

CloudGate „Marwis“ Manual



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Connecting the Marwis/UMB

The Marwis device / UMB bus is connected via the RS485 interface on the CloudGate device (green connector on the left side) using the pins:

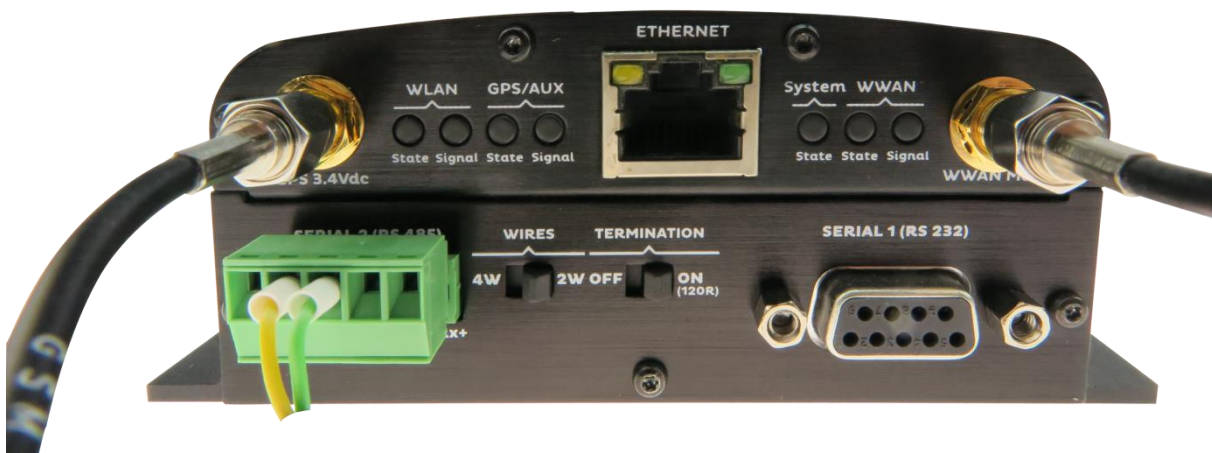
TX+ = A (green)

TX- = B (yellow)

Switch settings:

Wires: 2W

Termination: On



Power Supply

MARWIS and CloudGate have to be connected to a power supply that is not interrupted when the vehicle is restarted.

This applies especially to vehicles with a start-stop system.

Explanation:

If the power supply is interrupted frequently it cannot be guaranteed that the MARWIS LEDs acquire their operating temperature.

The CloudGate needs approximately 2 minutes for starting. Since there is no buffer, the data of this period will get lost.

Status LEDs

The application controls the 2 „WLAN“ status LEDs on the left side of the CloudGate front panel.

- LEDs off: the application is not (yet) running, or is being started.

- Both LEDs blink synchroniosly red/off (after startup): clock is not set yet. The application is waiting for the clock to be set (which happens after a connection to the internet could be established).

In normal operations, the "WLAN State" LED (left) shows the status of the UMB communication and GPS data:

- Green: normal communication / no error. Data is being queued for transmission to the server. Short "flickering" indicates communication with the device(s).
- Constant red: error in UMB communication (no data from the Marwis device)
- Red Orange "blinking": no or no valid GPS data
- Constant orange: GPS data outdated (older than 1.5 seconds)
- Green/Orange "blinking": GPS location

Note: "blinking" is in 500 ms interval (i.e. color is changing every half second), independent of the polling interval

The "WLAN Signal" LED indicates the status of the server connection.

- Green: connection established. "Flickering" indicates data transmission with the server
- Orange: no MARWIS id – no communication with the server because no Marwis is connected
- Orange/Red "blinking": some internal error in server communication
- Red: no connection to server

