service_dist	Number	device_inputs	CAN service distance	km
pedal_pos	Number	device_inputs	CAN accelerator pedal position	%
fuel_level_can	Number	device_inputs	CAN fuel level	%
fuel_used	Number	device_inputs	CAN engine total fuel used	l
speed_wheel	Number	device_inputs	CAN wheel based speed	km/h
speed_tacho	Number	device_inputs	CAN tachograph vehicle speed	km/h
tacho_status	Enum	device_inputs	CAN tachograph performance Possible values: NORMAL_PERFORMANCE PERFORMANCE_ANALYSIS	
overspeeding_events	Enum	device_inputs	CAN tacho vehicle overspeed Possible values: NO_OVERSPEED OVERSPEED	
axle_count	Number	device_inputs	CAN axle location	
canbus_brake_switch	Enum	device_inputs	CAN brake switch Possible values: RELEASED PRESSED	

canbus_clutch_switch	Enum	device_inputs	CAN clutch switch Possible values: RELEASED PRESSED
canbus_pto_state	Enum	device_inputs	CAN PTO state Possible values: OFF_DISABLED SET NOT_AVAILABLE
canbus_cruise_control_state	Enum	device_inputs	CAN cruise control active Possible values: OFF ON
canbus_request_supported	Enum	device_inputs	CAN request supported Possible values: NOT_SUPPORTED SUPPORTED RESERVED DO_NOT_CARE
canbus_diagnostics_supported	Enum	device_inputs	CAN diagnostics supported Possible values: NOT_SUPPORTED SUPPORTED RESERVED DO_NOT_CARE
canbus_vehicle_motion	Enum	device_inputs	CAN tachometer vehicle motion Possible values: NOT_DETECTED DETECTED
canbus_driver_1_time	Enum	device_inputs	CAN tachometer driver 1 time related status Possible values: NORMAL 15_MIN_BEFORE_4,5H 4,5H_REACHED 15_MIN_BEFORE_9H 9H_REACHED 15_MIN_BEFORE_16H 16H_REACHED ERROR NOT_AVAILABLE
canbus_driver_1_card	Enum	device_inputs	CAN tachometer driver 1 card Possible values: CARD_NOT_PRESENT CARD_PRESENT ERROR NOT_AVAILABLE
canbus_driver_2_time	Enum	device_inputs	CAN tachometer driver 2 time related status Possible values: NORMAL 15_MIN_BEFORE_4,5H 4,5H_REACHED 15_MIN_BEFORE_9H 9H_REACHED 15_MIN_BEFORE_16H 16H_REACHED ERROR NOT_AVAILABLE
canbus_driver_2_card	Enum	device_inputs	CAN tachometer driver 2 card Possible values: CARD_NOT_PRESENT CARD_PRESENT ERROR NOT_AVAILABLE

canbus_engine_plcs	Number	device_inputs	CAN engine percent load at current speed	%
canbus_tire_location	Number	device_inputs	CAN tire location	
canbus_system_event	Enum	device_inputs	CAN system event Possible values: NO_TACHO_EVENT TACHO_EVENT	
canbus_handling_information	Enum	device_inputs	CAN tachometer handling information Possible values: NO_HANDLING_INFORMATION HANDLING_INFORMATION	
canbus_direction_indicator	Enum	device_inputs	CAN tachometer direction indicator Possible values: FORWARD REVERSE	
canbus_ambient_air_temperature	Number	device_inputs	CAN ambient air temperature	°C
canbus_fuel_economy	Number	device_inputs	CAN instantaneous fuel economy	km/l
canbus_pto	Enum	device_inputs	CAN at least one PTO engaged Possible values: NO_PTO_DRIVER AT_LEAST_ONE_PTO_DRIVER ERROR NOT_AVAILABLE	
canbus_hrfc	Number	device_inputs	CAN high resolution engine total fuel used	l
vehicle_id	String	device_inputs	CAN vehicle ID	
first_driver_id	String	device_inputs	CAN first driver ID	
second_driver_id	String	device_inputs	CAN second driver ID	
canbus_driver_1_state	Enum	device_inputs	CAN tachometer driver 1 working state Possible values: REST DRIVER_AVAILABLE WORK DRIVE ERROR NOT_AVAILABLE	
canbus_driver_2_state	Enum	device_inputs	CAN tachometer driver 2 working state Possible values: REST DRIVER_AVAILABLE WORK DRIVE ERROR NOT_AVAILABLE	
canbus_axle_weight_1	Number	device_inputs	CAN axle 1 weight	kg
canbus_axle_weight_2	Number	device_inputs	CAN axle 2 weight	kg
canbus_axle_weight_3	Number	device_inputs	CAN axle 3 weight	kg
canbus_axle_weight_4	Number	device_inputs	CAN axle 4 weight	kg
canbus_axle_weight_5	Number	device_inputs	CAN axle 5 weight	kg
fuel_level_can_l	Number	device_inputs	CAN fuel level liters	l
fuel_used_diff	Number	device_inputs	CAN fuel used delta	l
canbus_parking_brake_switch	Enum	device_inputs	CAN parking brake switch Possible values: OFF ON	

