

# Configurable sleep

## Introduction

The configurable sleep feature adds flexibility to the FM device sleep mode configuration. The user himself can choose functionalities that should work in device custom sleep mode and functionalities that should be disabled.

This feature description applies to the following FM devices with the latest firmware version:

- FM-Tco4 HCV
- FM-Tco4 LCV
- FM-Pro4
- FM-Eco4
- FM-Eco4 S
- FM-Plug4

You can get the latest firmware and configurator from our documentation website: [doc.ruptela.it](http://doc.ruptela.it)

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## Document change log

Date	Version	Change details
2017-05-10	1.0	Initial draft.
2017-05-18	1.1	Feature is now available for Pro family devices.
2017-05-22	1.2	Feature is now available for FM-Plug4 devices.
2018-03-13	1.3	New "Sleep state" IO parameter described.
2018-11-14	1.4	Compatible device list updated.

## Configurable sleep

The configurable sleep feature allows the user to choose, which functionalities should work when the device is in custom sleep mode and which functionalities should be disabled.

By default, all configurable functionalities are disabled in custom sleep mode.

### Eco family and Plug devices

In all sleep modes, after the engine is OFF and a double "time to sleep" period has passed, the device will go into the configured sleep mode, unless there is an open link with a server.

### Pro family devices

In all sleep modes, after the engine is OFF and a double "time to sleep" period has passed, the device will go into the configured sleep mode regardless of the link status with the server. This condition is also true when the device is using a constant link feature.

Functionality	Available options	Compatibility
Modem	Enabled, <sup>1</sup> Sleep, Disabled	All FM devices
GNSS receiver	Enabled, Disabled	All FM devices
Battery charge	Enabled, Disabled	All FM devices
Wake up when DIN is high	Enabled, Disabled	All FM devices except Plug4
<sup>2</sup> 1-wire	Enabled, Disabled	All FM devices except Eco4-UBI and Plug4
<sup>2</sup> CAN	Enabled, Disabled	All Pro family devices
<sup>2</sup> Serial PortA (RS232)	Enabled, Disabled	All Pro family devices
<sup>2</sup> Serial PortB (RS232)	Enabled, Disabled	All Pro family devices
<sup>2</sup> Serial PortC (RS485)	Enabled, Disabled	All Pro family devices
<sup>2</sup> K-line	Enabled, Disabled	Only FM-Tco4 HCV and FM-Tco4 LCV devices

<sup>1</sup>If Sleep is selected, the GSM modem can receive SMS messages.

<sup>2</sup>If your FM device does not have this peripheral interface, then it will be greyed out or not displayed in custom sleep configuration options.

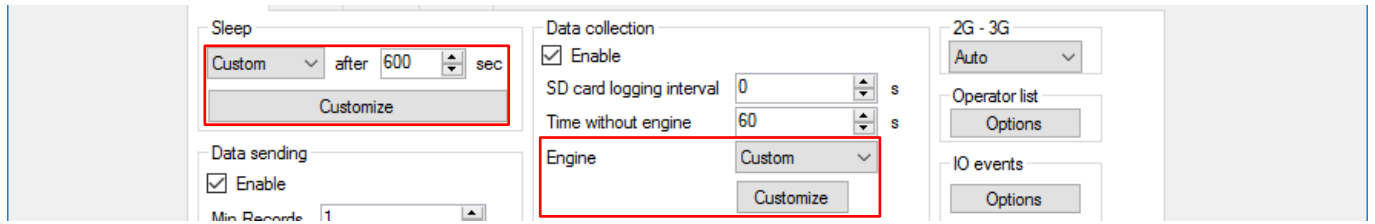
## Relations between configurable sleep and custom ignition options

**If you start the device configuration from configurable sleep options, then consider this:**

1. If **GNSS receiver** is set to *Disabled*, then in custom ignition settings the **GPS speed** parameter will be disabled.
2. If **CAN** is set to *Disabled*, then in custom ignition settings the **RPM**, **Wheel based speed** or **CAN ignition** parameters will be disabled, if they are received through CAN1 or CAN2 interface.

**If you start the device configuration from custom ignition options, then consider this:**

1. If **GPS speed** is enabled as a condition in custom ignition settings, then in custom sleep configuration options it will not be possible to disable the **GNSS receiver**.
2. If **RPM** is enabled as a condition in custom ignition settings, then in custom sleep configuration options it will not be possible to disable the **CAN** interface.
3. If **Wheel based speed** is enabled as a condition in custom ignition settings, then in custom sleep configuration options it will not be possible to disable the **CAN** interface.
4. If **CAN ignition** is enabled as a condition in custom ignition settings, then in custom sleep configuration options it will not be possible to disable the **CAN** interface.



