

Voice calls from IO events

Introduction

FM device can make a voice call to a defined phone number when one of specific IO events occurs.

This feature description is valid for FM devices listed below. Their firmware version has to match or be higher than:

- FM-Tco4 HCV - 00.02.23.08
- FM-Tco4 LCV - 00.02.23.08
- FM-Pro4 - 00.02.23.08

You can get the latest firmware and configurator from our documentation website: doc.ruptela.lt

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Document change log

Date	Version	Change details
2016-09-07	1.0	Initial draft.
2016-11-15	1.1	Added additional value for "Voice call" I/O event.
2017-04-26	1.2	Configuration description improved.

Voice call description

Rules for voice call functionality

- Voice call feature is only available for FM4 devices with 2G modems.

Note

In FM devices with GSM/UMTS modems voice call feature is not supported. Even if you choose 2G mode in the configurator, voice call feature will not function.

- Phone call can be triggered by several I/O parameters. The list of these I/O parameters is given in the list below.
- FM device makes a call to a single phone number with was defined in the configuration.
- FM device can make phone calls to international numbers, which start with "00" (i.e. 00xxxxxxxxxx). Two zeros "00" are used instead of "+" symbol. In the configurator, these two zeros are added automatically and you do not need to enter them manually. Device can also make phone calls to short numbers (i.e. 711, 2121).
- If the event that triggers the phone call occurs during the data transmission, that transmission will be stopped and the phone call procedure will begin.
- During the call, there is no possibility to send records. Before making the call, the FM device will send an SMS to the client with the latest information. It will be sent to the SMS alert numbers. SMS will have the same information as the response to the "cords" SMS command.

List of I/O parameters that support the voice call function

- DIN1
- DIN2
- DIN3

You can monitor voice call events and see them in reports. Use "Phone Call" I/O parameter.

Few operation principles

When the preset I/O event is triggered and calling option is enabled the FM device makes a call to the preconfigured phone number.

- If a recipient is busy – device hangs up;
- If a recipient does not answer – device hangs up;
- If a call duration exceeds predefined duration (configurable) – device hangs up;
- Incoming calls are automatically answered.

Special case for a call triggered by the button connected to the DIN

- If a call is triggered via a button switch, which is connected to the DIN, then the call can be stopped by triggering the button again. In this case the call duration timer does not apply.

Voice call operation in sleep/deep sleep mode

- When FM device is in sleep/deep sleep mode only high priority events will trigger a voice call.
- FM device cannot receive a call when it is in sleep/deep sleep mode.

