

# Template:FMA2 Device Family Parameter list



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## System parameters

| Parameter ID | Parameter Type | Recomended value | Value range |       | Value                                    | Parameter name                     |
|--------------|----------------|------------------|-------------|-------|------------------------------------------|------------------------------------|
|              |                |                  | Min         | Max   |                                          |                                    |
| 1002         | UInt8          | -                | 0           | 2     | 0 - Ignition<br>1 - Movement sensor      | Stop Detection Source              |
| 1003         | UInt8          | 1                | 0           | 1     | 2 - GPS<br>0 - Disable<br>1 - Enable     | Static navigation                  |
| 1004         | UInt8          | -                | 0           | 2     | 0 - Power voltage<br>1 - Digital input 1 | Ignition source                    |
| 1005         | UInt16         | -                | 0           | 30000 | 1 - Movement<br>Voltage                  | Power Voltage High Level           |
| 1006         | UInt16         | -                | 0           | 30000 | Voltage                                  | Power Voltage Low Level            |
| 1920         | UInt8          | -                | 0           | 1     | 0 - Manual<br>1 - Auto                   | Ignition detection (Power voltage) |

| 1921         | UInt8          | 10                | 0           | 65536  | Seconds                                                                             | Ignition detection timeout |
|--------------|----------------|-------------------|-------------|--------|-------------------------------------------------------------------------------------|----------------------------|
| 201          | UInt8          | 1                 | 0           | 2      | 0 - after position fix<br>1 - always                                                | Records Saving/Sending     |
| 202          | UInt8          | 0                 | 0           | 2      | 2 - after time sync<br>0 - GNSS (all available)<br>1 - GPS only<br>2 - GLONASS only | GNSS System                |
| 1007         | UInt32         | -                 | 1           | 259200 | Seconds                                                                             | GNSS Fix Timeout           |
| Parameter ID | Parameter Type | Recommended value | Value range |        | Value                                                                               | Parameter name             |
|              |                |                   | Min         | Max    |                                                                                     |                            |
| 1000         | UInt8          | -                 | 0           | 2      | 0 - Disable<br>1 - Sleep<br>2 - Deep sleep                                          | Sleep settings             |
| 200          | UInt8          | -                 | 1           | 3000   | Minutes                                                                             | Timeout                    |
| Parameter ID | Parameter Type | Recommended value | Value range |        | Value                                                                               | Parameter name             |
|              |                |                   | Min         | Max    |                                                                                     |                            |
| 1001         | UInt8          | -                 | 0           | 1      | 0 - 0...10V<br>1 - 1...30V                                                          | Analog Input value range   |
| Parameter ID | Parameter Type | Recommended value | Value range |        | Value                                                                               | Parameter name             |
|              |                |                   | Min         | Max    |                                                                                     |                            |
| 1008         | UInt8          | 1                 | 0           | 1      | 0 - disabled<br>1 - enabled                                                         | NTP Time Synchronization   |

## Records parameters

| Parameter ID | Parameter Type | Recommended value | Value range |        | Value                              | Parameter name           |
|--------------|----------------|-------------------|-------------|--------|------------------------------------|--------------------------|
|              |                |                   | Min         | Max    |                                    |                          |
| 1010         | UInt8          | -                 | 0           | 1      | 0 - From oldest<br>1 - From Newest | Sorting                  |
| 1011         | UInt32         | -                 | 0           | 259200 | Seconds                            | Active Data Link Timeout |
| 1012         | UInt8          | -                 | 0           | 300    | Seconds                            | Server Response Timeout  |

⚠ ATTENTION! Some GSM operators may disconnect the device from an active data link if the device doesn't send any data for a very long time, even if active data link timeout is set to maximum value. The amount of time that an operator keeps the link open depends solely on the operator. For example, if active data link timeout is set to maximum, 259200 seconds (72 hours), and the device sends data to server every 86400 seconds (24 hours), the operator might disconnect the link earlier and the device will have to connect to the server anew. This may cost extra, depending on the operator GPRS data charge. It is strongly recommended, when using active data link timeout, that data sending to the server should not be very rare (24 hours or more). If data sending is more frequent, then the operator will not disconnect the device from the server.

