

Wireless Transceiver Gateway

TCM 515U

The TCM 515U wireless transceiver gateway enables the realization actuators, controllers or gateways for systems communicating based on the EnOcean radio standard.

TCM 515U provides a highly integrated solution in a small form factor including the required functionality for encryption, decryption and authentication of secure telegrams without the need for external components.

TCM 515U receives radio telegrams based on an external antenna connected via the host PCB. It can filter, decrypt and authenticate these telegrams before forwarding them to an externally connected host processor or host PC via a serial interface (UART).



The serial interface operates according to EnOcean ESP3 standard with the option to use higher interface speeds (TURBO mode) to reduce latencies.

ESP3 messages received from the external host will be encrypted and authenticated as required and then transmitted as EnOcean radio telegrams.

TYPE
TCM 515U

ORDERING CODE
S3053-K515

Features overview

Antenna	50 Ohm antenna (connected via host PCB)
Radio Frequency / Modulation	902.875 MHz / FSK
Data Rate	125 kbps
Receiver Sensitivity (typ, at 25°C)	-98 dBm
Maximum Input Power (typ, at 25°C)	-15 dBm
Receiver Blocking Performance	Class 2 according to EN 300 220-1
Radiated RF Immunity	3 V / m according to EN 301 489-3
Transmit Power (typ, at 25°C)	+1 dBm
Supply Voltage	2.0V ... 3.6V
Supply Current RX/TX Mode (at 2.0V)	25 mA
Supply Current Sleep Mode (at 2.0V)	0.05 mA
Serial Host Interface	UART according to ESP3 Standard (with TURBO option)
Module Dimensions	19.0 mm x 14.7 mm x 3.0 mm (all +/- 0.3 mm)
Operating Temperature	-40°C ... +85°C

Note 1: Sensitivity and Maximum Input Power figures are based on 0.1% telegram error rate for the combination of 3 received sub-telegrams