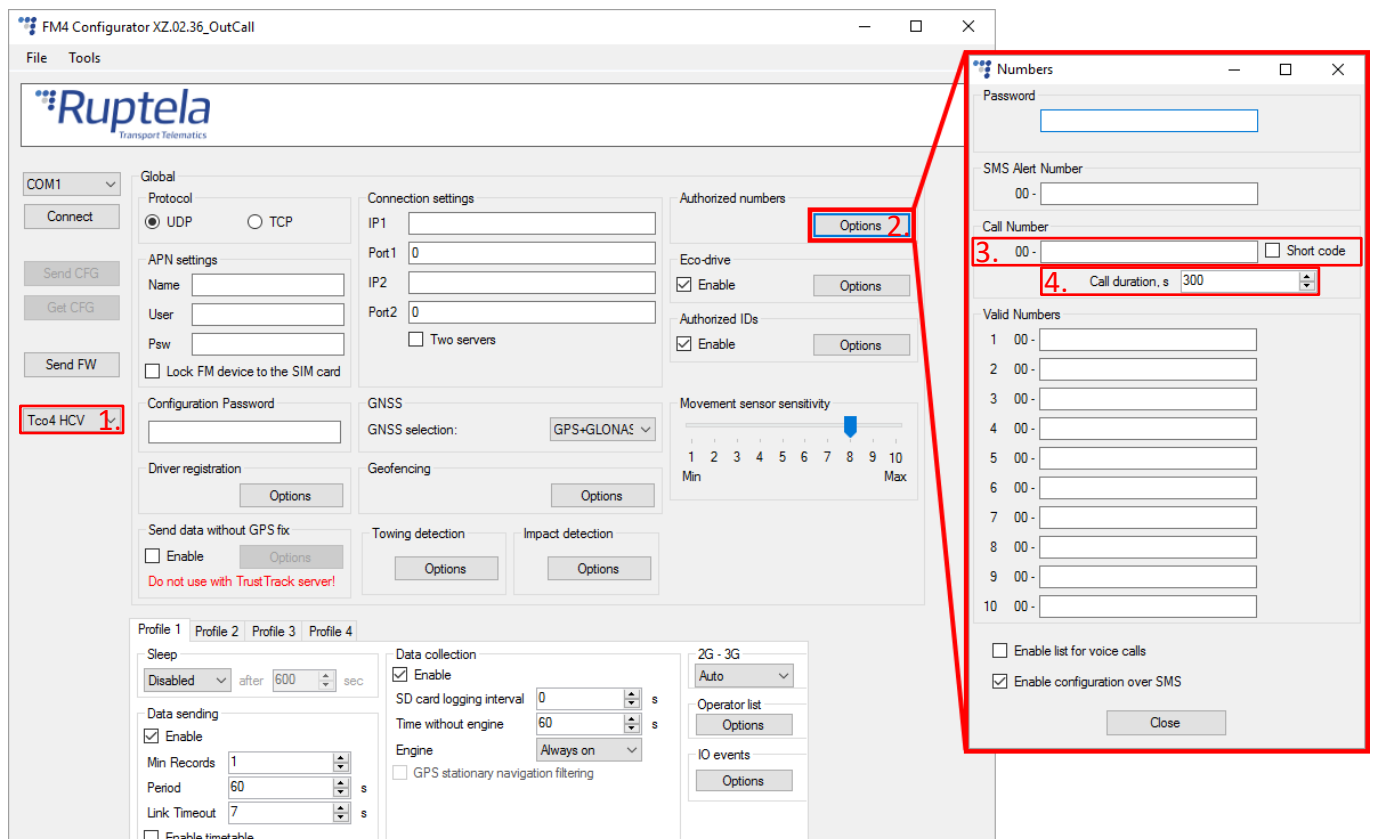
Configuration

Enable voice call

1. In the main configurator window choose your device (*FM-Tco4 LCV, FM-Tco4 HCV, FM-Pro4*).
2. Under **Global** settings, in the **Authorized numbers** section click on the "Options" button. It opens up a new "Numbers" popup window.
3. Enter phone number in the **Call number** field. Two zeros (00) are displayed at the beginning of the field. You can write a phone number without the "+" symbol. If you need to use a "short" phone number, then tick the **Short code** check box. This will remove "00" from the beginning of the field.
4. Also set **Call Duration, s**. Default value is 300 seconds. Lower limit is 1 second, upper limit is 600 seconds. Duration timer starts, when FM device begins dialing the number. It does not matter, if this call is answered on the other end or not.

Note

If you trigger the call with the button switch connected to the DIN, then call duration timer does not apply.