## GSM parameters

| Parameter ID | Parameter Type | Recommended value | Value range |     | Value                     | Parameter name          |
|--------------|----------------|-------------------|-------------|-----|---------------------------|-------------------------|
|              |                |                   | Min         | Max |                           |                         |
| 1240         | UInt8          | -                 | 0           | 1   | 0 - Disable<br>1 - Enable | GPRS content activation |
| 1142         | Char           | -                 | 0           | 32  | String                    | APN name                |
| 1243         | Char           | -                 | 0           | 30  | String                    | APN username            |
| 1244         | Char           | -                 | 0           | 30  | String                    | APN password            |
| Parameter ID | Parameter Type | Recommended value | Value range |     | Value                     | Parameter name          |
|              |                |                   | Min         | Max |                           |                         |

|      |        |   |   |       |                                |                    |
|------|--------|---|---|-------|--------------------------------|--------------------|
| 1245 | Char   | - | 0 | 31    | String                         | Domain             |
| 1246 | Uint16 | - | 0 | 65535 | Number                         | Target Server Port |
| 1247 | Uint8  | - | 0 | 1     | 0 - TCP<br>1 - UDP             | Protocol           |
| 1248 | Uint8  | - | 0 | 1     | 0 - Not Allowed<br>1 - Allowed | Always online      |

| Parameter ID | Parameter Type | Recommended value                                                 | Value range |     | Value                                                                                                                                                                                                                                                                                                         | Parameter name            |
|--------------|----------------|-------------------------------------------------------------------|-------------|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
|              |                |                                                                   | Min         | Max |                                                                                                                                                                                                                                                                                                               |                           |
| 1252         | Char           | -                                                                 | 0           | 5   | String                                                                                                                                                                                                                                                                                                        | SMS Login                 |
| 1253         | Char           | -                                                                 | 0           | 5   | String                                                                                                                                                                                                                                                                                                        | SMS password              |
| 1250         | Char           | -                                                                 | 0           | 1   | 0 - Not Allowed<br>1 - Allowed                                                                                                                                                                                                                                                                                | SMS data sending settings |
| 1273         | Uint32         | Example value:<br>7F,FF,FF,FF,FF,FF,FF,FF,FF,FF,FF,FF,FF,FF,FF,FF | -           | -   | Time is defined as 19 byte array. First byte of array defines week days; the rest 18 bytes define timestamps with 10 minute interval. In first byte, first bit (LSB) defines if module should connect to GPRS (send SMS) on Monday, second bit - on Tuesday and so on up to seventh bit - which means Sunday. | GPRS Week Time            |

| Parameter ID | Parameter Type | Recommended value                                                                                                             | Value range |           | Value  | Parameter name                  |
|--------------|----------------|-------------------------------------------------------------------------------------------------------------------------------|-------------|-----------|--------|---------------------------------|
|              |                |                                                                                                                               | Min         | Max       |        |                                 |
| 1260-1269    | Char           | -                                                                                                                             | 1 digit     | 16 digits | String | Authorized phone numbers        |
| 150-159      | Char           | -                                                                                                                             | 1 digit     | 16 digits | String | SMS Event<br>PreDefined Numbers |
| 1271 X       | u32            | X defines starting position that is changed: If X is from 0 to 49, X means index of operator code which has to be configured. | 0 digit     | 7 digits  | String | Operator list                   |
| 1272 X       | u32            | X defines starting position that is changed: If X is from 0 to 49, X means index of operator code which has to be configured. | 0 digit     | 7 digits  | String | Operator Black list             |

