2014/02

Driver registration via RFID and/or iButton

WHAT'S NEW

New functionality has been introduced with this version. It is available for PRO3 devices with firmware starting 00.A2.43, configurator version 00.01.51r2.

- Authorized ID list
- DOUTs control
- Driver and passenger identification
- New IO parameters

RFID integration combines RFID, iButton, Buzzer/LED and allow different registration type through these peripherals.

- Passenger and driver identification
- Mandatory driver identification
- Ignition blocking through RFID or iButton

You can get all newest software and firmware at
ftp://dev.ruptela.lt (user name: ftp, password: ftp).

Configurator update

You can see some new button and sections in configurator window. This is short overview of new features, configuration details are described in this manual.

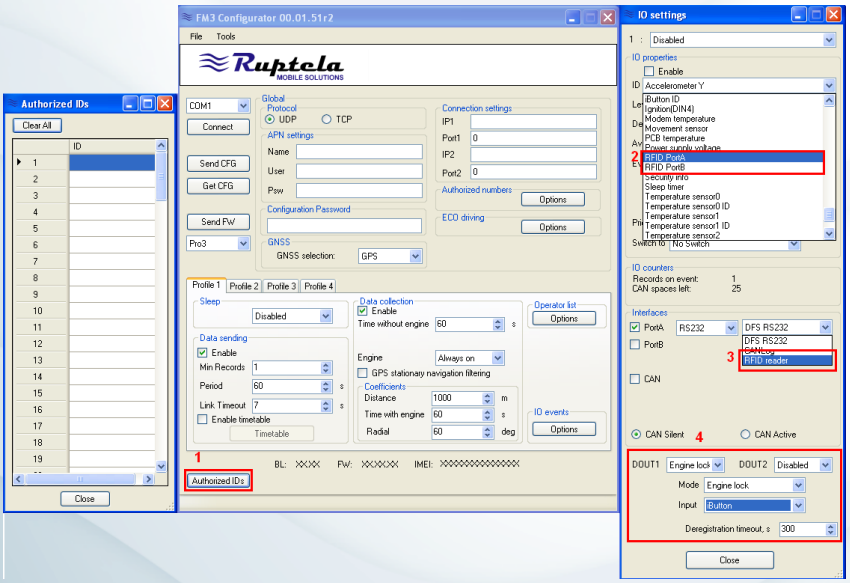
• First you can see **Authorized IDs** button (1). It is list of authorized IDs who can start engine when ignition blocking is used.

• In **IO settings** window, notice two new parameters (2). This allows you to see driver and passengers IDs in reports.

> **IMPORTANT**
> Condition Event on: **Change** must be selected in order to see IDs!

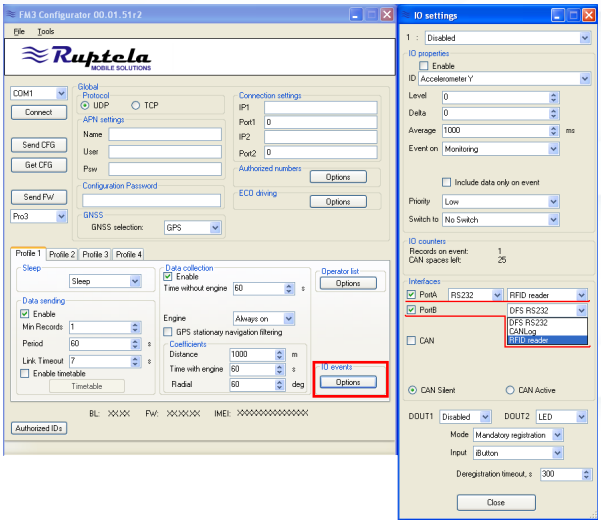
• **Port A** and **Port B** now have new option *RFID reader* (3)

• On the bottom (4) you can see **DOUT1** and **DOUT2** configuration, registration **mode** and **input** source. Also **deregistration time** drop box.



CONFIGURATION

Open configurator and go to **IO settings**. Enable RFID according to port you connected peripheral device. This is source where from device will get identification data.

