

THE SPX TECHNOLOGY

SPX wireless radio-communication to ULTRA low power consumption.

Extremely low cost SPT1 nanopower class transmitter and SPR1 nanopower class receiver operating in the worldwide license – free ISM bands 433, 868 and 900 MHz to enable easy product development and fast time-to-market.

Version	SPT17 - SPT18
Frequency	434 - 868 Mhz
Peak RF Power	30 - 60 mW
Power Supply	3V - 200 μ A
Transmission time	10 - 20 ms
Quiescent current	0,8 microA
Interface	4 programmable on/off or analog inputs



SPX IS A PATENTED TECHNOLOGY BY STE ENGINEERING

SPT1

THE SPX CONCEPT

The new SP generation of Rx and Tx is an innovative stand-alone one-chip solution offering a powerful Rf and ICs integrated architecture: this new concept is based over an innovative Rf architecture interfaced to a nanotech SPX microcontroller;

The new class of breaking through RF devices SPT1 and SPR1 are based over the innovative and patented SPX concept which guarantees extremely reduced "duty-cycle" to offer an extremely low power consumption high range communication networks and full reliability against multipath reflection in harsh environments.

THE SPT1 technology

The SPT1 is the new class integrated nanopower consumption Tx interfaced with the breaking through SPX microcontroller to generate the pulses with an extremely reduced "duty-cycle": the module operates in the ISM 434, 868 and 900 Mhz license-free bands and absorbs (during the transmission cycle) 100 μ A @ 3V.

THE SPX TYPICAL APPLICATION

SP generation of ICs/RF modules are ready-to-use full customizable wireless solution to ultra low power consumption designed for sensor management and wireless solution specifically dedicated to extremely low power application including but not limited to:

- Industrial monitoring**
- Remote control**
- Domotica**
- Building automation**
- Security**
- Wireless alarm system**
- AMR (Automatic Meter Reading)**
- Social alarm sensor**

THE SP GENERATION A BREAKING THROUGH WIRELESS INNOVATION

Temperature, Pressure, Accelerometer, Strain and other sensors, can be installed on the field wire free: combined with an innovative RF-Transmitter architecture, provided of a cyclical emission with continuous mean current consumption of less than 1 μ A and supplied by a very small battery, the sensors can easily be installed in a wireless network with an autonomy of several years.

The Tyre Pressure Measurement System (TPMS) is a typical example:
Three Sensors: Temperature, Pressure, Three axis acceleration;
Battery: 12 mm D, 48 mAh
Life: 7 years of continuous operation;
Weight: less than 5 gr;
Temperature operating Range: $-40 < T < +120$ °C

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