## Data Acquisition Modes parameters

### Home Network GSM operator code "Vehicle on STOP" parameters

| Parameter ID | Parameter Type | Recommended value                                                 | Value range |         | Value                                                                                                                                                                                                                                                                                                         | Parameter name    |
|--------------|----------------|-------------------------------------------------------------------|-------------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
|              |                |                                                                   | Min         | Max     |                                                                                                                                                                                                                                                                                                               |                   |
| 1540         | Uint32         | -                                                                 | 0           | 2592000 | Seconds                                                                                                                                                                                                                                                                                                       | Min Period        |
| 1543         | Uint8          | 1                                                                 | 1           | 225     | Records                                                                                                                                                                                                                                                                                                       | Min Saved Records |
| 1544         | Uint32         | -                                                                 | 0           | 2592000 | Seconds                                                                                                                                                                                                                                                                                                       | Send period       |
| 1545         | Uint32         | Example value:<br>7F,FF,FF,FF,FF,FF,FF,FF,FF,FF,FF,FF,FF,FF,FF,FF | -           | -       | Time is defined as 19 byte array. First byte of array defines week days; the rest 18 bytes define timestamps with 10 minute interval. In first byte, first bit (LSB) defines if module should connect to GPRS (send SMS) on Monday, second bit - on Tuesday and so on up to seventh bit - which means Sunday. | GPRS Week Time    |

## Home Network GSM operator code "Vehicle on MOVING" parameters

| Parameter ID | Parameter Type | Recommended value                                                    | Value range |         | Value                                                                                                                                                                                                                                                                                                                                                         | Parameter name    |
|--------------|----------------|----------------------------------------------------------------------|-------------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
|              |                |                                                                      | Min         | Max     |                                                                                                                                                                                                                                                                                                                                                               |                   |
| 1550         | Uint32         | -                                                                    | 0           | 2592000 | Seconds                                                                                                                                                                                                                                                                                                                                                       | Min Period        |
| 1551         | Uint32         | -                                                                    | 0           | 65535   | Meters                                                                                                                                                                                                                                                                                                                                                        | Min distance      |
| 1552         | Uint16         | 0                                                                    | 1           | 160     | Angle                                                                                                                                                                                                                                                                                                                                                         | Min angle         |
| 1553         | Uint16         | 1                                                                    | 1           | 255     | Records                                                                                                                                                                                                                                                                                                                                                       | Min Saved Records |
| 1544         | Uint32         | -                                                                    | 0           | 2592000 | Seconds                                                                                                                                                                                                                                                                                                                                                       | Send period       |
| 1555         | Uint32         | Example value:<br>7F,FF,FF,FF,FF,FF,FF,FF,FF,FF,FF,FF,FF,FF,FF,FF,FF | -           | -       | Time is defined as 19<br>byte array. First byte<br>of array defines week<br>days; the rest 18<br>bytes define<br>timestamps with 10<br>minute interval. In<br>first byte, first bit<br>(LSB) defines if<br>module should<br>connect to GPRS<br>(send SMS) on<br>Monday, second bit -<br>on Tuesday and so on<br>up to seventh bit -<br>which means<br>Sunday. | GPRS Week Time    |
| 1556         | Uint16         | -                                                                    | 0           | 255     | km/h                                                                                                                                                                                                                                                                                                                                                          | Min Speed         |
| 1557         | Uint8          | -                                                                    | 0           | 1       | 0- GPS<br>1- LVCAN                                                                                                                                                                                                                                                                                                                                            | Min Speed Source  |