### Feature compatibility matrix

Custom sleep \ Custom ignition	GPS speed	RPM	Wheel based speed	CAN ignition	DIN1	DIN2	DIN3	DIN4	Movement sensor	Power supply voltage
Modem	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
GNSS receiver	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES
1-wire	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
CAN	YES	NO	NO	NO	YES	YES	YES	YES	YES	YES
PortA (RS232)	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
PortB (RS232)	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
PortC (RS485)	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
K-Line	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Battery charge	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Wake up when DIN is high	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES

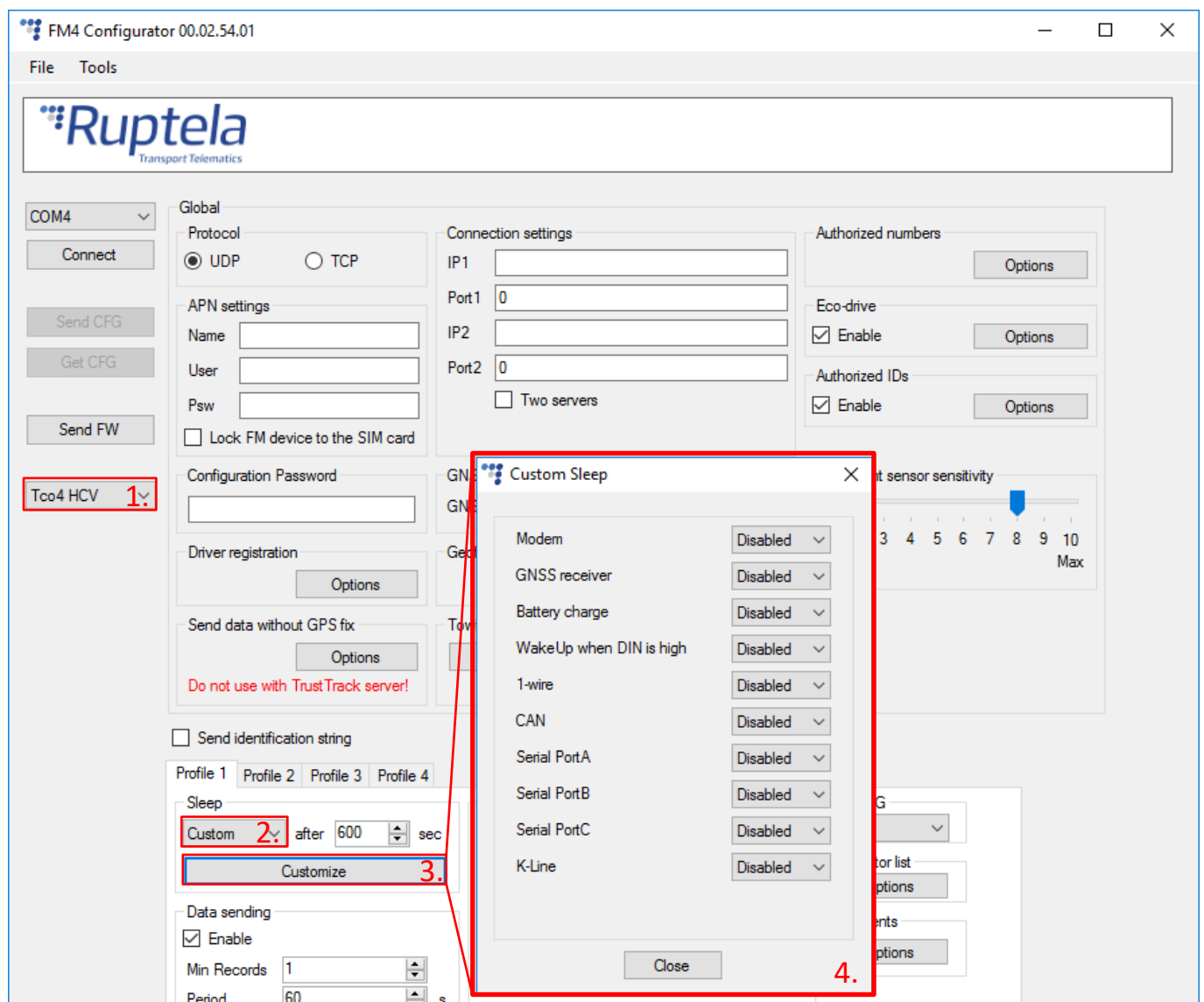
Features with a "NO" tag are incompatible and cannot be used together. If one of them is enabled, then the other one will be greyed out in the configurator.

# Configuration

Follow these steps:

1. In the main configurator window choose your device.
2. Under **Profile** settings, in the **Sleep** section use the drop down list and select *Custom*.
3. Click the **Customize** button.
4. Choose, which functionalities should work when the device is in custom sleep mode and which functionalities should be disabled.

Once all steps are complete, close the Custom Sleep configuration options window and send the configuration to the device.



## Sleep state IO parameter

This parameter stores the sleep state of the FM device.

ID	Name	Name in configurator	Size, B	Values
412	Sleep state	Sleep state	1	<ul style="list-style-type: none"><li>● 0 – no sleep;</li><li>● 1 – sleep timeout;</li><li>● 2 – hard sleep timeout;</li><li>● 3 – sleep;</li><li>● 4 – deep sleep;</li><li>● 5 – custom sleep;</li><li>● 255 – sleep disabled.</li></ul>