canbus_battery_charging	Enum	device_inputs	CAN battery charging Possible values: NO_CHARGING CHARGING
lcv_hood	Enum	device_inputs	LCV hood Possible values: CLOSE OPEN
lcv_driver_doors	Enum	device_inputs	LCV driver doors Possible values: CLOSE OPEN
lcv_passenger_doors	Enum	device_inputs	LCV passenger doors Possible values: CLOSE OPEN
lcv_left_back_doors	Enum	device_inputs	LCV left back doors Possible values: CLOSE OPEN
lcv_right_back_doors	Enum	device_inputs	LCV right back doors Possible values: CLOSE OPEN
lcv_trunk	Enum	device_inputs	LCV trunk Possible values: CLOSE OPEN
canbus_hours_to_service	Number	device_inputs	CAN hours to service h
can_interface_configuration_can1_inter face	Enum	device_inputs	CAN interface configuration CAN1 in- terface Possible values: NONE FMS LCV OBD TACHO MOBILEYE TRAILERS DXP
can_interface_configuration_can2_inter face	Enum	device_inputs	CAN interface configuration CAN2 in- terface Possible values: NONE FMS LCV OBD TACHO MOBILEYE TRAILERS DXP
can_interface_configuration_can1_stat us	Enum	device_inputs	CAN interface configuration CAN1 sta- tus Possible values: INACTIVE ACTIVE
can_interface_configuration_can1_mod e	Enum	device_inputs	CAN interface configuration CAN1 mode Possible values: SILENT ACTIVE

can_interface_configuration_can1_auto_baud_rate	Enum	device_inputs	CAN interface configuration CAN1 auto baud rate Possible values: OFF ON
can_interface_configuration_can1_ff_filters_status	Enum	device_inputs	CAN interface configuration CAN1 filters status Possible values: OFF ON
can_interface_configuration_can2_status	Enum	device_inputs	CAN interface configuration CAN2 status Possible values: INACTIVE ACTIVE
can_interface_configuration_can2_mode	Enum	device_inputs	CAN interface configuration CAN2 mode Possible values: SILENT ACTIVE
can_interface_configuration_can2_auto_baud_rate	Enum	device_inputs	CAN interface configuration CAN2 auto baud rate Possible values: OFF ON
can_interface_configuration_can2_ff_filters_status	Enum	device_inputs	CAN interface configuration CAN2 filters status Possible values: OFF ON
canbus_electric_motor_temperature	Number	device_inputs	CAN electric motor temperature °C
can_lcv_configuration_can2_subgroup	Number	device_inputs	CAN LCV configuration CAN2 subgroup
can_ignition	Enum	device_inputs	CAN ignition Possible values: OFF ON
can_lcv_window_state_front_left	Number	device_inputs	CAN LCV window state Front Left
can_lcv_window_state_front_right	Number	device_inputs	CAN LCV window state Front Right
can_lcv_window_state_back_left	Number	device_inputs	CAN LCV window state Back Left
can_lcv_window_state_back_right	Number	device_inputs	CAN LCV window state Back Right
can_lcv_window_state_sunroof	Number	device_inputs	CAN LCV window state Sunroof
can_fuel_level_milliliters	Number	device_inputs	CAN fuel level milliliters ml
can_door_lock_state	Enum	device_inputs	CAN door lock state Possible values: UNLOCKED LOCKED NOT_AVAILABLE
gsm_signal_strength	Number	device_inputs	GSM signal strength
operator	Number	device_inputs	GSM operator
gps_speed	Number	device_inputs	GPS speed km/h
gsm_umts_signal_strength	Number	device_inputs	GSM/UMTS signal strength
gsm_umts_operator	Number	device_inputs	GSM/UMTS operator
umts_enabled	Enum	device_inputs	UMTS enabled status Possible values: DISABLED ENABLED

gnss_antenna	Enum	device_inputs	GNSS antenna status Possible values: DISABLED ENABLED UNKNOWN	
gsm_umts_jamming	Enum	device_inputs	GSM/UMTS jamming status Possible status: JAMMING_NOT_DETECTED JAMMING_DETECTED	
gprs_errors	Number	device_inputs	GPRS errors	
gprs_status	Enum	device_inputs	GPRS status Possible values: DISCONNECTED CONNECTED	
gps_altitude	Number	device_inputs	GPS altitude	m
dout1_status	Enum	device_inputs	DOUT1 status Possible values: ACTIVE INACTIVE	
dout2_status	Enum	device_inputs	DOUT2 status Possible values: ACTIVE INACTIVE	
dxp_battery_battery_voltage	Number	device_inputs	DXP battery voltage	V
dxp_battery_nominal_capacity_used	Number	device_inputs	DXP battery nominal capacity used	A
dxp_battery_charging_counter	Number	device_inputs	DXP battery charging counter	
dxp_battery_state_of_charge	Number	device_inputs	DXP battery charging state	%
dxp_battery_charging_current	Number	device_inputs	DXP battery charging current	A
dxp_battery_battery_current	Number	device_inputs	DXP battery current	A
dxp_battery_battery_temp	Number	device_inputs	DXP battery temperature	°C
dxp_battery_charger_stop_reason	Number	device_inputs	DXP battery charge stop reason	
dxp_switches_switch1	Enum	device_inputs	DXP switch 1 value Possible values: OFF ON	
dxp_switches_switch2	Enum	device_inputs	DXP switch 2 value Possible values: OFF ON	
dxp_switches_switch3	Enum	device_inputs	DXP switch 3 value Possible values: OFF ON	
dxp_switches_switch4	Enum	device_inputs	DXP switch 4 value Possible values: OFF ON	
dxp_switches_switch5	Enum	device_inputs	DXP switch 5 value Possible values: OFF ON	
dxp_switches_switch6	Enum	device_inputs	DXP switch 6 value Possible values: OFF ON	
dxp_switches_switch7	Enum	device_inputs	DXP switch 7 value Possible values: OFF ON	