## Roaming Network GSM operator code "Vehicle on STOP" parameters

| Parameter ID | Parameter Type | Recommended value                                                    | Value range |         | Value                                                                                                                                                                                                                                                                                                                                                         | Parameter name    |
|--------------|----------------|----------------------------------------------------------------------|-------------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
|              |                |                                                                      | Min         | Max     |                                                                                                                                                                                                                                                                                                                                                               |                   |
| 1560         | Uint32         | -                                                                    | 0           | 2592000 | Seconds                                                                                                                                                                                                                                                                                                                                                       | Min Period        |
| 1563         | Uint8          | 1                                                                    | 1           | 225     | Records                                                                                                                                                                                                                                                                                                                                                       | Min Saved Records |
| 1564         | Uint32         | -                                                                    | 0           | 2592000 | Seconds                                                                                                                                                                                                                                                                                                                                                       | Send period       |
| 1565         | Uint32         | Example value:<br>7F,FF,FF,FF,FF,FF,FF,FF,FF,FF,FF,FF,FF,FF,FF,FF,FF | -           | -       | Time is defined as 19<br>byte array. First byte<br>of array defines week<br>days; the rest 18<br>bytes define<br>timestamps with 10<br>minute interval. In<br>first byte, first bit<br>(LSB) defines if<br>module should<br>connect to GPRS<br>(send SMS) on<br>Monday, second bit -<br>on Tuesday and so on<br>up to seventh bit -<br>which means<br>Sunday. | GPRS Week Time    |

## Roaming Network GSM operator code "Vehicle on MOVING" parameters

| Parameter ID | Parameter Type | Recommended value                                                    | Value range |         | Value                                                                                                                                                                                                                                                                                                                                                         | Parameter name    |
|--------------|----------------|----------------------------------------------------------------------|-------------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
|              |                |                                                                      | Min         | Max     |                                                                                                                                                                                                                                                                                                                                                               |                   |
| 1570         | Uint32         | -                                                                    | 0           | 2592000 | Seconds                                                                                                                                                                                                                                                                                                                                                       | Min Period        |
| 1571         | Uint32         | -                                                                    | 0           | 65535   | Meters                                                                                                                                                                                                                                                                                                                                                        | Min distance      |
| 1572         | Uint16         | 0                                                                    | 1           | 160     | Angle                                                                                                                                                                                                                                                                                                                                                         | Min angle         |
| 1573         | Uint16         | 1                                                                    | 1           | 255     | Records                                                                                                                                                                                                                                                                                                                                                       | Min Saved Records |
| 1574         | Uint32         | -                                                                    | 0           | 2592000 | Seconds                                                                                                                                                                                                                                                                                                                                                       | Send period       |
| 1575         | Uint32         | Example value:<br>7F,FF,FF,FF,FF,FF,FF,FF,FF,FF,FF,FF,FF,FF,FF,FF,FF | -           | -       | Time is defined as 19<br>byte array. First byte<br>of array defines week<br>days; the rest 18<br>bytes define<br>timestamps with 10<br>minute interval. In<br>first byte, first bit<br>(LSB) defines if<br>module should<br>connect to GPRS<br>(send SMS) on<br>Monday, second bit -<br>on Tuesday and so on<br>up to seventh bit -<br>which means<br>Sunday. | GPRS Week Time    |
| 1576         | Uint16         | -                                                                    | 0           | 255     | km/h                                                                                                                                                                                                                                                                                                                                                          | Min Speed         |
| 1577         | Uint8          | -                                                                    | 0           | 1       | 0- GPS<br>1- LVCAN                                                                                                                                                                                                                                                                                                                                            | Min Speed Source  |

## Unknown Network GSM operator code "Vehicle on STOP" parameters

| Parameter ID | Parameter Type | Recommended value                                                    | Value range |         | Value                                                                                                                                                                                                                                                                                                         | Parameter name    |
|--------------|----------------|----------------------------------------------------------------------|-------------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
|              |                |                                                                      | Min         | Max     |                                                                                                                                                                                                                                                                                                               |                   |
| 1580         | Uint32         | -                                                                    | 0           | 2592000 | Seconds                                                                                                                                                                                                                                                                                                       | Min Period        |
| 1583         | Uint8          | 1                                                                    | 1           | 225     | Records                                                                                                                                                                                                                                                                                                       | Min Saved Records |
| 1584         | Uint32         | -                                                                    | 0           | 2592000 | Seconds                                                                                                                                                                                                                                                                                                       | Send period       |
| 1585         | Uint32         | Example value:<br>7F,FF,FF,FF,FF,FF,FF,FF,FF,FF,FF,FF,FF,FF,FF,FF,FF | -           | -       | Time is defined as 19 byte array. First byte of array defines week days; the rest 18 bytes define timestamps with 10 minute interval. In first byte, first bit (LSB) defines if module should connect to GPRS (send SMS) on Monday, second bit - on Tuesday and so on up to seventh bit - which means Sunday. | GPRS Week Time    |