Hints for the operation

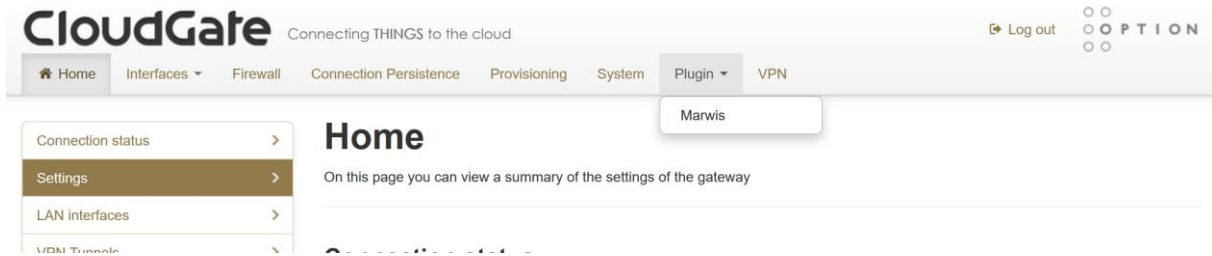
- Switch off Bluetooth connections
Try to deactivate all Bluetooth connections (Car, mobile phones) close to the CloudGate antennae since they may interfere with the GPS and GPRS signals.
If the CloudGate does not receive any valid GPS data during 60 s it will interrupt the data transmission to ViewMondo and data will be lost.
- Data visualization only in ViewMondo
The MARWIS-App as well as the LufftConfigTool offer the possibility to look at the data online simultaneously to the transmission. However, both tools communicate with MARWS over Bluetooth. Due to the above mentioned problems none of them should not be used simultaneously to the CloudGate.
If you want to look at the data online please use ViewMondo.

Configuration User Interface

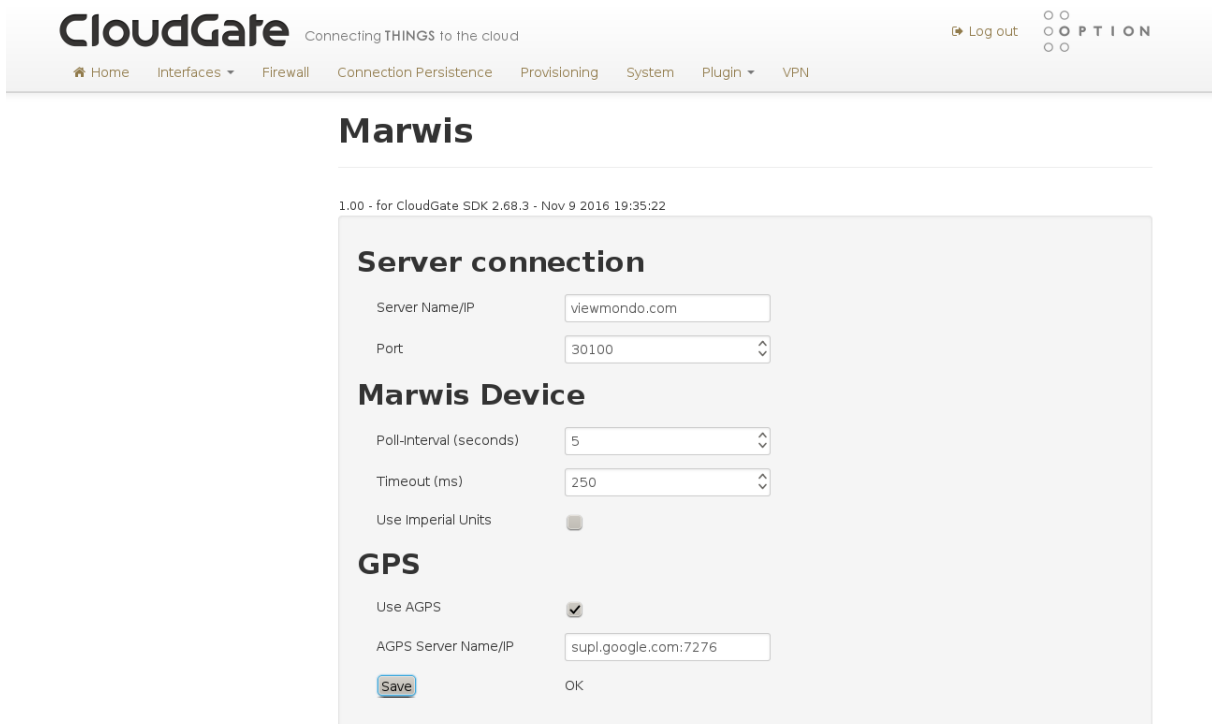
Most Important settings can be performed via an extension of the CloudGate user interface.

