Firmware & Changelog (Modbus LoRaWAN)

Firmware

Downloads:

app-modbus-lora-bridge-1.3.4.hex	current release
app-modbus-lora-bridge-1.2.2.hex	previous release
app-modbus-lora-bridge-0.3.1.hex	latest release with old stack version

Changelog

`app-modbus-lora-bridge` – Reading modbus devices remotely over LoRaWAN.

This changelog's format is based on Keep a Changelog, and this project adheres to Semantic Versioning.

1.3.4 - 2022-01-26

Fixed

- Prevent a crash that could be triggered on failed LoRaWAN uplink attempts.
- Fix Log's UART config to correctly communicate with current version of Lobaro Tool.

1.3.3 - 2021-04-01

Changed

- Support 32kB SRAM on board as alternative to FRAM.

1.3.2 - 2020-12-21

Fixed

- Initial time sync failed when running device in Class C.
- Fix status message to be sent once daily, not every 15min.

1.3.0 - 2020-12-16

⚠️ This version has some changes that could break your integration if you have a very specific parser! An undocumented Payload Format has been removed and the Status Message (Port 1) is 2 bytes longer. ⚠️

Changed

- Replace broken compact payload formats (2 and 3) with new version (4 and 5).
- Daily status messages independent of configuration.

Added

- Feedback by LED blinking patterns for success/failure reading data and otaa join.
- Add Reboot Reason and Final Words to status message.
- Add Config Parameter `PowerDelay` to control warm up time of sensors that are powered by the bridge.

Fixed

- Increase stack size for dialog mode.

1.2.2 - 2020-06-18

Changed

- Using Lobawan 1.2.2 (fixes some issues with OTAA Joins).

1.2.1 - 2020-02-17

Added

- Display Version of Lobaro LoRaWAN Stack on boot.

Fixed

- Fix a crash when using remote command `append`.

1.2.0

Added

- New config parameter `MbAttempts` to control how often Modbus Commands will be repeated in case of timeouts.

1.1.1

Changed

- Increased size available for config.

1.1.0

Added

- New optional Listen-Before-Talk Modbus communication, so device can coordinate with another master on bus.

Fixed

- Fix issue that could cut of long Modbus responses.

1.0.3

Changed

- Dialog Mode now logs activity on RS485 Bus while not communicating (to detect other Modbus Masters).
- Log Frequencies for LoRaWAN.

1.0.2

Added

- Wait cycles for optional capacitors to load and stabilize on startup

1.0.1

Changed

- Using FRAM for storing results before uploading, allowing for multiple kB of data to be sent (size depending on hardware).

Fixed

- Removed memory corruption error that could be triggered by configurations with lots of Modbus commands.

1.0.0

Added

- LoRaWAN 1.1 support
- Remote configuration via LoRaWAN on port 128.
- Clock synchronisation via LoRaWAN.

Changed

- Random delay before Uplink (to prevent persistent collisions when using multiple devices).
- Modbus responses longer than payload now get split up (additional parts on port 5).

0.4.1

Fixed

- Changed error indication bit on error 11 from `0xf0` to `0x80`.
- Fixed issue when parsing multiple Modbus commands from config.

0.4.0

Added

- Writing values to holding registers and coils.
- Execution of arbitrary Modbus commands triggered by LoRaWAN Downlink messages.
- Support for LoRaWAN Operation Mode Class C (for short reaction time to Downlinks).
- Automated register writing and broadcasts possible through new configuration.

Changed

- Automated reading (triggered by cron) is now configured by entering actual Modbus commands (more flexibility and usage of already existing Modbus syntax – *this breaks old configurations*).
- Upload format changed to sending raw response to Modbus commands (*this breaks existing integration*s).

Fixed

- Flushing to avoid invalid byte received from switching from TX to RX.
- Modbus mode ASCII now counts received bytes correctly.
- DataLength of 7 bits can now correctly be set in config again.

0.3.1 - 2019-05-24

Fixed

- Increased robustness of data reception on higher Baud rates.

0.3.0 - 2019-05-15

Added

- Initial release of Firmware for new Hardware revision (with RS485-addon).
- Update Modbus to support all 4 types of registers.

Changed

- Parity bit must not be subtracted from Data bits anymore. `8E1` can now be configured with `8 Data bits, EVEN parity, 1 Stop bit`.

0.1.0 – 2018-08-13

Added

- Original hardware release (with RS-485 on holding PCB).