STACKFORCE
embedded.connectivity.solutions

DUAL STACK

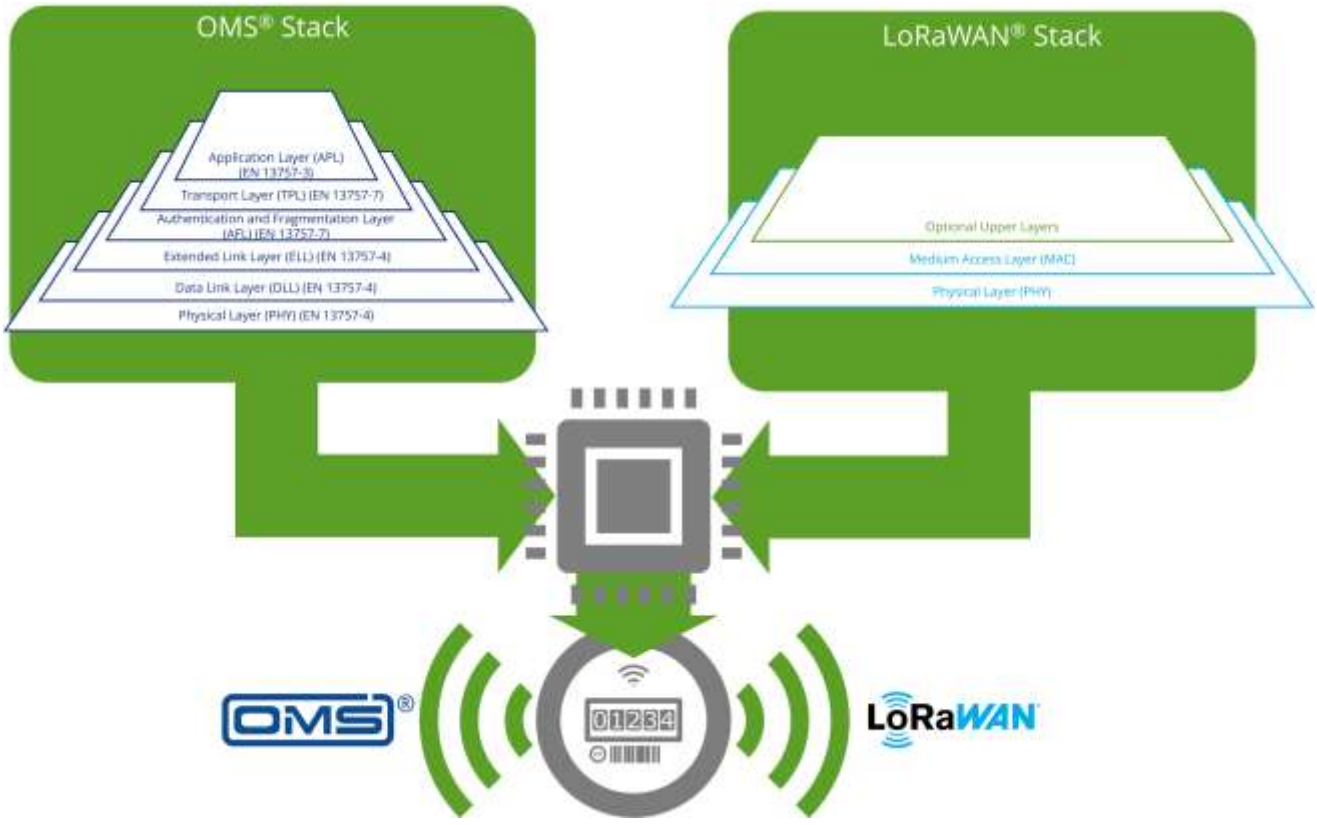
OMS® v4.5.1 / wM-BUS + LoRaWAN® v.1.0.4

In order to align our software solutions for metering applications even better to the needs of the end users of our products, we have combined OMS® / wM-Bus with LoRaWAN® in a high-performance dual stack.

The advantages are obvious: Further standardization within smart metering applications and the use of existing LoRaWAN® networks facilitate the entry into IoT connectivity for your customers.

However, our dual stack is not only interesting for those getting started with IoT connectivity. This multi stack solution also enables a smooth transition phase for end users who already operate an OMS® / wM-Bus network and want to switch to LoRaWAN®.

Take advantage of a multi stack solution in your product development and offer your customers a product that is designed for different application scenarios.



