

Transceiver Gateway Module TCM 310 / TCM 310U

TCM 310 enables the realization of gateways for the EnOcean 868 and 902 MHz radio systems. It provides a bi-directional radio interface at one end and a bi-directional serial interface at the other end. Radio messages are sent transparently through the serial interface in both directions from and to an externally connected host processor or host PC. In addition control commands can be sent from the host, e.g. to configure the repeater functionality or to manage the Smart Ack functions. TCM 310 can act as postmaster for up to 15 bi-directional sensors using Smart Ack technology.

Feature

- Smart Ack controller functionality
- Transparent radio channel
- Programmable repeater functionality (1 / 2 Level)
- EnOcean Serial Protocol V3 (ESP3)



Product variants

- TCM 310: SMD transceiver module 868MHz
- TCM310U: SMD transceiver module 902MHz

Type	Ordering Code
TCM 310	S3003-K310
TCM 310U	S3053-K310

Features overview

Antenna	External whip or 50Ω antenna mountable
Frequency	TCM 310: 868.300MHz TCM 310U: 902.875MHz
Data rate	125 kbps
Modulation type	TCM 310: ASK 868 MHz ¹⁾ TCM 310U: FSK 902MHz ¹⁾
Receiver Sensitivity (at 25°C)²⁾	TCM 310: typ. -96 dBm (868MHz) TCM 310U: typ. -98 dBm (902MHz)
Conducted Output Power	TCM 310: typ. 3 dBm (868MHz) TCM 310U: typ. 1 dBm (902MHz)
Power Supply	2.6...4.5V
Serial Interface	UART (ESP3)
Current Consumption	Receive mode: 33 mA Transmit mode: 24 mA
Dimensions of PCB	22x19x3 mm
Operating temperature	-25° to +85°C
Radio Regulations	TCM 310 (max. radiated power +1.4 dBm with whip): RED (EU) TCM 310U: FCC (US) / ISED (CA)

1) According to ISO/IEC 14543-3-1x

2) 0.1% telegram error rate (based on the combination of 3 received sub-telegrams)