Enable I/O parameters

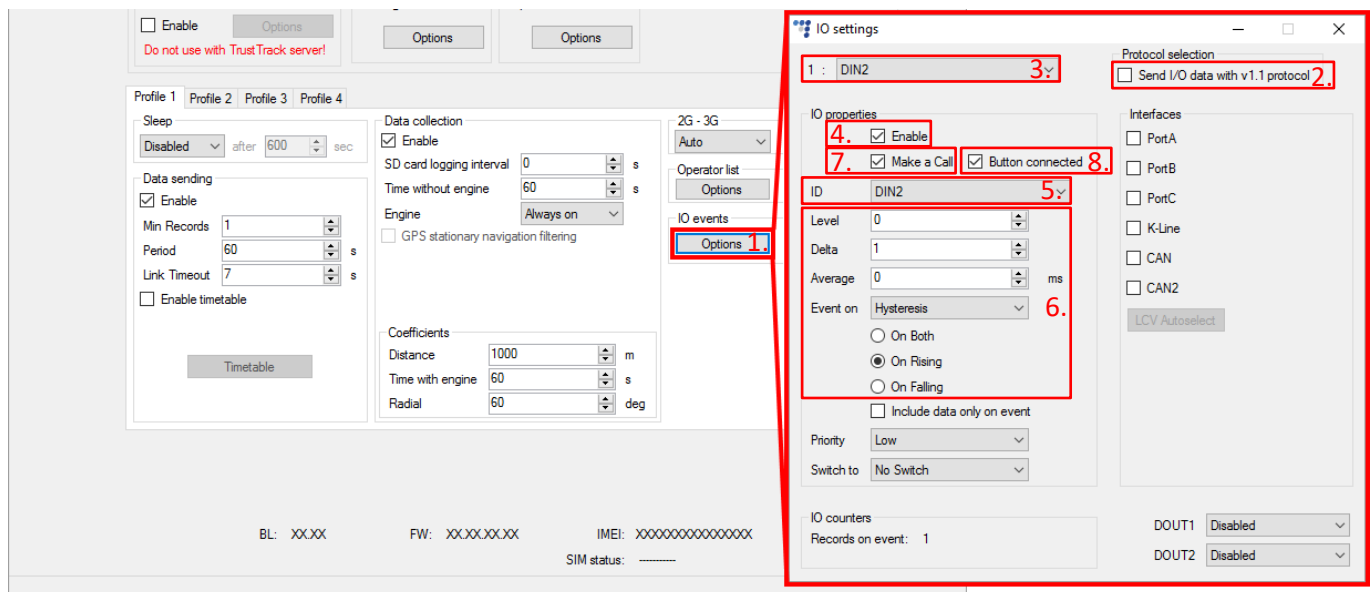
Enable required I/O parameters to trigger and monitor voice calls.

1. In the **I/O events** section click on the "Options" button. It opens up a new "I/O settings" window, here you can enable or disable I/O parameters.

- In **Protocol selection** section put a tick in **Send I/O data with v1.1 protocol** checkbox. After this step, voice call I/O parameter will be displayed in the I/O list.
 - Select a slot that you want to enable.
 - In the **I/O properties** section tick the **Enable** check box, otherwise the slot will remain empty.
 - ID** contains the parameters list. Choose a parameter you want to enable for the selected slot. To monitor voice events and see them displayed in reports choose *Phone Call*.
- In the next slot add and enable an IO parameter that will trigger the voice call. One of these options could be used:
DIN1, DIN2, DIN3.

More details about these parameters available below.

- In the **Event on** field choose *Hysteresis*, set values in **Level** and **Delta** fields. In some cases **Event on** can be configured on *Change*. More information about possible configuration options available in the "I/O parameters to trigger the voice call" table below.
- Tick the **Make a Call** check box and this I/O parameter will be able to trigger voice call events.
- If you use button connected to the DIN, then enable **Button connected** check box.



I/O parameters to trigger the voice call

I/O	Configuration options
DIN1, DIN2, DIN3	On change On hysteresis ¹ Supports button mode

¹Button mode can be enabled, when Hysteresis is set in the **Event on** field.

“Phone call” I/O event

You can monitor voice call events and see them in reports. Use “Phone Call” I/O parameter.

ID	Name in configurator	Size, B	I/O value description
596	Phone Call	1	If 0 – no events; If 1 – phone call attempt was made successfully; If 2 – phone call attempt was made, but there were GSM problems; If 3 – phone call attempt was made, but there was no answer from the recipient; If 4 – phone call attempt was made, but the recipient was busy; If 5 – local hang up; If 6 – remote hang up; If 7 – incoming call; If 8 – device is ringing.

This I/O can generate vents on change or hysteresis.

Note

To enable “Phone call” I/O parameter you have to use an extended v1.1 protocol version.