RELEASE NOTES FOR MODBUS APP FW 2.0.0

CONCERNED PRODUCTS

The following products already contain this FW version:
- ARF8240AA**C**: MODBUS LoRaWAN EU863-870
- ARF8240CA**C**: MODBUS Sigfox RC1

SUMMARY

This version adds some important features:
- It is now possible to have up to 6 different periodical frames. User configures now in which frames he wants to retrieve the MODBUS slave content. These periodical frames may also have different sending periods that allows to cover several user needs.
- It is now possible to manage up to 20 periodical data (10 previously)
- Add LoRa class C support
- New downlink commands that allow to read or write in registers of a MODBUS slave
- Add new AT commands and so new function in the IoT Configurator to test MODBUS communication
- LED indicators to help during installation of the product

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CHANGES COMPARED WITH FW APP VERSION 1.2.9 (8240AA**C** AND 8240CA**C**)

1.1 In general

- Add LoRa class C support
- Add a new AT commands to test MODBUS communication
- Improve compatibility with slaves that are not fully compliant with MODBUS timings
- Light indicators (Green/Red) displayed depending if MODBUS bus is correctly or not correctly connected
- External power supply is now OFF by default

1.2 Registers

- S300 and S301 have now a granularity of 10 seconds (20 seconds before)
- S322 is now on 16 bits allowing supply time of external load up to 6553 seconds (25 seconds before)
- New registers S323 to S327 for additional transmit periods
- New S329 that configures an optional alarm repetition period
- Bits <7:5> of S330 to S349 determines in which periodic frames corresponding data are sent.
- Possibility to choose "Word Swap" (bits <6:4>) in S350, S355, S360, S365... in alarm configuration registers

1.3 Uplinks

- Product configuration frame (0x10) has a payload which is slightly different as S300 register is now on 16 bits
- New additional periodic frames (0x5F, 0x60, 0x61, 0x62 and 0x63) with a specific transmit period for each
- Alarm frame (0x45) has a payload which is slightly different as it contains now in byte 2 a specific alarm status that ease decoding this event.
- New uplink "READ MODBUS registers response" (0x5E) sent when receiving downlink 0x05
- New uplink "WRITE MODBUS registers ACK" (0x2F) sent when receiving downlink 0x08

1.4 Downlinks

- New downlink 0x05 to read MODBUS registers on demand
- New downlink 0x08 to write MODBUS registers on demand

READ AND WRITE WITH THE IoT CONFIGURATOR

With this new Firmware version, it is now possible to test the reading and writing into slave registers.

1.1 Read in one or several slave registers

To help to configure or install the MODBUS product, a function to test the reading of a slave has been integrated into the advanced mode of the IoT Configurator.

Before having wired the product to one or several slaves, it is possible to test the reading into registers of a slave completing the following fields:
• Baud Rate
• Parity
• Stop bits
• Slave address
• First register address
• Number of registers
• Type of registers (holding or input)

The product will test the link and the reading into registers and will show you the response from the slave.

This function enables you to confirm a configuration before to implement it into the product and switch it to PRODUCTION mode.

1.2 Write in one slave register

To help to configure or install the MODBUS product, a function to test writing into the register of a slave has been integrated into the advanced mode of the IoT Configurator.

Before having wired the product to one pr several slaves, it is possible to test the writing function of the product completing the following fields:
• Baud Rate
• Parity
• Stop bit
• Slave address
• Register address
• Value to write into the register

The product will test the link and the writing into the concerned register and will show you the response from the slave.

This function enables you to confirm the link between the device and the slave register or to write directly in a slave register.

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