Template:Networking rut850 manual gps

The information in this page is updated in accordance with the **RUT850_R_00.01.04** firmware version.

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Contents

Summary

The **Global Positioning System** (**GPS**) is a space-based radionavigation system. This page is an overview of the GPS service in {{{name}}} routers.

Map

The **Map** page displays the device's current coordinates and position on the map. To see the device's location on the map, make sure to attach the GPS antenna on the router and enable GPS in the [[{{{name}}}_GPS#General|General]] page.

The figure below is an example of the Map page:

[[File:{{{file_map}}}]]

General

The **General** section is used to enable the GPS service and the support for different types satellites. Once you turn on GPS, you can check the [[{{{name}}}_GPS#Map|Map]] page in order to see if the router has obtained a GPS fix. It is very important to attach the GPS antenna on the router and place it outside (not inside of a building). The router will not be likely to obtain a GPS fix otherwise.

The figure below is an example of the General page.

[[File:{{{file_general}}}]]

NMEA

The **NMEA** page is used to configure settings related to NMEA sentence collecting and forwarding.

NMEA forwarding

The **NMEA forwarding** section is used to configure and enable NMEA forwarding. The figure below is an example of the NMEA forwarding section and the table below provides information on the fields contained in that section:

[[File:{{{file_nmea_forwarding}}}]]

Field	Value	Description
Enabled	yes | no; default: **no**	Turns NMEA forwarding on or off.
Hostname	ip | host; default: **192.168.1.5**	IP address or hostname of the server to which NMEA data will be forwarded.
Port	integer [0..65535]; default: **8500**	Port number off the server to which NMEA data will be forwarded.
Protocol	TCP | UDP; default: **TCP**	Protocol that will be used to send NMEA data.

NMEA forwarding cache

The router **caches NMEA forwarding** information if NMEA forwarding is enabled. This section is used to select the memory type where the cache will be stored and the maximum amount of data that will be saved:

[[File:{{{file_nmea_cache}}}]]

Field	Value	Description
Type	ram | flash; default: **ram**	Selects which type of memory will be used for storing NMEA forwarding cache.
Maximum sentences	integer; default: **5000**	Maximum amount of NMEA sentences that will be saved in the cache before older entries are deleted and replaced by new ones.

File	filepath; default: **none**	Location of the file where NMEA forwarding cache information will be stored. This field becomes visible only when the selected memory type is "flash".

NMEA collecting

The **NMEA collecting** section is used to enable NMEA sentence gathering and storing. The figure below is an example of the NMEA collecting section and the table below provides information on the fields contained in that section:

[[File:{{{file_nmea_collecting}}}]]

Field	Value	Description
Enabled	yes | no; default: **no**	Turns NMEA sentence collecting on or off.
Location	filepath; default: **none**	Location of the file where NMEA sentences will be stored. This field becomes visible only when NMEA collecting is enabled.

NMEA sentence settings

The **NMEA sentence settings** section provides the possibility to configure which NMEA sentences will be forwarded or collected and at what frequency. The figure below is an example of the NMEA sentence settings section and the table below provides information on the fields contained in that section:

[[File:{{{file_nmea_sentence}}}]]

Field	Value	Description
Forwarding enabled	yes | no; default: **no**	Enables forwarding for the adjacent NMEA sentence.
Forwarding interval	integer; default: **5**	NMEA sentence forwarding frequency in seconds.
Collecting enabled	yes | no; default: **no**	Enables collecting for the adjacent NMEA sentence.
Collecting interval	integer; default: **5**	NMEA sentence collecting frequency in seconds.

NMEA sentence reference table:

NMEA sentence name	Description
GPGSV	Number of GPS satellites in view.
GPGGA	GPS fix data.
GPVTG	Track made good and speed relative to the ground.
GPRMC	Recommended minimum specific GPS/Transit data.
GPGSA	GPS DOP and active satellites.

HTTPS

The **HTTPS** page can be used to configure data sending to an HTTP(S) server.

HTTPS/HTTP Server Settings

The **HTTPS/HTTP Server Settings** section is used to enable GPS data sending to an HTTP or HTTPS server:

[[File:{{{file_https_settings}}}]]

Field	Value	Description
Enabled	yes	no; default: **no**	Turns data sending to an HTTP/HTTPS server on or off.
URL	ip	host; default: **192.168.1.5**	IP address or hostname of the HTTP/HTTPS server.

TAVL Settings

The **TAVL Settings** section is used to select which data will be sent to the TAVL server:

Field	Value	Description
Send GSM signal	yes	no; default: **no**	Includes GSM signal strength information in the GPS data sent to server.
Send analog input	yes	no; default: **no**	Includes analog input state in GPS data package to be sent to server.
Send digital input (1)	yes	no; default: **no**	Includes digital input #1 state in the GPS data sent to server.
Send digital input (2)	yes	no; default: **no**	Includes digital input #2 state in GPS data package to be sent to server.

AVL

The **AVL** page is used to set up GPS data sending to an AVL server.