## Unknown Network GSM operator code "Vehicle on MOVING" parameters

| Parameter ID | Parameter Type | Recommended value                                                    | Value range |         | Value                                                                                                                                                                                                                                                                                                         | Parameter name    |
|--------------|----------------|----------------------------------------------------------------------|-------------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
|              |                |                                                                      | Min         | Max     |                                                                                                                                                                                                                                                                                                               |                   |
| 1590         | Uint32         | -                                                                    | 0           | 2592000 | Seconds                                                                                                                                                                                                                                                                                                       | Min Period        |
| 1591         | Uint32         | -                                                                    | 0           | 65535   | Meters                                                                                                                                                                                                                                                                                                        | Min distance      |
| 1592         | Uint16         | 0                                                                    | 1           | 160     | Angle                                                                                                                                                                                                                                                                                                         | Min angle         |
| 1593         | Uint16         | 1                                                                    | 1           | 255     | Records                                                                                                                                                                                                                                                                                                       | Min Saved Records |
| 1594         | Uint32         | -                                                                    | 0           | 2592000 | Seconds                                                                                                                                                                                                                                                                                                       | Send period       |
| 1595         | Uint32         | Example value:<br>7F,FF,FF,FF,FF,FF,FF,FF,FF,FF,FF,FF,FF,FF,FF,FF,FF | -           | -       | Time is defined as 19 byte array. First byte of array defines week days; the rest 18 bytes define timestamps with 10 minute interval. In first byte, first bit (LSB) defines if module should connect to GPRS (send SMS) on Monday, second bit - on Tuesday and so on up to seventh bit - which means Sunday. | GPRS Week Time    |
| 1596         | Uint16         | -                                                                    | 0           | 255     | km/h                                                                                                                                                                                                                                                                                                          | Min Speed         |
| 1597         | Uint8          | -                                                                    | 0           | 1       | 0- GPS<br>1- LVCAN                                                                                                                                                                                                                                                                                            | Min Speed Source  |

## Features parameters

### Green driving parameters

| Parameter ID | Parameter Type | Recommended value | Value range |      | Value                                 | Parameter name         |
|--------------|----------------|-------------------|-------------|------|---------------------------------------|------------------------|
|              |                |                   | Min         | Max  |                                       |                        |
| 1890         | Uint8          | -                 | 0           | 1    | 0 - Disable<br>1 - Enable             | Scenario settings      |
| 1891         | Uint8          | -                 | 0           | 2    | 0 - disable<br>1 - DOUT1<br>2 - DOUT2 | Digital Output Control |
| 1909         | Uint8          | -                 | 0           | 1    | 0 - GPS<br>1 - Accelerometer          | Source                 |
| 1892         | Float          | 0.25              | 0.25        | 0.85 | mG                                    | Max Acceleration Force |
| 1893         | Float          | 0.35              | 0.25        | 0.85 | mG                                    | Max Braking Force      |
| 1894         | Float          | 0.2               | 0.1         | 1.0  | mG                                    | Max Cornering Force    |

## Overspeeding scenario parameters

| Parameter ID | Parameter Type | Recommended value | Value range |     | Value                                | Parameter name         |
|--------------|----------------|-------------------|-------------|-----|--------------------------------------|------------------------|
|              |                |                   | Min         | Max |                                      |                        |
| 1895         | UInt8          | 0                 | 0           | 1   | 0 - Disable<br>1 - Enable            | Scenario settings      |
| 1896         | UInt8          | -                 | 0           | 2   | 0 - None<br>1 - DOUT 1<br>2 - DOUT 2 | Digital Output control |
| 1897         | UInt16         | -                 | 0           | 260 | km/h                                 | Max speed              |

