ECOPRO - GX100

Make Batteries Last Forever

HIGHEST BATTERY LIFE AT LOWEST COST

The ATM-TSP-022 module is an extreme low-power Bluetooth® 5 system-on-a-chip (SoC) solution. This innovative module design is based on the extremely low power Atmosic ATM2 Series Bluetooth® wireless platform. The ATM-TSP-022 design incorporates several innovative features that have a dramatic impact on extending the battery life of edge-of-network connected IoT products.

This Bluetooth® SIG certified Low Energy SoC integrates a Bluetooth® 5.0 compliant radio with an ARM® Cortex® M0 application processor, 128 KB, 512 KB or 1MB embedded Flash, 128 KB Random Access Memory (RAM), 256 KB Read-Only Memory (ROM), 4 KB One-Time-Programmable (OTP) memory, and state-of-the-art power management.

APPLICATIONS

- ☑ Home automation
- ☑ Smart Appliances
- ☑ Industrial IOT
- ☑ Remote Controls
- ☑ Medical Devices
- ☑ Beacons
- ☑ BLE Devices
- ☑ Connected Vehicles
- ☑ Proximity Services

TECHNOSPHERE
Design driven innovation

Atmosic™

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75% MORE ENERGY EFFICIENT

The extremely low power ATM2 series SoC with 900uA active Rx and 2.4 mA active Tx full system power has been designed to extend battery life for smart devices and IoT Applications. The support for low duty cycle operation allows systems to run for significantly longer time periods without battery replacement. We can expect four times the battery life at 50% of the cost.

MODULE FEATURES

- ☑ Compliant with Bluetooth® 5.0 standard
- ☑ Incorporates a second specialized Wake Up Receiver (WURx) can run with the system in hibernate mode using less than 850nA in place of beaconing
- ☑ Smart sensor hub with out of bounds exception handling that can run in hibernate mode in conjunction with the Wake-Up Receiver

- ☑ SoC typical power consumption with 3 V battery including PMU
- ☑ Interfaces: I2C, SPI, UART, GPIO, Digital microphone Input (PDM), 10-bit ADC

  Active Rx @ -95 dBm: 900 uA, Active Tx @ 0 dBm: 2.4 mA, Hibernate: 0.8 µA, SoC Off: 300 nA
- ☑ Security: AES 128 hardware; True random number generator (TRNG)

DEVELOPMENT KIT
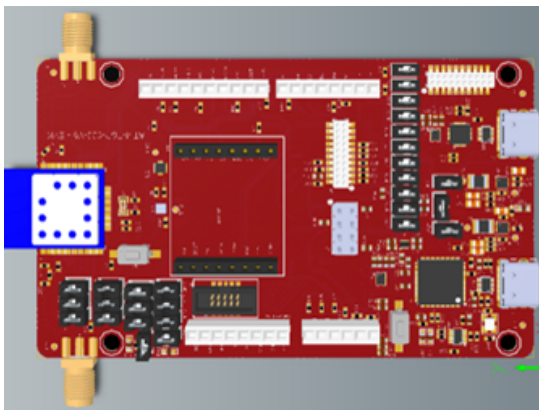
10. The ATM-TSP-022 Development Kit is designed to facilitate easy application development. The EVB supports the same J-Link, USB-SWD and USB-UART interfaces.

MODULE BLOCK DIAGRAM
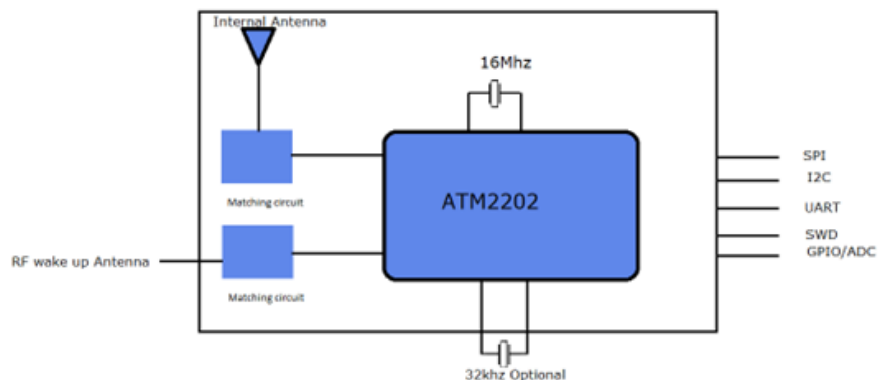
ORDERING INFORMATION

Model Number	Product	Ordering Part Number
BLECO-022	Module	BLECO-022
BLECO-022 -EVK	Evaluation board	BLECO-022 -EVK

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