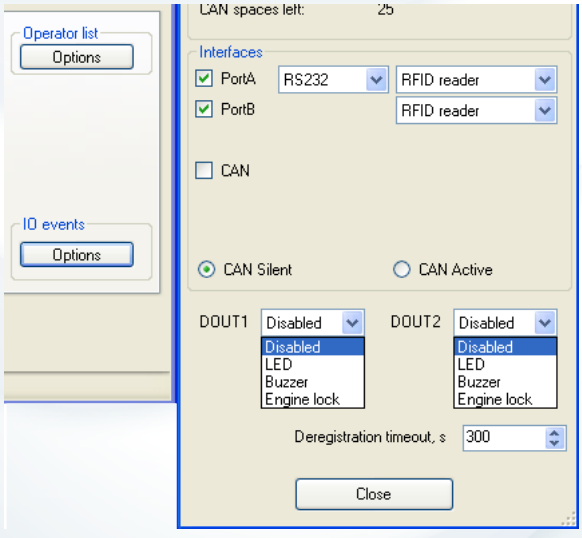


You can select up to 3 source inputs. Port A RS232 interface, Port B RS232 interface and iButton connected to 1-Wire interface.

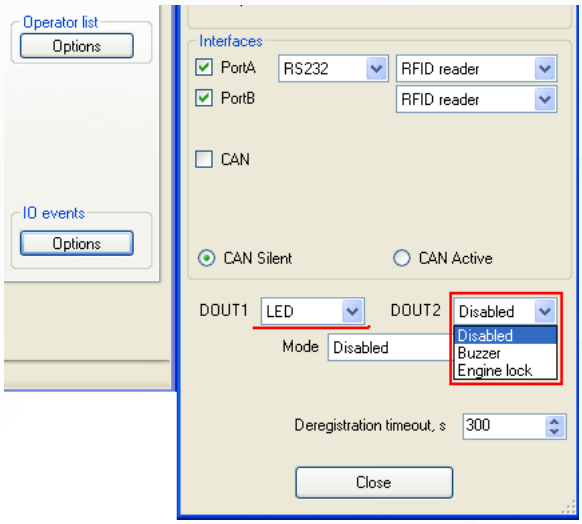
> **Be advised**
> On some vehicles (usually Volvo and Renault with DXI engine) Port A is used to get CAN data via J1708, so RFID is not be available on port A.

Next you need to configure digital outputs. DOUT's are configured independently. It can control peripheral units and/or ignition lock function connected to DOUT. You have 4 options from drop down menu:

- Disabled
- LED
- Buzzer
- Engine lock



If you select one option on DOUT1 it becomes unavailable on DOUT2 and vice versa.



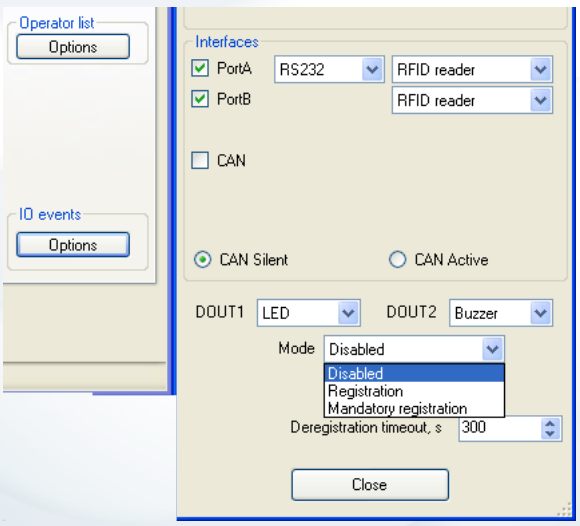
- *Disabled* output will not interact with any peripheral connected.
- *LED* will blink when record is made (e.g. card or iButton is read).
- *Buzzer* interacts same as LED, just instead of blinking, it will make a sound.
- *Engine lock* feature will lock ignition until registration is made with authorized card or ibutton. This feature will be discussed further in section *Engine Lock*.

NOTE
You must connect peripheral to DOUT and configure it on that output. E.g. If you connected Buzzer to DOUT1, in configurator, select Buzzer on DOUT1 drop menu.

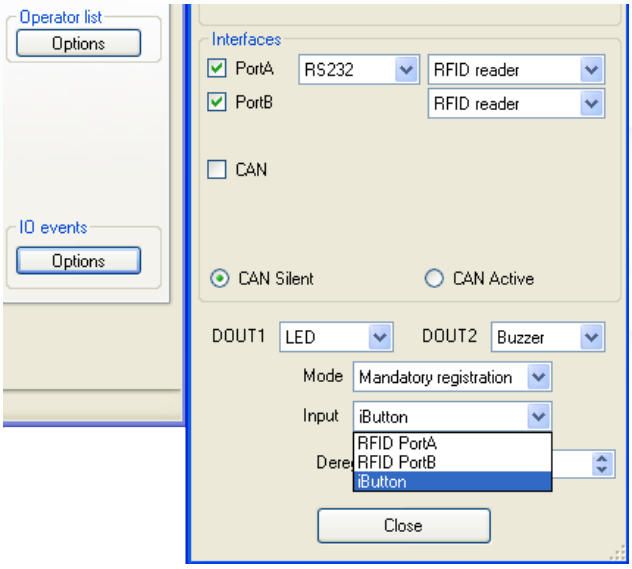
After configuring outputs you should select registration *mode*. Here you get 3 choices:

- Disabled
- Registration
- Mandatory registration

This is important!
If you leave this drop down menu as *disabled*, digital outputs will do nothing and iButton ID is sent only once (ID is not held until ignition is switched off).

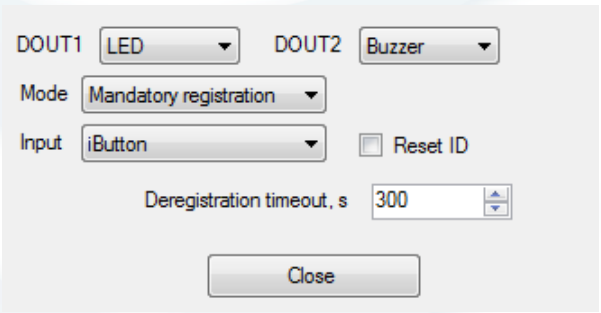


- *Registration* option allow optional registration of driver and/or passengers over all three identification sources (iButton, RFID port A, RFID port B) if they are connected. Outputs will became active on registration from any source - in this case LED will blink and buzzer will make sound when either driver or passenger register.
- Only one source can be configured for *Mandatory registration* for driver. If you choose this setting, another drop box will appear where you need to select source which will be controlling digital outputs.



Now, if you selected iButton as mandatory registration source, driver will have to register in order to drive. If driver is not identified in 5 seconds after starting engine, peripherals connected to DOUTs start to indicate. In example shown, LED will glow red and buzzer begins making sound alert until registration is made or engine is off. Other registration sources (RFID port A and RFID port B) will register card ID without any authentication and send record to tracking platform.

NOTE
Device will register driver ID with engine off if it is in normal mode or sleep mode. If device is in deep sleep, registration will not happen. Entering sleep and deep sleep modes depend on configuration. We recommend start engine and register within 5 seconds.

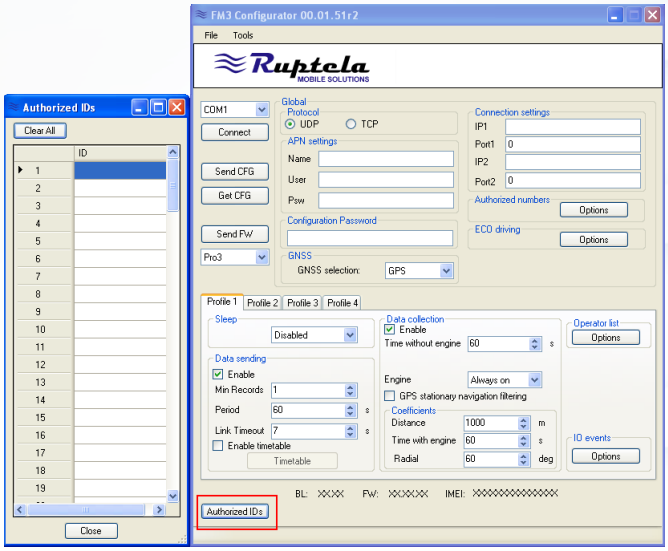


Deregistration means period of time, when you can start engine again without need to register again. For example, deregistration is set to 300 seconds (5 minutes). If engine is turned off, it can be started again within 5 minutes without registration.

If Reset ID is not checked, iButton ID will be included with every record until deregistration time expires. If it is checked, iButton ID will be sent only when iButton is attached.

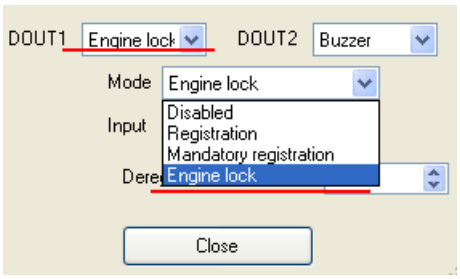
Engine Lock

First of all we have to mention **authorized IDs**. It can be found in main configurator window.



