

Thermal Energy Harvester ECT 100 Evaluation Kit

EnOcean has developed a thermal energy harvester which is able to power wireless sensor nodes from temperature differentials of only a few Kelvin.

This new energy harvester is based on a revolutionary DC/DC converter which automatically starts operation at 20mV. For comparison: the leading conventional DC/DC converters need at least 300mV to start operation - a factor of 15 more!

The output power is in the range from μ W to mW at 3.5V and depends on the actual temperature differential and the Peltier element being used. Therefore it is designed for use with EnOcean radio technology in sensors and actuators. A typical thermo-driven sensor consists of a sensor element, a small Peltier element, the new DC/DC converter and an STM110 radio module from EnOcean. Powered by the thermo differential the



STM110 will wake up on a regular basis, e.g. every 10s, acquire sensor values and transmit them via a radio signal over a distance of up to 300m.

Type
ECT100 Kit

Ordering Code
S3004-P100

Box	Scope of delivery
Box 1	<ul style="list-style-type: none"> ■ 1x ECT 100 DC/DC converter ■ 1x Peltier element with heat sink ■ 1x Peltier element without heat sink ■ 1x heat conductive paste ■ 1x STM110 radio transmitter module ■ 1x EVA120 evaluation board for STM 110 ■ 1x RS232 to USB adapter
Box 2	<ul style="list-style-type: none"> ■ 1x RCM120 radio receiver module ■ 1x PTM200 radio transmitter module with rocker ■ 1x EVA110 evaluation board for RCM120 ■ 1x RS232 to USB adapter ■ 1x power supply ■ CD-ROM with documentation and WinEtel software