## Jamming scenario parameters

| Parameter ID | Parameter Type | Recommended Value | Value range |       | Value                                                                                               | Parameter name         |
|--------------|----------------|-------------------|-------------|-------|-----------------------------------------------------------------------------------------------------|------------------------|
|              |                |                   | Min         | Max   |                                                                                                     |                        |
| 1898         | UInt8          | -                 | 0           | 1     | 0 - Disable<br>1 - Enable                                                                           | Scenario settings      |
| 1899         | UInt8          | -                 | 0           | 2     | 0 - None<br>1 - DOUT1<br>2 - DOUT2                                                                  | Digital Output control |
| 1900         | UInt8          | -                 | 0           | 2     | 0 - Low sensitivity (50 RSSI)<br>1 - Medium sensitivity (30 RSSI)<br>2 - High sensitivity (10 RSSI) | Jamming sensitivity    |
| 1901         | UInt16         | 60                | 0           | 65535 | Seconds                                                                                             | Jamming Timeout        |
| 1902         | UInt16         | 0                 | 0           | 65535 | Seconds                                                                                             | Jamming Pulse Duration |

## Immobilizer scenario parameters

| Parameter ID | Parameter Type | Recommended value | Value range |       | Value                                 | Parameter name         |
|--------------|----------------|-------------------|-------------|-------|---------------------------------------|------------------------|
|              |                |                   | Min         | Max   |                                       |                        |
| 1903         | UInt8          | -                 | 0           | 1     | 0 - Disable<br>1 - Enable             | Scenario settings      |
| 1904         | UInt8          | -                 | 0           | 2     | 0 - Disable<br>1 - DOUT1<br>2 - DOUT2 | Digital Output Control |
| 1905         | UInt8          | -                 | 0           | 1     | 0 - Disable<br>1 - Enable             | iButton list checking  |
| 1906         | UInt16         | 30                | 5           | 65353 | Seconds                               | Ignition Off Timeout   |

## iButton read notification

| Parameter ID | Parameter Type | Recommended value | Value range |     | Value                                  | Parameter name         |
|--------------|----------------|-------------------|-------------|-----|----------------------------------------|------------------------|
|              |                |                   | Min         | Max |                                        |                        |
| 1907         | UInt8          | -                 | 0           | 1   | 0 - Disabled<br>1 - Enabled            | iButton detect         |
| 1908         | UInt8_t        | 0                 | 0           | 1   | 0 - Disabled<br>1 - DOUT1<br>2 - DOUT2 | Digital Output Control |

## Trip scenario parameters

| Parameter ID | Parameter Type | Recommended value | Value range |       | Value                     | Parameter name               |
|--------------|----------------|-------------------|-------------|-------|---------------------------|------------------------------|
|              |                |                   | Min         | Max   |                           |                              |
| 1280         | UInt8          | -                 | 0           | 1     | 0 - Disable<br>1 - Enable | Scenario settings            |
| 1281         | UInt8          | -                 | 0           | 255   | km/h                      | Start speed                  |
| 1282         | UInt16         | -                 | 0           | 65535 | Seconds                   | Ignition off timeout         |
| 1283         | UInt8          | -                 | 0           | 1     | 0 - Not<br>1 - Continuous | Continuous distance counting |
| 1284         | UInt8          | -                 | 0           | 1     | 0 - Disable<br>1 - Enable | Remember iButton ID          |
| 1285         | UInt8          | -                 | 0           | -     | Meters                    | Odometer Value               |