dxp_switches_switch8	Enum	device_inputs	DXP switch 8 value Possible values: OFF ON	
dxp_switches_parameters_set	Number	device_inputs	DXP switch parameters set	
dxp_other_parameters_chassis_number_nr	Number	device_inputs	DXP chassis number	
dxp_other_parameters_service_odometer	Number	device_inputs	DXP service odometer	
dxp_other_parameters_vcl_version	Number	device_inputs	DXP VCL version	
dxp_other_parameters_parameter_blk_version	Number	device_inputs	DXP parameter BLK version	
dxp_faults1_status1_faults_error_codes	Number	device_inputs	DXP status 1 fault error codes	
dxp_faults1_status2_faults_error_codes	Number	device_inputs	DXP status 2 fault error codes	
dxp_faults1_status3_faults_error_codes	Number	device_inputs	DXP status 3 fault error codes	
dxp_faults1_status4_faults_error_codes	Number	device_inputs	DXP status 4 fault error codes	
dxp_faults1_status5_faults_error_codes	Number	device_inputs	DXP status 5 fault error codes	
dxp_faults1_status6_faults_error_codes	Number	device_inputs	DXP status 6 fault error codes	
dxp_faults1_status7_faults_error_codes	Number	device_inputs	DXP status 7 fault error codes	
dxp_faults1_status8_faults_error_codes	Number	device_inputs	DXP status 8 fault error codes	
dxp_faults2_user_fault_1_error_codes	Number	device_inputs	DXP user fault 1 error codes	
dxp_faults2_user_fault_2_error_codes	Number	device_inputs	DXP user fault 2 error codes	
dxp_faults2_user_fault_2_history_error_codes	Number	device_inputs	DXP user fault 1 history error codes	
dxp_faults2_user_fault_1_history_error_codes	Number	device_inputs	DXP user fault 2 history error codes	
dxp_faults2_kyb_hist_fault_codes	Number	device_inputs	DXP KYB hist fault codes	
dxp_charger_status	Number	device_inputs	DXP charger status	
ecodrive_maximum_speed	Number	device_inputs	Eco-Drive maximum speed	km/h
ecodrive_overspeed	Number	device_inputs	Eco-Drive overspeeding timer	s
ecodrive_rpm_on_red	Number	device_inputs	Eco-Drive RPM in red band timer	s
ecodrive_maximum_rpm	Number	device_inputs	Eco-Drive maximum RPM	RPM
ecodrive_braking_events	Number	device_inputs	Eco-Drive brake counter	
ecodrive_harsh_acceleration	Number	device_inputs	Eco-Drive harsh acceleration counter	
ecodrive_idling_time	Number	device_inputs	Eco-Drive idling counter	s
ecodrive_engine_on	Number	device_inputs	Eco-Drive engine on timer	s
ecodrive_time_cruise_control_could_be_on	Number	device_inputs	Eco-Drive time cruise control could be on	s
ecodrive_time_cruise_control_was_on_when_it_could_be_on	Number	device_inputs	Eco-Drive time cruise control was on when it could be on	s
ecodrive_extreme_braking_count	Number	device_inputs	Eco-Drive extreme braking count	
ecodrive_harsh_braking_count	Number	device_inputs	Eco-Drive harsh braking count	
ecodrive_mileage_in_rpm_green_zone	Number	device_inputs	Eco-Drive mileage in RPM green zone	m