AVL Server Settings

The **AVL Server Settings** section is used to configure the main parameters of data sending to an AVL server. The figure below is an example of the AVL Server Settings section and the table below provides information on the fields contained in that section:

Field	Value	Description
Enabled	yes	no; default: **no**	Turns data sending to AVL server on or off.
Hostname	ip	host; default: **192.168.1.5**	IP address or hostname of an AVL server.
Port	integer [0..65535]; default: **8501**	TCP/UDP port number of the AVL server to which the router will be connecting.
Protocol	TCP	UDP; default: **TCP**	Protocol that will be used for communication with the AVL server.

Main rule

The **Main rule** section defines how and when GPS data will be collected and sent to a specified AVL server. Refer to the figure and table below for information on the configuration fields of Main Rule.

[[File:{{{file_main_rule}}}]]

Field	Value	Description
Enable	yes | no; default: **yes**	Turns the main rule on or off.
Rule priority	Low priority level | High priority level | Panic priority level | Security priority level; default: **Low priority level**	The rule's priority. Different priority settings add different flags to event packets, so they can be displayed differently in the receiving system. The router sends data of higher priority first. Priority levels from highest to lowest are as follows: 1. Security 2. Panic 3. High 4. Low
Collect period	integer [1..999999]; default: **50**	How often (in seconds) data will be collected.
Min distance	integer [1..999999]; default: **50**	Minimum distance change (in meters) before sending records.
Min angle	integer [1..360]; default: **50**	Minimum angle change (in degrees) before sending records.
Min saved records	integer [1..32]; default: **20**	Minimum amount of gathered records before sending.
Send period	integer [0..999999]; default: **20**	How often (in seconds) gathered data is sent.

Secondary Rules

The **Secondary rules** section provides you with the possibility to create additional data sending rules. The difference from the main rule is that the secondary rules only send data when the router uses a specified type of WAN and when the digital isolated output is in the specified state.

Refer to the figure and table below for information on the configuration fields of the Secondary rules section.

[[File:{{{file_secondary_rules}}}]]

Field	Value	Description
Enable	yes | no; default: **no**	Turns the secondary rule on or off.
WAN	Mobile Both | Mobile Home | Mobile Roaming | WiFi | Wired; default: **Mobile Home**	Selects which type of WAN will trigger the rule.
Digital Isolated Input	Low logic level | High logic level | Both; default: **Low logic level**	Selects which input state will trigger the rule.

Rule priority	Low priority level | High priority level | Panic priority level | Security priority level; default: **Low priority level**	The rule's priority. Different priority settings add different flags to event packets, so they can be displayed differently in the receiving system. The router sends data of higher priority first. Priority levels from highest to lowest are as follows: 1. Security 2. Panic 3. High 4. Low
Collect period	integer [1..999999]; default: **25**	How often (in seconds) data will be collected.
Min distance	integer [1..999999]; default: **200**	Minimum distance change (in meters) before sending records.
Min angle	integer [1..360]; default: **30**	Minimum angle change (in degrees) before sending records.
Min saved records	integer [1..32]; default: **20**	Minimum amount of gathered records before sending.
Send period	integer [0..999999]; default: **50**	How often (in seconds) gathered data is sent.

AVL Configuration

The **AVL Configuration** section is used to add additional secondary GPS data sending rules.

[[File:{{{file_gps_configuration}}}]]

TAVL Settings

The **TAVL Settings** section is used to select which data will be sent to the TAVL server:

Field	Value	Description
Send GSM signal	yes | no; default: **no**	Includes GSM signal strength information in the GPS data sent to server.
Send analog input	yes | no; default: **no**	Includes analog input state in GPS data package to be sent to server.
Send digital input (1)	yes | no; default: **no**	Includes digital input #1 state in the GPS data sent to server.
Send digital input (2)	yes | no; default: **no**	Includes digital input #2 state in GPS data package to be sent to server.

GPS Geofencing

A **geofence** is a virtually defined boundary for a real-world geographic area. The GPS Geofencing page provides you with the possibility to set this custom area and apply rules that will inform you when the device leaves or enters the geofence.

[[File:{{{file_geofencing_add}}}]]

The figure below is an example of GPS Geofencing configuration and the table below provides information related to that configuration:

[[File:{{{file_geofencing_details}}}]]

Field	Value	Description
Enable	yes | no; default: **no**	Turns the Geofence rule on or off
Longitude (X)	degrees [-180.000000..180.000000]; default: **0.000000**	East-west position of a point on the Earth's surface. Combining this and the Latitude information will produce a point on the world map that will serve as the center of the geofence area.
Latitude (Y)	degrees [-90.000000..90.000000]; default: **0.000000**	North-south position of a point on the Earth's surface. Combining this and the Longitude information will produce a point on the world map that will serve as the center of the geofence area.
Radius	integer [1..999999]; default: **200**	Radius (in meters) of the geofence area.
Generate event on	Exit | Enter | Enter/exit; default: **Exit**	Specifies whether the rule should be triggered when the device enters the geofence area, leaves it or on both events.
Get current coordinates	- (interactive button)	Obtains the device's current coordinates and places them in the Longitude and Latitude fields.

See also

- [[{{{name}}} GPS Protocols]]

[[Category:{{{name}}} Services section]]