## AutoGeofencing scenario parameters

| Parameter ID | Parameter Type | Recommended value | Value range |         | Value                                                              | Parameter name                |
|--------------|----------------|-------------------|-------------|---------|--------------------------------------------------------------------|-------------------------------|
|              |                |                   | Min         | Max     |                                                                    |                               |
| 1101         | UInt8          | 1                 | 0           | 1       | 0 - Disable<br>1 - Enable                                          | Scenario Settings             |
| 1102         | UInt16         | 60                | 0           | 65535   | 0 - Disable                                                        | Activation Timeout            |
| 1100         | UInt8          | -                 | 0           | 1       | 0 - Ignition<br>1 - Enable                                         | Deactivation Source           |
| 1103         | UInt8          | 1                 | 0           | 1       | 0 - Low<br>1 - high                                                | AutoGeofence event priority   |
| 1104         | UInt8          | 2                 | 0           | 3       | 0 - No Event<br>1 - On entering zone<br>2 - On both<br>3 - On both | AutoGeofence event generating |
| 1105         | UInt32         | 100               | 0           | 1000000 | Meters                                                             | Radius                        |

## iButton list

| Parameter ID | Parameter Type | Recommended value | Value range |                      | Value          | Parameter name |
|--------------|----------------|-------------------|-------------|----------------------|----------------|----------------|
|              |                |                   | Min         | Max                  |                |                |
| 3500-3999    | UInt64         | -                 | 0           | FFFFFFFF<br>FFFFFFFF | 0 - iButton ID | iButton list   |

## Manual Geofence

| Parameter ID | Parameter Type | Recommended value | Value range |         | Value                                                                      | Parameter name |
|--------------|----------------|-------------------|-------------|---------|----------------------------------------------------------------------------|----------------|
|              |                |                   | Min         | Max     |                                                                            |                |
| 1020         | UInt32         | 1000              | 0           | 1000000 | Border value meters                                                        | Frame border   |
| 1030         | UInt8          | -                 | 0           | 1       | 0 - Circle<br>1 - Rectangle                                                | Shape type     |
| 1031         | UInt8          | -                 | 0           | 2       | 0 - Low<br>1 - High<br>2 - Panic                                           | Priority       |
| 1032         | UInt8          | -                 | 0           | 3       | 0 - No event<br>1 - On entering zone<br>2 - On exiting zone<br>3 - On both | Generate event |

|             |       |      |      |         |                                                                                  |              |
|-------------|-------|------|------|---------|----------------------------------------------------------------------------------|--------------|
| <b>1033</b> | float | -    | -180 | 180     | Rectangle left down corner X coordinate<br>Or X1 Coordinate circle middle point  | Longitude X1 |
| <b>1034</b> | float | -    | -90  | 90      | Rectangle left down corner Y1 coordinate<br>Or Y1 Coordinate circle middle point | latitude Y1  |
| <b>1035</b> | float | -    | -180 | 180     | Rectangle right upper corner X2 coordinate                                       | longitude X2 |
| <b>1035</b> | float | 1000 | 0    | 1000000 | X2 coordinate radius of circle                                                   | longitude X2 |
| <b>1036</b> | float | -    | -90  | 90      | Rectangle right upper corner Y2 coordinate<br>If circle ID 1036 is not used      | latitude Y2  |

Similarly to a group defined in the upper table:

| Zone number | Parameter   |             |                |             |             |             |             |             |
|-------------|-------------|-------------|----------------|-------------|-------------|-------------|-------------|-------------|
|             | Shape       | Priority    | Generate event | X1          | Y1          | X2          | Radius      | Y2          |
| <b>1</b>    | <b>1030</b> | <b>1031</b> | <b>1032</b>    | <b>1033</b> | <b>1034</b> | <b>1035</b> | <b>1035</b> | <b>1036</b> |
| <b>2</b>    | <b>1040</b> | <b>1041</b> | <b>1042</b>    | <b>1043</b> | <b>1044</b> | <b>1045</b> | <b>1045</b> | <b>1046</b> |
| <b>3</b>    | <b>1050</b> | <b>1051</b> | <b>1052</b>    | <b>1053</b> | <b>1054</b> | <b>1055</b> | <b>1055</b> | <b>1056</b> |
| <b>4</b>    | <b>1060</b> | <b>1061</b> | <b>1062</b>    | <b>1063</b> | <b>1064</b> | <b>1065</b> | <b>1065</b> | <b>1066</b> |
| <b>5</b>    | <b>1070</b> | <b>1071</b> | <b>1072</b>    | <b>1073</b> | <b>1074</b> | <b>1075</b> | <b>1075</b> | <b>1076</b> |