ecodrive_braking_events	Number	device_inputs	Eco-Drive brake counter	
ecodrive_harsh_acceleration	Number	device_inputs	Eco-Drive harsh acceleration counter	
ecodrive_idling_time	Number	device_inputs	Eco-Drive idling counter	s
ecodrive_engine_on	Number	device_inputs	Eco-Drive engine on timer	s
ecodrive_time_cruise_control_could_be_on	Number	device_inputs	Eco-Drive time cruise control could be on	s
ecodrive_time_cruise_control_was_on_when_it_could_be_on	Number	device_inputs	Eco-Drive time cruise control was on when it could be on	s
ecodrive_extreme_braking_count	Number	device_inputs	Eco-Drive extreme braking count	
ecodrive_harsh_braking_count	Number	device_inputs	Eco-Drive harsh braking count	
ecodrive_mileage_in_rpm_green_zone	Number	device_inputs	Eco-Drive mileage in RPM green zone	m
ecodrive_mileage_when_speed_is_below_overspeed	Number	device_inputs	Eco-Drive mileage when speed is below overspeed	m
ecodrive_mileage_when_cruise_control_could_be_on	Number	device_inputs	Eco-Drive mileage when cruise control could be on	m
ecodrive_mileage_when_cruise_control_was_on_when_it_could_be_on	Number	device_inputs	Eco-Drive mileage when cruise control was on when it could be on	m
ecodrive_cornering_counter	Number	device_inputs	Eco-Drive cornering counter	
ecodrive_stops_counter	Number	device_inputs	Eco-Drive stop counter	
ecodrive_fuel_used_at_stops	Number	device_inputs	Eco-Drive fuel used while idling	l
ecodrive_mileage_while_free_rolling	Number	device_inputs	Eco-Drive free rolling distance	m
ecodrive_mileage_while_engine_overloaded	Number	device_inputs	Eco-Drive engine overloaded distance	m
ecodrive_fuel_used_while_engine_overloaded	Number	device_inputs	Eco-Drive engine overloaded fuel used	l
ecodrive_mileage_while_overspeeding	Number	device_inputs	Eco-Drive overspeeding distance	m
ecodrive_fuel_used_while_overspeeding	Number	device_inputs	Eco-Drive overspeeding fuel used	l
ecodrive_mileage_when_cruise_control_was_on	Number	device_inputs	Eco-Drive cruise control on distance	m
ecodrive_fuel_used_when_cruise_control_was_on	Number	device_inputs	Eco-Drive cruise control on fuel used	l
ecodrive_mileage_in_highest_gear	Number	device_inputs	Eco-Drive highest gear distance	m
ecodrive_fuel_used_in_highest_gear	Number	device_inputs	Eco-Drive highest gear fuel used	l
ecodrive_mileage_in_range_1_900_rpm	Number	device_inputs	Eco-Drive RPM range 1 (<900 RPM) distance	m
ecodrive_fuel_used_in_range_1_900_rpm	Number	device_inputs	Eco-Drive RPM range 1 (<900 RPM) fuel used	l
ecodrive_mileage_in_range_900_1300_rpm	Number	device_inputs	Eco-Drive RPM range 2 (900-1300 RPM) distance	m
ecodrive_fuel_used_in_range_900_1300_rpm	Number	device_inputs	Eco-Drive RPM range 2 (900-1300 RPM) fuel used	l
ecodrive_mileage_in_range_1300_1500_rpm	Number	device_inputs	Eco-Drive RPM range 3 (1300-1500 RPM) distance	m
ecodrive_fuel_used_in_range_1300_1500_rpm	Number	device_inputs	Eco-Drive RPM range 3 (1300-1500 RPM) fuel used	l
ecodrive_mileage_in_range_1500_2300_rpm	Number	device_inputs	Eco-Drive RPM range 4 (1500-2300 RPM) distance	m
ecodrive_fuel_used_in_range_1500_2300_rpm	Number	device_inputs	Eco-Drive RPM range 4 (1500-2300 RPM) fuel used	l

ecodrive_idling_state	Enum	device_inputs	Eco-Drive idling state Possible values: NO_IDLING IDLING	
ecodrive_braking_value	Number	device_inputs	Eco-Drive braking value	m/s^2
ecodrive_acceleration_value	Number	device_inputs	Eco-Drive acceleration value	m/s^2
ecodrive_cornering_value	Number	device_inputs	Eco-Drive cornering value	m/s^2
eco_rpm_in_red_band_distance	Number	device_inputs	Eco-Drive RPM in red band distance	m
eco_engine_braking_distance	Number	device_inputs	Eco-Drive engine braking distance	m
eco_braking_distance	Number	device_inputs	Eco-Drive braking distance	m
eco_braking_duration	Number	device_inputs	Eco-Drive braking duration	s
eco_retarder_duration	Number	device_inputs	Eco-Drive retarder duration	s
eco_stops_counter	Number	device_inputs	Eco-Drive stop counter	
thermoking_air_return_temp	Number	device_inputs	ThermoKing air return temperature	°C
thermoking_alarms	Number	device_inputs	ThermoKing alarm code	
thermoking_set_point	Number	device_inputs	ThermoKing temperature setpoint	°C
thermoking_fuel_level	Number	device_inputs	ThermoKing fuel level	%
thermoking_battery_voltage	Number	device_inputs	ThermoKing battery voltage	V
thermoking_total_electric_hours	Number	device_inputs	ThermoKing total electric hours	h
thermoking_vehicle_hours	Number	device_inputs	ThermoKing total vehicle hours	h
thermoking_total_engine_hours	Number	device_inputs	ThermoKing total engine hours	h
thermoking_alarm_type	Enum	device_inputs	ThermoKing alarm type Possible values: NO_ALARM LOG_STORED_OR_ROUTINE_MAINTENANCE LOW_FUEL MAINTENANCE_PAST_DUE RESERVED IMMEDIATE_ATTENTION_REQUIRED SHUTDOWN_OR_CATASTROPHIC_SYS TEM_FAILURE	
thermoking_discharge_temperature	Number	device_inputs	ThermoKing discharge air temperature	°C
thermoking_evaporator_coil_temperature	Number	device_inputs	ThermoKing evaporator coil temperature	°C
thermoking_operating_mode	Enum	device_inputs	ThermoKing operating mode Possible values: POWER_OFF_OR_UNKNOWN COOLING HEATING DEFROST NULL PRETRIP SLEEP RESERVED	
thermoking_cycle_mode	Enum	device_inputs	ThermoKing cycle mode Possible values: CYCLE_SENTRY_MODE CONTINUOUS_MODE START_STOP_MODE	
thermoking_high_speed_status	Boolean	device_inputs	ThermoKing high speed status	
thermoking_door_status	Enum	device_inputs	ThermoKing door status Possible values: CLOSED OPEN	

