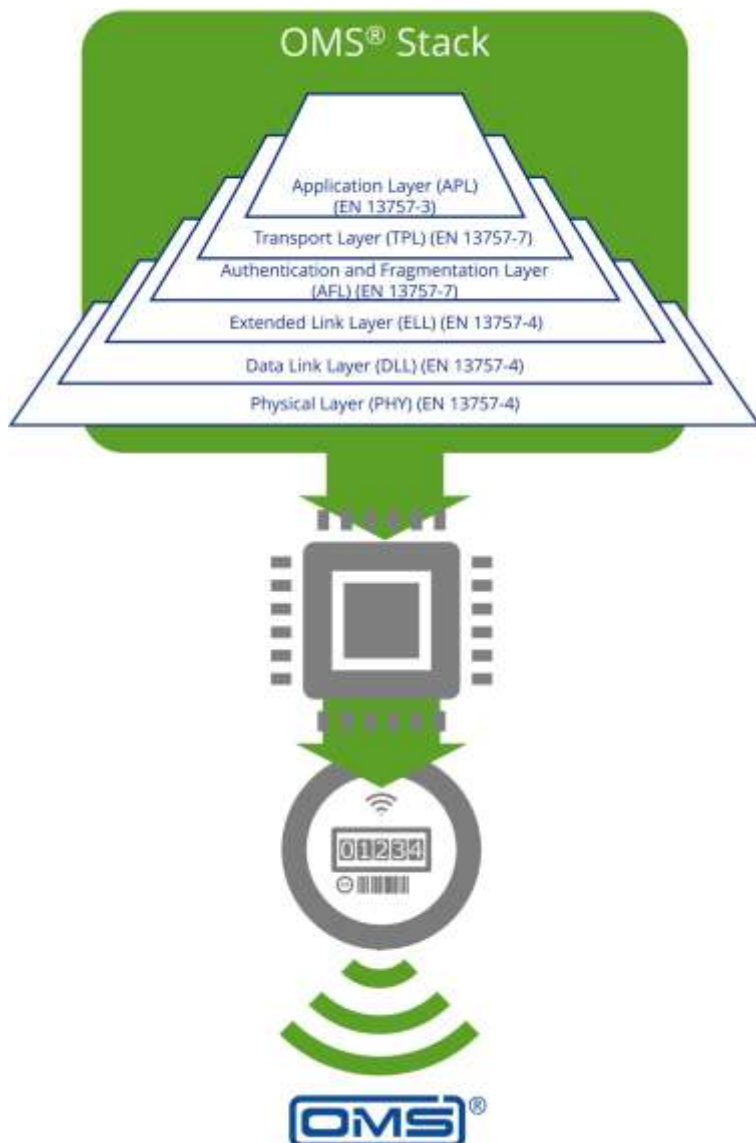# OMS® v4.5.1 / wM-BUS
FOR GATEWAY DEVICES

The OMS® Stack for Gateway Devices plays a central role within a smart metering network. It enables data transmission from numerous meters and sensors and allows the device to manage a large number of connections simultaneously.

The OMS® v4.5.1 stack implements all the protocol elements required for Wireless M-Bus compliance.

It also covers a large part of the options and features specified in EN 13757 and its sub-standards, with a focus on the most commonly used options and features.

With this stack, you can be sure that you are equipping your products with a proven and constantly evolving software solution.

OMS® Stack

- Application Layer (APL) (EN 13757-3)
- Transport Layer (TPL) (EN 13757-7)
- Authentication and Fragmentation Layer (AFL) (EN 13757-7)
- Extended Link Layer (ELL) (EN 13757-4)
- Data Link Layer (DLL) (EN 13757-4)
- Physical Layer (PHY) (EN 13757-4)

Compliant to EN 13757 -3/-4/-7 (Wireless) M-Bus and OMS® Specification

Twenty end devices can be connected to one gateway device

Bidirectional as well as unidirectional communication possible

Pre-certification on reference hardware platform

SUPPORTED SPECIFICATIONS

Compliant according

- EN 13757-3/-4/-7
- OMS® Specification

STACK FEATURES

OMS® v4.5.1 / Wireless M-Bus

- Operation modes S, T or C
- Security profiles A or B (encryption modes 5 and 7)
- Security profile D (encryption mode 10)[1]
- Enables application to support all use cases specified by Annex M „Requirements for OMS® use case support"
- Enables optimization of TRX timing[1]

[1] Feature will be implemented in a later product version.

REFERENCE HARDWARE

- CC13x0[2]
- CC13x2[2]
- EFR32FG23
- EFR32FG28
- STM32WL3

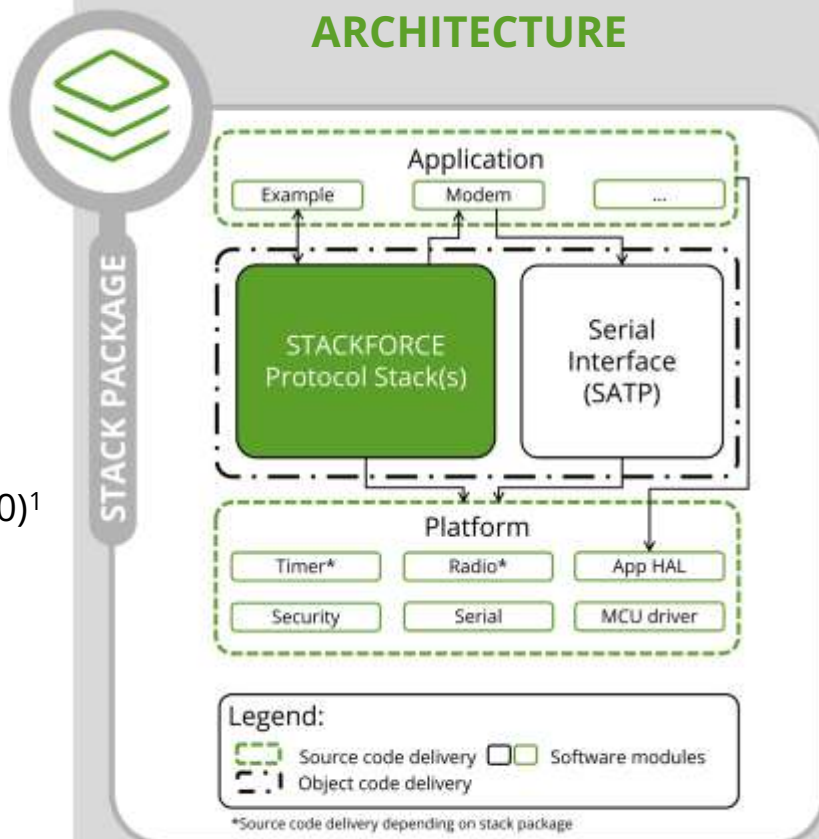[2] For this hardware the stack implements OMS® version 4.3.3

STACK CHARACTERISTICS

Memory requirements*

	Stack	Apps	Platform, Drivers, other SW
Bidirectional			
Flash	~ 39,6 kB	~ 1,2 kB	~ 55,5 kB
RAM	~ 9,9 kB	~ 0,04 kB	~ 1,9 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 STM32WL3.

STACK PACKAGE ARCHITECTURE

YOUR BENEFITS

✓ Example application allowing an easy start-up of the stack

✓ Platform Interface enabling customization and fine tuning of Platform Driver

✓ Customization of this OMS® v4.5.1 stack to your requirements is possible

✓ Professional support and long-term maintenance and availability