Here you can enter ID card/iButton authorization numbers who can start engine. You can store up to 120 records in this list.

If you choose (and connect[1]) engine lock function to one of DOUTs, new selection in *mode* drop box will appear.



Select engine lock, then choose *input* source (iButton, RFID port A, RFID port B). Now if driver register authorized card or ibutton, he is allowed to turn on ignition and start engine.

> **NOTE**
> If authorized ID was used to start engine and then unauthorized ID was scanned, record is made with unauthorized ID but ignition is NOT blocked.

Deregistration time is applied same as for mandatory registration mode.

Indication

Indicators have pre-set values for successful and failed registration. RFID device has integrated LED and buzzer. However if you want sound and/or light indication for iButton you have connect independent LED and/or buzzer.

- Buzzer
- LED
- Engine lock

It does not matter if Buzzer or LED connected to digital output is integrated into RFID or is separate device, it will act the same.

• *Buzzer* will make 1.5 second long sound alert upon successful registration and short beeping upon failure.

[1] connection scheme shown in Installation Recommendations

NOTE
RFID device will short beep each time card ID is read regardless failed or successful registration.

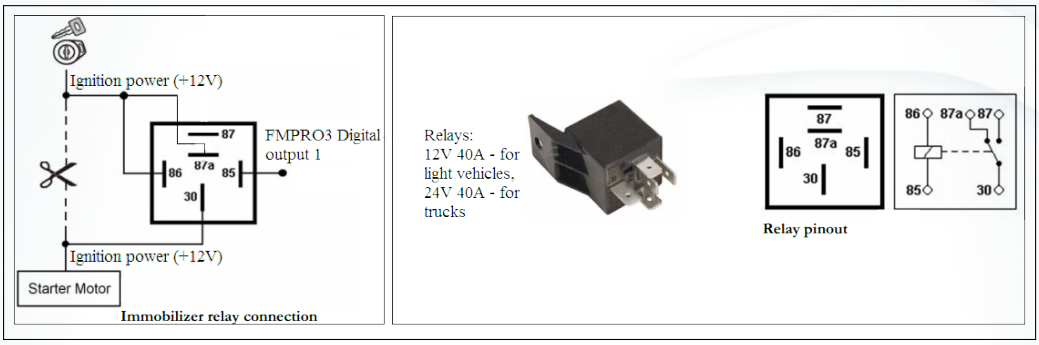
• *LED* has two color indication: green LED is glowing all the time. If registration is successful LED will blink. If registration has failed LED glows red.

• *Engine lock* itself has no indication but combined with LED/buzzer will make indications according to LED/buzzer description. (e.g. DOUT1–Engine lock; DOUT2–Buzzer).

INSTALLATION RECOMMENDATIONS

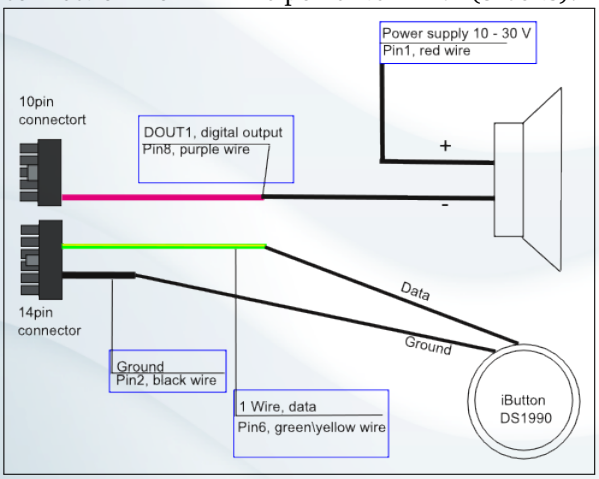
Ignition Lock Schematics

When connected as shown below, device disables engine starter when output is ON. A simple automotive relay is used to invert signal or immobilise engine starter. Note that 12 V and 24 V options are available.