## Parameters

| ID          | Parameter name           | Value type | Value description                                                                                            | Min Value   | max Value  |
|-------------|--------------------------|------------|--------------------------------------------------------------------------------------------------------------|-------------|------------|
| <b>1300</b> | I/O#1 property parameter | S8         | 0 - disable<br>1 - enable                                                                                    | 0           | 1          |
| <b>1301</b> | I/O#1 priority parameter | S8         | 0 - Low<br>1 - High<br>2 - Panic                                                                             | 0           | 2          |
| <b>1302</b> | I/O#1 High level         | S32        | used to set thresholds for I/O properties to generate events.                                                | -2147483647 | 2147483647 |
| <b>1303</b> | I/O#1 Low level          | S32        | used to set thresholds for I/O properties to generate events.                                                | -2147483647 | 2147483647 |
| <b>1304</b> | I/O#1 logic operand      | S8         | 0 - on range exit<br>1 - on range entrance<br>2 - both<br>3 - monitoring<br>4 - hysteresis<br>5 - on changes | 0           | 5          |
| <b>1305</b> | I/O#1 averaging length   | S32        | Parameter defines I/O property sample length to average                                                      | 0           | 2592000    |

Similarly to a group defined in the upper table



## I/O parameters

| I/O Element Number       | I/O element parameters |
|--------------------------|------------------------|
| Digital Input 1          | 1300-1305              |
| Digital Input 2          | 1310-1315              |
| Digital Input 3          | 1320-1325              |
| Analog Input 1           | 1330-1335              |
| Digital Output 1         | 1340-1345              |
| Digital Output 2         | 1350-1355              |
| GNSS PDOP                | 1360-1365              |
| GNSS HDOP                | 1370-1375              |
| External Voltage         | 1380-1385              |
| GNSS Power               | 1390-1395              |
| Movement Sensor          | 1400-1405              |
| Trip distance            | 1410-1415              |
| GSM Operator             | 1420-1425              |
| Speed (Km/h)             | 1430-1435              |
| iButton ID               | 1440-1445              |
| Mode                     | 1450-1455              |
| GSM Signal               | 1460-1465              |
| Deep Sleep               | 1470-1475              |
| Cell ID                  | 1480-1485              |
| Area Code                | 1490-1495              |
| Dallas Temperature 1     | 1500-1505              |
| Reserved                 | 1510-1515              |
| Reserved                 | 1520-1525              |
| Battery Voltage          | 1530-1535              |
| Battery Charging Current | 1110-1115              |
| Ignition                 | 1120-1125              |
| Total Distance           | 1130-1135              |
| Reserved IO1             | 1140-1145              |
| Reserved IO2             | 1150-1155              |
| RFID                     | 1160-1165              |
| LLS Fuel1                | 1720- 1725             |
| LLS Temp1                | 1730- 1735             |
| LLS Fuel2                | 1740- 1745             |
| LLS Temp2                | 1750- 1755             |
| LLS Fuel3                | 1760- 1765             |
| LLS Temp3                | 1770- 1775             |
| LLS Fuel4                | 1780- 1785             |
| LLS Temp4                | 1790- 1795             |
| LLS Fuel5                | 1800- 1805             |
| LLS Temp5                | 1810- 1815             |

|                                |            |
|--------------------------------|------------|
| <b>Dallas Temperature 2</b>    | 1820- 1825 |
| <b>Dallas Temperature 3</b>    | 1830- 1835 |
| <b>Dallas Temperature 4</b>    | 1840- 1845 |
| <b>Dallas Temperature ID 1</b> | 1850- 1855 |
| <b>Dallas Temperature ID 2</b> | 1860- 1865 |
| <b>Dallas Temperature ID 3</b> | 1870- 1875 |
| <b>Dallas Temperature ID 4</b> | 1880- 1885 |