

FMB910 Basic GPRS settings

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GPRS Settings



These settings define the main parameters for FMB910 basic.
GPRS Context:

- Device ability to enable or disable GPRS connection.

APN:

- Access point name, a mandatory parameter which is used to connect to the internet (GPRS).
Access Point Name is the name of a gateway between a mobile operator and the public internet. It can be obtained from your SIM card provider.

APN Username:

- Access point name username (optional – depending on operator)

APN Password:

- Access point name password (optional – depending on operator).

Limit connection errors:

- When enabled (default option) device will try to open GPRS or socket and if it fails it will introduce additional delays on the next try. The delays are incremented based on the consecutive network errors received:

1. No delays
2. 1 minute.
3. 1 minute.
4. 2 minutes.
5. 2 minutes.
6. 4 minutes.

7. 6 minutes.
8. 8 minutes.
9. 10 minutes.

Once 10 minutes is reached and if errors continue to occur the delay will not reset. When connection is successful the delay resets. This feature is enabled for every socket and SIM1 or SIM2 (if available) GPRS context.

- When disabled (option introduced from 03.29.00.Rev.10 base firmware version) device will spam the network with GPRS or socket related network operations with no additional delays. This might introduce operators bans on some devices if the network signal quality is poor and device tries its best to connect to the network.

GPRS Authentication:

- Some operators use a specific type of authentication for GPRS sessions. It could be CHAP or PAP authentications. In configurator's GPRS settings there are option to select which GPRS authentication could be used. Information about the APN details and authentication should be provided by your GSM operator.

The image shows a web-based configurator interface. A sidebar on the left contains a list of settings categories. The 'GPRS' category is highlighted. The main content area on the right shows the 'Set keyword' configuration, which includes a text input field for a keyword.

Auto APN



Auto APN:

- This feature allows the device to select the correct APN from integrated into the firmware APN

database. After the tracker turns ON it will automatically search APN settings depending on the inserted SIM card.

- This feature is used from 03.25.15.Rev.32 and up, explained in more detail in [this page](#).
- This feature can be disabled in the device configuration if the device GPRS settings are configured before installation or during installation of device.

Transfer APN File



APN file Upload / Download:

- Connect to the device using configurator and look for Transfer APN file section. Press the Upload button and locate your APN_list.bin file. (binary APN list can be named differently, make sure to use the correct file).
- This transfer APN File option is valid from 03.25.15.Rev.32 and up.
- The AutoAPN file comes with the device from the factory, but if the GPRS settings are configured before installation or during installation of device - APN file is not required.

First Server Settings



Domain:

- Server or Domain address, can be written either IP address or Domain.

Port:

- Server Port

Protocol:

- Defines GPRS data transport protocol, used for data transfers - **TCP** or **UDP**. From the device side TCP and UDP work almost the same, only difference is that UDP doesn't need additional confirmation from the server side, that the data packet was received. TCP has that, and uses more network data for the confirmation. The desired data transfer protocol can be selected through the configurator.

TLS encryption:

- An additional option is the use of TLS encryption for sending records to the main server and backup server.



All the information in photos must not be used, just for demonstrational use only.

Second Server Settings



Second server has 4 different modes:

Disable:

- Second server is not used.

Backup:

- Records are sent to second server if main server is not available (for example: device fails to open link with main server) or when main server response timeout has been reached 5 times in a row.

Duplicate:

- Records are sent to both servers (main and second), records are deleted from SD-card (or Flash storage) only if both servers confirmed that the records were received from device.

EGTS:

- Records are sent to both servers (main and second), records are sent to the backup server using the EGTS protocol. **RNIS** system is supported with EGTS protocol. **(Relevant just in CIS Regions)**

Backup server Domain:

- Server or Domain adress, can be written either IP address or Domain.

Back up server Port:

- Server Port

Backup server Protocol:

- Defines GPRS data transport protocol, used for data transfers - **TCP** or **UDP**. From the device side TCP and UDP both protocols require a confirmation from the server to the device sent packets. However, data consumption will be less using UDP due to differences in the Network layer of TCP/UDP and also packet structure of Codec8 using UDP protocol. More information - [here](#).

Encryption:

- An additional option is the use of TLS encryption for sending records to the main server and backup server.



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Records Settings



Open Link Timeout:

- The parameter used to define a timeout between the fleet management device and the server. If the device has sent all records, device holds the link for duration of the configured timeout. "Open link timeout" will refresh after device sends a new record. If there is a need to keep a constant link with a server, increasing the value of the parameter is needed.

Server Response Timeout:

- Is used to set a period of time waiting for the response from the server-side. If there is no response from the server during the timeout, the device will close the link and according to device configuration resend the same packet.



NOTE! If Data [protocols](#) are not implemented correctly, device will not send data correctly.

Network Ping Timeout:

- Enables network ping after timeout to prevent link close by operator. For example, if the operator closes the active link after 15 minutes when no data is sent, you can set the "network ping" timeout to 10 minutes then the device sends a 0xFF byte to server to keep the link open. This functionality works only for Record and Backup Servers. **Network Ping Timeout should be always lower than Open Link Timeout.**

Sort by:

- Can be set either Newest or Oldest. For example if the Oldest is marked the device first will send the Oldest information, if Newest then Device will send the newest information. If the device had no connection (GSM or GPRS) due to bad coverage or being in an area with no signal. Device continues to save records into internal memory, once GSM and GPRS are recovered device will start sending saved data to server. In this example, if Oldest is configured - until newest data is seen on the server all of the oldest records have to be sent first. If Newest is configured - previous data and track won't be seen until newest data is sent first. If high priority on I/O parameters or Features are configured device will send the generated records with High Priority first.

ACK Type:

- Determines what method the device uses to receive confirmation from the server **TCP/IP** or **AVL**. **TCP/IP** means that the confirmation will be included in the TCP/IP layer and no additional message will be needed to acknowledge the record receiving. **AVL** means that the device will expect an additional AVL message from the server - according to the Data sending protocols described [here](#).