tk_touchprint_input_1	Number	device_inputs	TK Touchprint input 1	°C
tk_touchprint_input_2	Number	device_inputs	TK Touchprint input 2	°C
tk_touchprint_input_3	Number	device_inputs	TK Touchprint input 3	°C
tk_touchprint_input_4	Number	device_inputs	TK Touchprint input 4	°C
tk_touchprint_input_5	Number	device_inputs	TK Touchprint input 5	°C
tk_touchprint_input_6	Number	device_inputs	TK Touchprint input 6	°C
tk_temperature_sensor1	Number	device_inputs	TK temperature sensor 1	°C
tk_temperature_sensor2	Number	device_inputs	TK temperature sensor 2	°C
tk_temperature_sensor3	Number	device_inputs	TK temperature sensor 3	°C
tk_temperature_sensor4	Number	device_inputs	TK temperature sensor 4	°C
tk_temperature_sensor5	Number	device_inputs	TK temperature sensor 5	°C
tk_temperature_sensor6	Number	device_inputs	TK temperature sensor 6	°C
fuel_counter	Number	device_inputs	Fuel counter 1	
digital_fuel_sensor_a1	Number	device_inputs	Digital fuel sensor A1	
fuel_counter_2	Number	device_inputs	Fuel counter 2	
digital_fuel_sensor_b1	Number	device_inputs	Digital fuel sensor B1	
digital_fuel_sensor_a2	Number	device_inputs	Digital fuel sensor A2	
digital_fuel_sensor_a3	Number	device_inputs	Digital fuel sensor A3	
digital_fuel_sensor_a4	Number	device_inputs	Digital fuel sensor A4	
digital_fuel_sensor_a5	Number	device_inputs	Digital fuel sensor A5	
digital_fuel_sensor_a6	Number	device_inputs	Digital fuel sensor A6	
digital_fuel_sensor_a7	Number	device_inputs	Digital fuel sensor A7	
digital_fuel_sensor_a8	Number	device_inputs	Digital fuel sensor A8	
digital_fuel_sensor_a9	Number	device_inputs	Digital fuel sensor A9	
digital_fuel_sensor_a10	Number	device_inputs	Digital fuel sensor A10	
digital_fuel_sensorc1_temperature	Number	device_inputs	Digital fuel sensor C1 temperature	°C
digital_fuel_sensorc2_temperature	Number	device_inputs	Digital fuel sensor C2 temperature	°C
digital_fuel_sensorc3_temperature	Number	device_inputs	Digital fuel sensor C3 temperature	°C
digital_fuel_sensorc4_temperature	Number	device_inputs	Digital fuel sensor C4 temperature	°C
digital_fuel_sensorc5_temperature	Number	device_inputs	Digital fuel sensor C5 temperature	°C
digital_fuel_sensorc6_temperature	Number	device_inputs	Digital fuel sensor C6 temperature	°C
digital_fuel_sensorc7_temperature	Number	device_inputs	Digital fuel sensor C7 temperature	°C
digital_fuel_sensorc8_temperature	Number	device_inputs	Digital fuel sensor C8 temperature	°C
digital_fuel_sensorc9_temperature	Number	device_inputs	Digital fuel sensor C9 temperature	°C
digital_fuel_sensorc10_temperature	Number	device_inputs	Digital fuel sensor C10 temperature	°C
digital_fuel_sensorc1	Number	device_inputs	Digital fuel sensor C1	
digital_fuel_sensorc2	Number	device_inputs	Digital fuel sensor C2	
digital_fuel_sensorc3	Number	device_inputs	Digital fuel sensor C3	
digital_fuel_sensorc4	Number	device_inputs	Digital fuel sensor C4	
digital_fuel_sensorc5	Number	device_inputs	Digital fuel sensor C5	
digital_fuel_sensorc6	Number	device_inputs	Digital fuel sensor C6	
digital_fuel_sensorc7	Number	device_inputs	Digital fuel sensor C7	