Log on to the CloudGate device, using the username and password (factory default is "admin" and "admin").

From the main menu, open "Plugin" and "Marwis"



A form with basic settings for the Marwis app is shown:



Change the values to your needs, and click "save". This will save the values to the config file (see below) and re-start the Marwis app (not re-boot the device!), so that the changed parameters will take effect.

Note on AGPS usage: the LTE version of the CloudGate router does not support AGPS (the chipset uses a different mechanism to refine the GPS location data), so for the LTE version, "Use AGPS" can/should be disabled

Configuration files

There are 2 configuration files, located in the „\myconfig“ folder on the CloudGate device.

File security for these files permits the “admin” user to read/write these files, so they can be edited by logging on via SSH and using a text editor (vi).

Booth configuration files are empty by default, i.e. all default values apply.

[/myconfig/marwis.ini](#)

Contains common parameters for the app.

[MARWIS]	
GPS-STARTUP-DELAY=15	Delay for initializing the GPS chip after startup.
ENABLE-AGPS=ON	AGPS active
AGPS-SERVER-NAME=supl.google.com:7276	AGPS Server
SERVER-NAME=viewmondo.com	Data Server
SERVER-PORT=30100	Server Port
SERVER-TIMEOUT=2000	Communication-Timeout Server in ms
SERVER-RECONNECT-DELAY=10	Server re-connect timeout in S
STANDBY-TIMEOUT-LOCATION=60	Standby Timeout for location change in S
LOCATION-CHANGE-MIN-DIFFERENCE-MM=100	Minimum Delta in mm between 2 GPS Samples for location change
MAX-SEND-QUEUE-ENTRIES=86400	Maximum number of measure samples entries in „Send Queue“ („storage“)
UMB-MASTER-ADDRESS=61695	UMB Master address.
DEVICE-IO-RESET-TIMEOUT=60	Device Reset timeout in sec. After this time, device data (Marwis - ID) is reset, and transmission of data to the server is stopped (WLAN State LED will turn red). The Marwis device can be changed - different serial number will be recognized.
DEVICE-TIMEOUT=250	Timeout device communication in ms
DEVICE-IO-RETRIES=3	Number of retries for UMB communication
DEVICE-POLL-IV=5000	Device Poll-Interval (and data transmission interval) in ms. Minimum: 1000 ms! Should always be in whole seconds !
MARWIS-UMB-ADDRESS=40961	UMB address for the Marwis device
SEND-ERROR-VAL-ON-IO-FAULT=ON	Send error values on communication error with Marwis
USE-IMPERIAL-UNITS=OFF	Use default sensor channels for imperial units

[/myconfig/sensor_config.ini](#)

Here, the sensor channels to be polled can be configured freely.

Note: if any sensor channel is configured in this file, none of the "default" channels is active, i.e. if this file is used, all sensor channels that should be polled need to be configured here.

[SENSOR-CHANNELS	
NUM-CHANNELS=0	Number of configured channels
DEVICE-ID-xx=0	UMB Device ID for channel xx
CHANNEL-NR-xx=0	UMB Channel Nr for channel xx
IS-ACTIVE-xx=ON	Channel active/inactive

If the file is empty (default), or NUM-CHANNELS=0, the default channels (in metric or imperial units, depending on param USE-IMPERIAL-UNITS above) will be used.

Log file

The application is writing a log file:

`/tmp/marwis.log`

The file is size-restricted to 0.5 Mbyte. If this size is reached, the file is renamed to `/tmp/_marwis.log`, i.e. the maximum space occupied by the log file is 1 MB.

`/tmp` is a temporary file system in RAM, i.e. the log file is NOT persistent, and will be deleted on a reboot/power failure etc.

Firmware-Update

Updating the MARWIS firmware is still possible with the Lufft Config Tool or the MARWIS app over Bluetooth.

Since a Bluetooth connection can disturb GPS and GPRS signals data loss may occur during firmware updates, see "hints for the operation"

Attention!

Doing an update with the IOS MARWIS app is only possible at the moment as long as there is no connection to the CloudGate. Before starting an update therefore please unplug the RS485 connection on the CloudGate housing and only re-plug it when the update has finished.