Remote meter reading enabled by fixed networks and walk-by / drive-by

Smooth transition from OMS® to LoRaWAN® possible

Switching of stacks “on-the-fly” for maximum flexibility

User-defined protocol priority to be set for each possible state of a system

SUPPORTED SPECIFICATIONS

- EN 13757 (Wireless M-Bus)
- Open Metering Standard (OMS®)
- LoRaWAN® v1.0.4
- LoRaWAN® Regional Parameters v1.0.3

STACK FEATURES

OMS® v4.5.1 / Wireless M-Bus

- Operation modes S, T or C
- Security profiles A and B (encryption modes 5 and 7)
- OMS® Annex C „Sensor“ compatibility
- OMS® Annex M "Requirements for OMS® use case support"

LoRaWAN® v1.0.4

- Class A & C
- OTAA & ABP
- Pre-certified for several regions: EU868 / US915 / AU915 / AS923

Optional software module:

- LoRaWAN® Application Protocols

REFERENCE HARDWARE

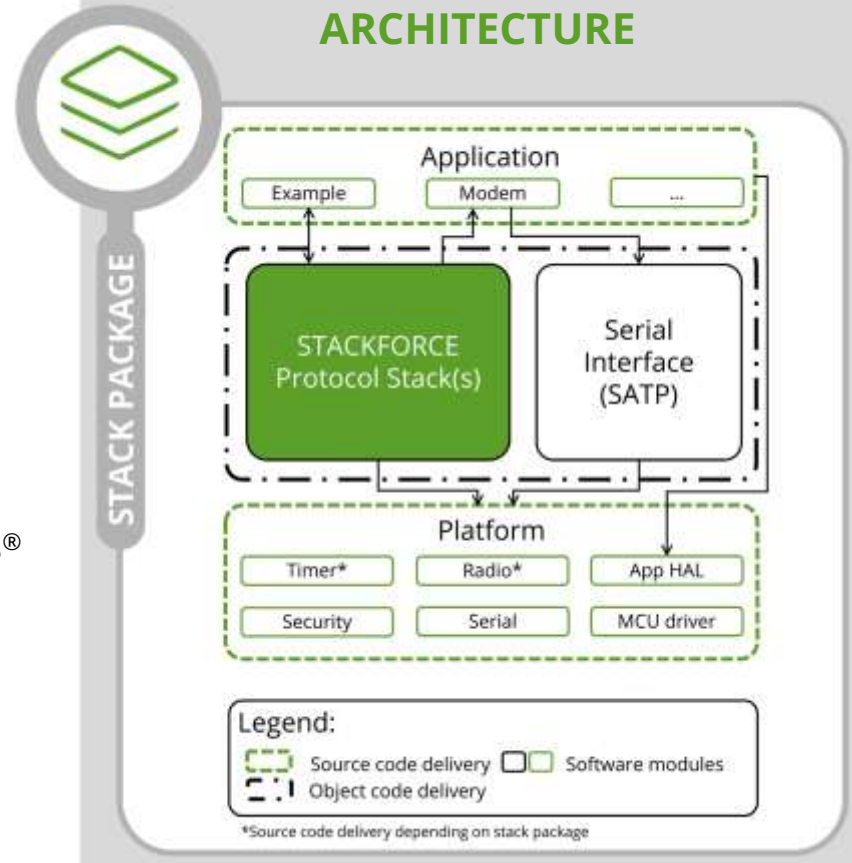
- STM32L0+SX126x
- STM32U5+SX126x
- STM32WL5/STM32WLE5

MEMORY REQUIREMENTS*

	Library	Applications, HAL, drivers, other software
Unidirectional		
Flash	~ 62 kB	~ 29 kB
RAM	~ 7,8 kB	~ 4,1 kB
Bidirectional		
Flash	~ 75 kB	~ 32 kB
RAM	~ 8,2 kB	~4,2 kB

* The code sizes described above specify the typical required memory for operating the full featured protocol stack as a library including related drivers. Values based on STM32WL5/WLE5. The RAM requirements for LoRaWAN® FUOTA are not included in the values, as these are very dependent on the application.

STACK PACKAGE ARCHITECTURE



YOUR BENEFITS

- Easy to use API well-proven and used for several low-power radio stacks by STACKFORCE
- Platform Interface now available as source code:
  - Customization and fine tuning of platform driver
  - Customization of radio settings (e.g., frequency)
- Support and maintenance packages according to your needs
- Optimized power consumption by interrupt driven state management and exclude polling