digital_fuel_sensorc8	Number	device_inputs	Digital fuel sensor C8	
digital_fuel_sensorc9	Number	device_inputs	Digital fuel sensor C9	
digital_fuel_sensorc10	Number	device_inputs	Digital fuel sensor C10	
digital_fuel_sensora1_temperature	Number	device_inputs	Digital fuel sensor A1 temperature	°C
fuel_level_sensorb1_temperature	Number	device_inputs	Fuel level sensor B1 temperature	°C
bt_humidity_sensor_0	Number	device_inputs	BT humidity sensor 0	%
bt_humidity_sensor_1	Number	device_inputs	BT humidity sensor 1	%
bt_humidity_sensor_2	Number	device_inputs	BT humidity sensor 2	%
bt_humidity_sensor_3	Number	device_inputs	BT humidity sensor 3	%
bt_humidity_sensor_4	Number	device_inputs	BT humidity sensor 4	%
ibutton	String	device_inputs	iButton driver ID	
rfid_a	String	device_inputs	RFID PortA	
rfid_b	String	device_inputs	RFID PortB	
magnetic_card_id	String	device_inputs	Magnetic card ID	
ds1971_ibutton_internal_8b_driver_id	String	device_inputs	DS1971 iButton internal 8B driver ID	
ds1971_ibutton_internal_16b_driver_id	String	device_inputs	DS1971 iButton internal 16B driver ID	
ds1971_ibutton_internal_8b_passenger_id	String	device_inputs	DS1971 iButton internal 8B passenger ID	
ds1971_ibutton_internal_16b_passenger_id	String	device_inputs	DS1971 iButton internal 16B passenger ID	
ultra_high_frequency_rfid_port_b	String	device_inputs	Ultra High Frequency RFID port B	
ultra_high_frequency_rfid_port_a	String	device_inputs	Ultra High Frequency RFID port A	
digital_input_1	Boolean	device_inputs	DIN1 value	
din2_working_time_diff	Number	device_inputs	DIN2 hour counter	s
din3_working_time_diff	Number	device_inputs	DIN3 hour counter	s
din4_working_time_diff	Number	device_inputs	DIN4 hour counter	s
ot_digital_input_1	Boolean	device_inputs	OT digital input 1	
ot_digital_input_2	Boolean	device_inputs	OT digital input 2	
ot_digital_input_3	Boolean	device_inputs	OT digital input 3	
ot_digital_input_4	Boolean	device_inputs	OT digital input 4	
frequency_input_1	Number	device_inputs	Frequency input 1	Hz
frequency_input_2	Number	device_inputs	Frequency input 2	Hz

current_profile	Number	device_inputs	Current profile	
power_supply_voltage	Number	device_inputs	Power supply voltage	V
battery_voltage	Number	device_inputs	Battery voltage	V
pcb_temperature	Number	device_inputs	PCB temperature	°C
virtual_odometer	Number	device_inputs	Virtual odometer	km
input_trigger	Number	device_inputs	Input trigger	
priority	Enum	device_inputs	Priority Possible values: LOW HIGH	
battery_current	Number	device_inputs	Battery charge current	mA
movement	Enum	device_inputs	Movement sensor Possible values: STILL MOVING	
hdop	String	device_inputs	HDOP	
modem_temperature	Number	device_inputs	Modem temperature	°C
modem_temperature	Number	device_inputs	Modem temperature	°C
virtual_odometer_diff	Number	device_inputs	Virtual odometer DIFF	m
ignition_plugtrack	Enum	device_inputs	Virtual ignition Possible values: OFF ON	
sleep_timer	Enum	device_inputs	Sleep timer Possible values: NO_EVENT DEVICE_WAKE_UP_BY_TIMER_EVENT	
custom_ignition	Enum	device_inputs	Custom ignition Possible values: OFF ON	
panic	Boolean	device_inputs	Panic status	
shock_duration	Number	device_inputs	Shock duration	ms
roll_over_alarm	Boolean	device_inputs	Rollover alarm	
position	Array		Container for all record GPS parameters	
altitude	Number	position	Altitude	m
longitude	Number	position	Longitude	Degrees
latitude	Number	position	Latitude	Degrees
direction	Number	position	Direction	Degrees
satellites_count	Number	position	Satellites count	
speed	Number	position	Speed	km/h
geozone_ids	Array		Container for all geozones IDs	
nearest_geozone	Array		Container for the nearest geozone information	
id	String		Geozone ID If object is in geozone it will be "null". Geozones detection radius 50km. Historical data will be kept for 1 month.	
distance	Number		Distance from object to the nearest geozone edge. If object is in geozone it will be "null". Geozones detection radius 50km. Historical data will be kept for 1 month.	m

Object API

Scopul principal al API-urilor obiect este de a oferi informații de bază despre unul sau toate obiectele clienților. Object API poate solicita fie pentru un anumit obiect, fie dacă nu sunt specificate obiecte, API-ul va returna clienților toate obiectele existente.

Exemplu de solicitare API pentru un anumit obiect:

```
GET /objects/{object_id}?version=1&api_key=<>
HOST: api.fm-track.com
Content-Type: application/json; charset=UTF-8
```

Pentru ca acest API să funcționeze, doi parametri (fără a lua în calcul cheia API) sunt obligatorii:

Parameter	Type	Description
objectid	String	Object identifier (This ID can be acquired by sending an API request for clients all available objects)
version	String	Version of the API, currently only version=1 is available
api_key	String	User identification key

```
{
  "id": "abc123",
  "name": "AAA 000",
  "imei": "123456789123",
  "vehicle_params": {
    "vin": null,
    "make": null,
    "model": null,
    "plate_number": null
  }
}
```

Dacă un parametru a fost introdus incorect, sistemul va răspunde cu un cod de eroare. Toate codurile de eroare sunt descrise în secțiunea [API](#) -uri . Parametrii pentru care nu sunt furnizate date nu sunt incluși în răspuns. O listă completă a parametrilor de răspuns este disponibilă la sfârșitul acestei secțiuni.

Exemplu de solicitare API pentru toate obiectele clienților:

```
GET /objects?version=1&api_key=<>
HOST: api.fm-track.com
Content-Type: application/json; charset=UTF-8
```

Pentru ca acest API să funcționeze, este obligatoriu un singur parametru (fără numărarea API_key):

Parameter	Type	Description
version	String	Version of the API, currently only version=1 is available
api_key	String	User identification key

Răspunsul de la server este identic cu răspunsul pentru un obiect, cu excepția faptului că lista continuă pentru fiecare dintre obiectele clienților.

