

STM 550U (Revision DB) Multisensor Module

STM 550U is an energy-harvesting wireless sensor that communicates based on the EnOcean Alliance radio standard.

STM 550U can be easily mounted onto desks, walls or equipment to report temperature, humidity, illumination, door / window status and utilization / orientation.

STM 550U integrates sensors that measure temperature, humidity, illumination, acceleration and magnet contact status (open or closed). STM 550U transmits the measured values of these sensors every 2 minutes.

STM 550U immediately transmits a status update if an acceleration event (STM 550U is being moved or shaken) is detected after a period without such an event or if the magnet contact status (open / closed) changes.

STM 550U provides an integrated NFC interface for device configuration and commissioning. In addition, STM 550U contains an LRN button that can be used for simple commissioning tasks



STM 550U contains a solar cell that is optimized to generate energy from available ambient light.

STM 550U operates self-supplied for typical indoor lighting scenarios (200 lux for 6 hours/day). For use cases with insufficient available light, it is possible to mount a backup battery.

STM 550U is available as module in PTM 21x form factor for integration into OEM designs or as product kit which additionally contains wall mount, front cover, magnet and adhesive tape.

Order information

Type	Frequency	Variant	Order Code
STM 550U	902.875	Module	S6251-K516
STM 550U KIT	MHz	Kit	B6251-K516

Features overview

Transmission Frequency / Data Rate	902.875 MHz / 125 kbps
Transmission Power	+99 dBμV
Transmission Range (for guidance only)	typ. 200 m free field / 30 m indoor environment
Temperature Measurement Range / Accuracy	-5 °C ... +45 °C / ± 0.3 K
Humidity Measurement Range / Accuracy	0 ... 90 % r.h. / ± 3% r.h.
Illumination Measurement Range / Accuracy	0 ... 2000 lux / ± 5 % of full scale
Acceleration Measurement Range / Accuracy	± 2 g / ± 5 % of full scale
Acceleration Wake Threshold	0.03 g
Update Rate (excl. random offset)	Every 2 minutes
Device Configuration	NFC (ISO 14443)
Supported EEP (selectable via NFC)	D2-14-41 (default) D2-14-40, A5-02-05, A5-04-01, A5-04-03 A5-06-02, A5-06-03, A5-14-05, D5-00-01
Power Supply	Integrated solar cell
Operating Time In Darkness (at 25°C)	4 days (after full charge)
Backup Power Supply (optional)	CR1632
Dimensions (STM 550U module)	40 mm x 40 mm x 13 mm
Operating Temperature / Humidity	-5°C ... +45°C / 0 ... 90% r.h. (non-condensing)

Note 1: Sensor measurement range is dependent on the selected EEP

STM 550U should only be used in the operating conditions (temperature / humidity) specified above