

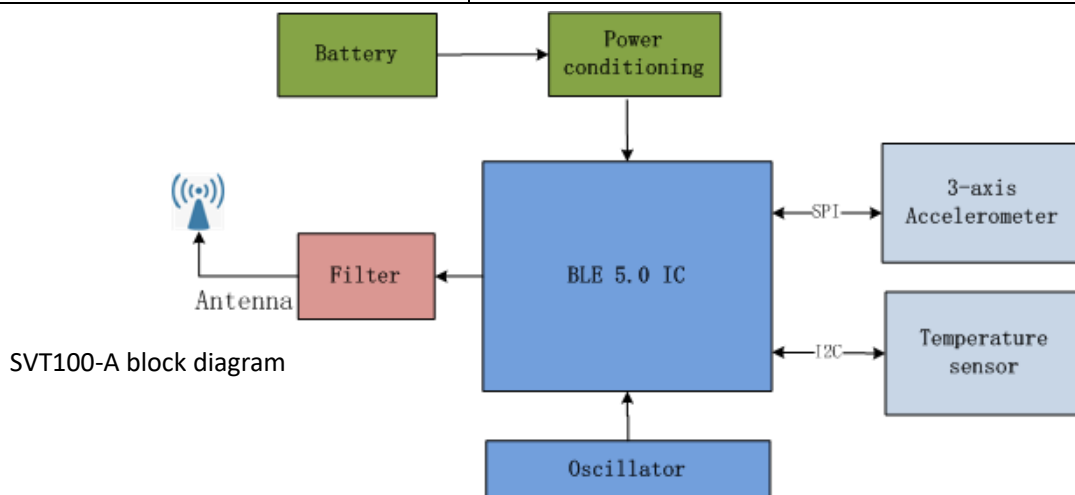


SVT100-A is an ultra-low power wireless vibration and temperature sensor designed for machine condition monitoring. It has the advantages of easy installation, easy usage and high battery efficiency. SVT100-A consists of low power wireless IC, high performance 3-axis accelerometer and high precision temperature sensor. It can monitor the machine status in real time or by schedules. Multiple SVT100-As can be grouped together and divided into different groups at the wireless gateway (sold separately). They can be synchronized to provide advanced monitoring and analysis ability.



Wireless vibration & temperature sensor SVT100-A

Parameters	Description
Acceleration range	±2g, ±4g, ±8g; ±16g and ±64g version available per request
Selectable sampling rates	50Hz, 100Hz, 200Hz,400Hz,800Hz,1.6kHz,3.2kHz,6.4kHz, 12.8kHz, 25.6kHz
Resolution	16 bit. ±2g:0.06mg/bit; ±8g:0.24mg/bit
Non-linearity	<0.6% of full scale
Noise	0.7mg RMS; 130ug/ √ Hz density
Sampling modes	Real time, synchronized real time, batch mode & synchronized batch mode; single DAQ; synchronized single DAQ
Temperature measurement range	-40 - 125 °C
Temperature measurement accuracy	-25-85°C: ±0.3 °C; -40-125°C: ±0.4 °C without calibration
Temperature measurement period	5s when active
Power consumption	idle:4-8uA; Sampling & transmission<400uA (measured at 1.6 kHz, batch mode)
Power supply	14250 replaceable battery, 1200mAh capacity. Can last up to 5 years (depending on the frequency of usage and environment)
Wireless protocol	2.4GHz proprietary
FCC ID	X8WBC840M
Wireless distance	Up to 100m
Size	Diameter:34mm; height:31mm
Weight	100 g (including battery)
Installation	Epoxy mount; screw mount (M6); stud mount (M8 to M6)
Working environment	Temperature: -30 - 65 °C; water resistance: IP67



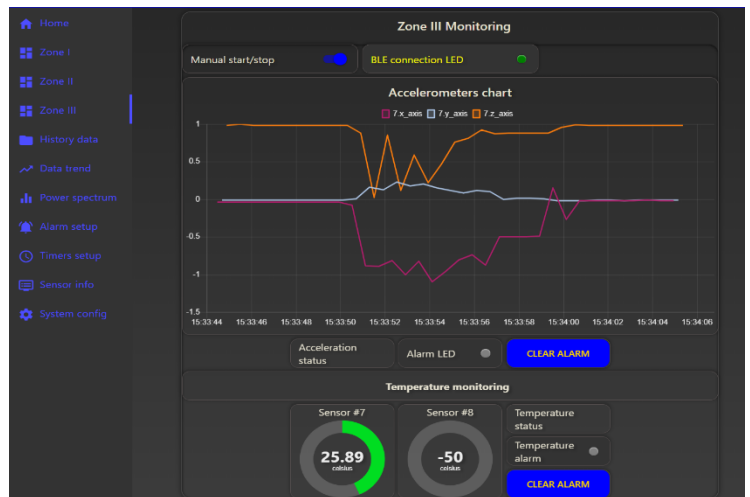
Advantage of SVT100-A

Thanks to its unique low-power design, SVT100-A can work for up to 5 years before replacing the battery (depending on the frequency of usage and environment). SVT100-A is easy to install and configure, which solves the problem of complicated setup process of wireless sensors. SVT100-A can work under harsh environment. It has a secure boot loader for improved security. It supports OTA (Over the Air) firmware upgrade. SVT100-A has six working modes: real time mode, synchronized real-time mode, batch mode, synchronized batch mode, single DAQ and synchronized single DAQ.

- . Real-time mode: when sensor wakes up, it starts data acquisition and transmission immediately.
- . Batch mode: When sensor wakes up, it takes a fixed amount of data at the given sample rate and transmit the data together to the gateway, and then repeat the process.
- . Single DAQ: When sensor wakes up, it takes a fixed amount of data at the given sample rate and transmit the data to the gateway for one time only. The sampling rate is guaranteed and is ideal for frequency domain analysis.
- . Synchronized mode: Synchronized mode can be combined with real-time mode, batch mode or single DAQ. After waking up, the sensors in the same group start taking data and transmission at the same time. This feature is useful for advanced analysis.

Monitoring Software

Monitoring software at the gateway GU200 is based on Node.js's open-source architecture. It is web-based and can be accessed with all major web browsers.



Software advantages

- . Real-time monitoring
- . Intuitive data visualization
- . Alarm & threshold setup
- . Scheduled data acquisition
- . Time-series database
- . Key parameters trend charts
- . Power spectrum analysis
- . OTA firmware upgrade
- . Open source
- . Secure data transmission

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