Toate câmpurile de răspuns care pot fi primite cu fiecare tip de parametru sunt descrise în următorul tabel:

Name	Type	Description
name	String	Visible vehicle name
imei	String	Vehicle hardware IMEI code
make	String	Vehicle brand
model	String	Vehicle brand model
object_id	String	Object identifier (external)
vin	String	VIN of object
plate_number	String	Plate number of object

Trips API

API-ul Trips este dedicat istoricului de călătorii al obiectului de ieșire pentru perioada solicitată. Structura cererii:

```
GET /objects/{objectId}/trips?version=1&from_datetime=<.>&to_datetime=<.>&continuation_token=<.>&limit=<.>&api_key=<.> HTTP/1.1
HOST:api.fm-track.com
Content-Type:application/json;charset=UTF-8
```

Parametri de solicitare:

Parameter	Type	Description	Required
objectId	String	External object ID	Yes
from_datetime	Date time	Finds records starting from the specified date and time. Date and time format example: "2017-04-13T06:58:48.090Z"	Yes
to_datetime	Date time	Finds records ending at the specified date and time. Date and time format example: "2017-04-13T06:58:48.090Z"	No
continuation_token	Date time	Displays from what date and time the data is shown if the record limit was reached.	No
limit	Integer	How many records will be included in the response (default value - 100 records, maximum value - 1000 records).	No
version	String	API version	Yes
api_key	String	User identification key	Yes

Exemplu de răspuns:

JSON

```
{
  "continuation_token": "2019-05-24T06:58:48.121Z",
  "trips": [
    {
      "object_id": "ID0000",
      "trip_type": "BUSINESS",
      "trip_duration": 4781,
      "mileage": 10.56,
      "driver_ids": ["asdf321", "123asdf", "fdsa123"],
      "trip_start": {
        "datetime": "2019-05-24T06:58:48.121Z",
        "longitude": 11.2222,,
        "latitude": 33.444,
        "address": {
          "country": "Denmark",
```

```

    "country_code": "DK",
    "county": "",
    "region": "",
    "locality": "Herlev",
    "street": "Unnamed Road",
    "house_number": "",
    "zip": "2730"
  },
  "trip_end": {
    "datetime": "2019-05-24T06:58:48.121Z",
    "longitude": 0,
    "latitude": 0,
    "address": {
      "country": "Denmark",
      "country_code": "DK",
      "county": "",
      "region": "",
      "locality": "Herlev",
      "street": "Unnamed Road",
      "house_number": "",
      "zip": "2730"
    }
  },
  },
  ...
]
}

```

Dacă un parametru a fost introdus incorect, sistemul va răspunde cu un cod de eroare. Toate codurile de eroare sunt descrise în secțiunea [API](#) -uri . Parametrii pentru care nu sunt furnizate date nu sunt incluși în răspuns. O listă completă a parametrilor de răspuns este disponibilă la sfârșitul acestei secțiuni.

Parametrii de răspuns:

Parameter	Type	Description	Units
continuation_token	String	Displays from what date and time the data is shown if the record limit was reached.	
trips	Array	Contains all parameters in accordance to the request	
object_id	String	Object identifier	
trip_type	Enum	Trip type Possible values: UNKNOWN NONE PRIVATE BUSINESS WORK	
trip_duration	Datetime	Trip duration	s
mileage	Number	Mileage pass during the trip	m
driver_ids	Array	Container for all driver IDs assigned to the vehicle during the trip.	
trip_start	Array	Container for trip start parameters	
datetime	Datetime	Date and time point of coordinate generated in hardware Format: "yyyy-mm-ddThh:mm:ss.sssZ"	Datetime
longitude	Number	Longitude	Degrees
latitude	Number	Latitude	Degrees
address	Array	Container for address parameters	
country	String	Country name	
country_code	String	Country code	
county	String	County name	
region	String	Region name	
locality	String	Locality name	
street	String	Street name	
house_number	String	House number	
zip	String	ZIP code	
trip_end	Array	Container for trip end parameters	

Driver API v2

Scopul principal al Driver API v2 este de a scoate informații despre driver. Acest API are două tipuri de solicitări – una pentru un anumit driver și una pentru toți driverele.

Cerere pentru un anumit șofer

GET /drivers/{driverId}?version=2&api_key=<...>

HOST: api.fm-track.com

Content-Type: application/json;charset=UTF-8

Următorii parametri sunt obligatorii pentru această solicitare:

Parameter	Type	Description
driverid	String	Driver identifier
version	String	Version of the API
api_key	String	User identification key

Un exemplu de răspuns este prezentat mai jos:

```

{
  "id": "ABC123",
  "first_name": "Driver",
  "last_name": null,
  "address": "Lithuania, Vilnius",
  "phone": "+3700000000",
  "identifiers": [
    {
      "identifier": "343234323432342",
      "type": "DLT"
    },
    {
      "identifier": "123456789",
      "type": "TACHOGRAPH"
    },
    {
      "identifier": "3AC64785D2FF",
      "type": "WIRELESS"
    },
    {
      "identifier": "123456789",
      "type": "IBUTTON"
    }
  ]
}

```

Notă

Parametrii fără valori returnează o valoare „nulă”.

Parametrii de răspuns sunt descriși în următorul tabel:

Parameter	Type	Array	Description	Units
id	String		Driver identifier	Text
first_name	String		The driver's first name	Text
last_name	String		The driver's last name	Text
address	String		The driver's address	Text
phone	String		The driver's telephone number	Text
identifiers	Array		Container for identification codes	
identifier	String	identifiers	Identification code	Text
type	String	identifiers	Identification code type Possible values: DLT TACHOGRAPH WIRELESS IBUTTON	Text

GET

/drivers?version=2&api_key=<...>&limit=<...>&continuation_token=<...>&identifier_type=<...>&identifier=<...>

HOST: api.fm-track.com

Content-Type: application/json;charset=UTF-8

Această solicitare are următorii parametri:

Parameter	Type	Description	Required
version	String	Version of the API	Yes
api_key	String	User identification key	Yes
limit	Number	How many drivers should be included in the response Default value: 100 Maximum value: 1000	No
continuation_token	Number		No
identifier_type	String	Identification type, used to get specific driver data Possible values: DLT TACHOGRAPH WIRELESS IBUTTON	No
identifier	String	Identification code, used to get specific driver data	No

Un exemplu de răspuns este prezentat mai jos:

```
{
  "count": 100,
  "continuation_token": 123,
  "items": [
    {
      "id": "ABC123",
      "first_name": "Driver",
      "last_name": null,
      "address": "Lithuania, Vilnius",
      "phone": "+3700000000",
      "identifiers": [
        {
          "identifier": "343234323432342",
          "type": "DLT"
        },
        {
          "identifier": "123456789",
          "type": "TACHOGRAPH"
        },
        {
          "identifier": "3AC64785D2FF",
          "type": "WIRELESS"
        },
        {
          "identifier": "123456789",
          "type": "IBUTTON"
        }
      ]
    },
    ...
  ]
}
```

Notă
Parametrii fără valori returnează o valoare „nulă”.

Parameter	Type	Array	Description	Units
count	Number		How many records are included in the response	
continuation_token	Number		Displays from which record the data is shown if the record limit was reached	
items	Array		Container for all drivers	
id	String	items	Driver identifier	Text
first_name	String	items	The driver's first name	Text
last_name	String	items	The driver's last name	Text
address	String	items	The driver's address	Text
phone	String	items	The driver's telephone number	Text
identifiers	Array	items	Container for identification codes	
identifier	String	identifiers	Identification code	Text
type	String	identifiers	Identification code type Possible values: DLT TACHOGRAPH WIRELESS IBUTTON	Text

Eveni History API

Istoricul evenimentelor API este dedicat istoricului evenimentelor obiectului de ieșire pentru o perioadă solicitată.

Structura cererii:

```
GET /detected-events?object_id=<...>&from_datetime=<...>&to_datetime=<...>&continuation_token=<...>&limit=<...>&version=1&api_key=<...> HTTP/1.1
Host: api.fm-track.com
Content-Type: application/json; charset=UTF-8
```

Parametri de solicitare:

Parameter	Type	Description	Required
object_id	String	External object ID	Yes
from_datetime	Date time	Find events starting from specified date	Yes
to_datetime	Date time	Find events ending to specified date	Yes
continuation_token	Integer	Displays from what date and time the data is shown if the record limit was reached	No
limit	Integer	Limits events count in response	No
version	String	API version	Yes
api_key	String	User identification key	Yes

Exemplu de răspuns:

```
{
  "continuation_token": 1,
  "events": [
    {
      "name": "ToyotaIgnition",
```

```

    "description": "TestIgnition",
    "driver_id": null,
    "trip_type": "NONE",
    "duration": 31,
    "start": {
      "datetime": "2020-02-10T09:13:23.000Z",
      "location": {
        "latitude": 54.924457,
        "longitude": 23.872841
      },
      "mileage": 6000.0,
      "speed": 40
    },
    "end": {
      "datetime": "2020-02-10T09:13:54.000Z",
      "location": {
        "latitude": 54.924457,
        "longitude": 23.872841
      },
      "mileage": 6000.0
    }
  },
  ...
]
}

```

Dacă un parametru a fost introdus incorect, sistemul va răspunde cu un cod de eroare. Toate codurile de eroare sunt descrise în secțiunea [API](#) -uri . Parametrii pentru care nu sunt furnizate date nu sunt incluși în răspuns. O listă completă a parametrilor de răspuns este disponibilă la sfârșitul acestei secțiuni.

Parametrii de răspuns:

Parameter	Type	Description
continuation_token	Integer	Continuation token is sent when number of events in response exceed limit
events	Array	Container for all object events for selected period
name	String	Event name
description	String	Event description
driver_id	String	External driver ID
trip_type	Enum	Trip type
duration	Long	Event duration in seconds
start	Array	Container for event start information
end	Array	Container for event end information
datetime	Datetime	Date and time
location	Array	Container for coordinates
latitude	Double	Latitude
longitude	Double	Longitude
mileage	Double	Mileage in kilometres
speed	Integer	Speed in km/h