

## Wireless M-Bus – Stack for Automatic Meter Infrastructure

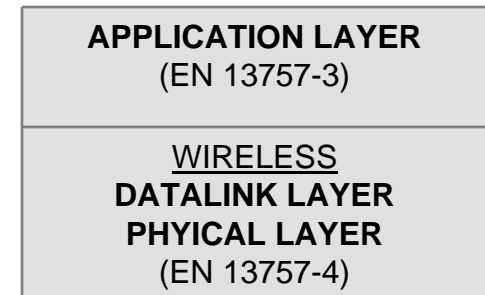
### Steinbeis Transfer Center Embedded Design and Networking (STZEDN)

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# STZEDN – Wireless M-Bus – Functionality and Portings

- standard compliant meter/collector functionality
- supports all specified modes
  - S1, S1-m, S2, T1, T2, R2
- already ported on
  - CC430F6137,
  - MSP430F247 & CC1101,
  - MSP430F2274 & CC1101 (Panasonic module PAN7550),
  - MSP430FG4618 & CC1100 (MSP430 experimenter’s board)
- successful interoperability tests with other suppliers’ devices
- code sizes (with lean application):
- very scalable buffer module  
(< 1kByte of RAM in all configurations)
- projects for IAR and CCE



	optimized for speed	optimized for size
Meter (S1)	~9 kBytes	~8.4 kBytes
Meter (S2)	~9.2 kBytes	~8.5 kBytes
Collector (S1)	~9.6 kBytes	~9.2 kBytes
Collector (S2)	~9.7 kBytes	~9.4 kBytes

# STZEDN – Wireless M-Bus – Packages

<b>modem mode</b>	<ul style="list-style-type: none"><li>➤ module firmware is provided as such with a serial interface.</li><li>➤ AT command set (ASCII data format), and additional extended Serial-API (binary format, optimized for speed, more options).</li></ul>
<b>library (IAR / CCE)</b>	<ul style="list-style-type: none"><li>➤ Application Programming Interface (API) to Data Link Layer and Application Layer functionality.</li><li>➤ custom metering firmware can be implemented on the module using the library for communicating.</li><li>➤ example projects for IAR and CCE include small demo application.</li><li>➤ smallest footprint enabled by individual selectable library functionality:<ul style="list-style-type: none"><li>• <u>mode</u>: S1, S1-m, S2, R2, T1, T2 or selectable during runtime.</li><li>• <u>device type</u>: meter, collector or selectable during runtime.</li><li>• selectable <u>top layer of stack</u> (either Application Layer or Data Link Layer).</li></ul></li></ul>
<b>source code (upon request)</b>	<ul style="list-style-type: none"><li>➤ customization of the communication stack, especially concerning scaling of the communication buffer system.</li></ul>