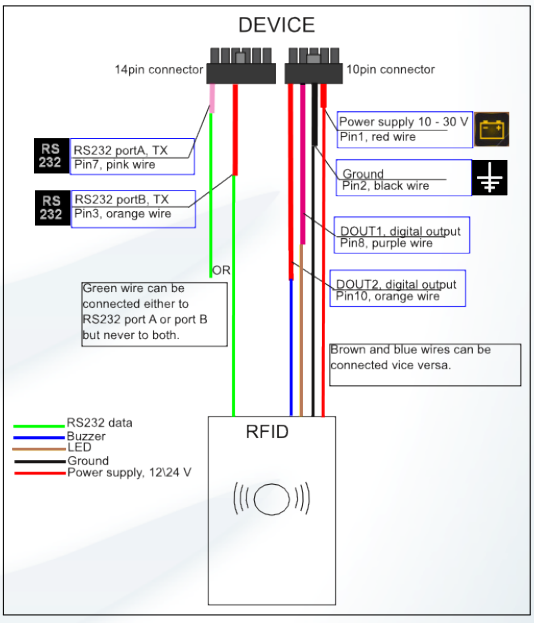


iButton and Buzzer/LED schematics

iButton connection scheme is valid only for iButton (and socket) purchased from Ruptela. If you bought iButton socket elsewhere please see your product datasheet for proper connection. It may require power supply connection from 1-Wire power terminal (5 Volts).

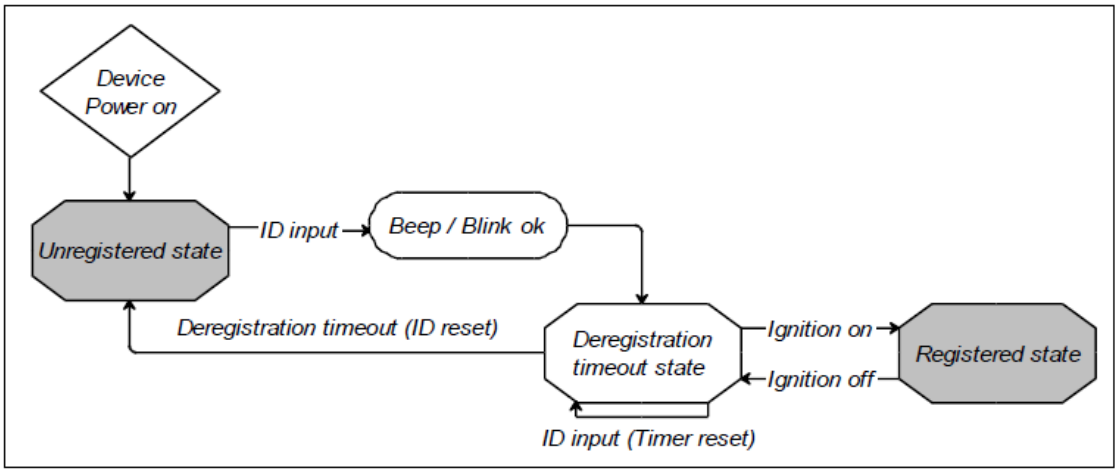


RFID Schematics

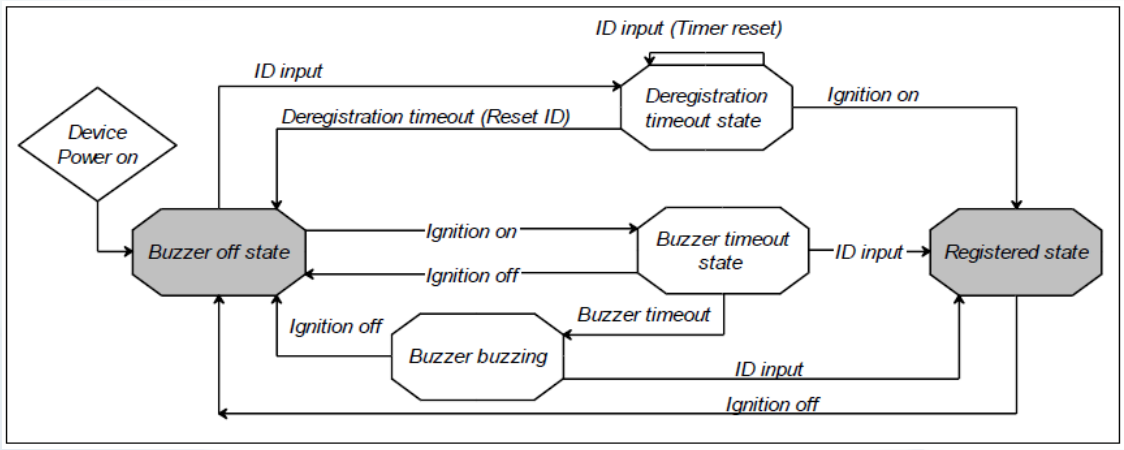


Registration mode logic schematics

Registration mode:



Mandatory registration mode:



Ignition lock: