

Oceana Sensor

Wireless Building Environment Sensor

“Truly Wireless Building Environment Monitoring”

Oceana Sensor's *Wireless Building Environmental Sensors* are a stand-alone, single point wireless multi-sensor node that integrates Temperature, Humidity and CO2 sensors in a single package. It incorporates market required features for ultra low power consumption with power management technology, appropriate bandwidth and resolution, and internal signal processing. More importantly it addresses the market need to use smaller self-sufficient devices to monitor processes, machinery and perform condition-based maintenance. Deploying a network of single-point wireless sensors allows Oceana Sensor to penetrate its target markets by providing broader and more flexible solutions.

The *Wireless Building Environmental Sensors* are based on 802.11 wireless communications, thus allowing the user to deploy it with existing network infrastructures. This device is IP addressable which provides for easy network and monitoring management. Expected battery life is 5 years which will be *extended* or *reduced* based on the user's specific duty cycles.

The *Wireless Building Environmental Sensors Package* offers:

- Stand-alone single-point sensing capability
- IP addressable 802.11 communication
- User-configurable data acquisition parameters
- Long battery life
- **Reference design that is portable to any standard housing design**



Wireless Temperature Sensor - Short Specification

Hardware

Item	Value
Sensor	Thermistor , Humidity and CO2 Style Package
Battery	1 AA Lithium-thionyl chloride
Battery life	5 years*
Electronics	WSeM™
Sensor housing	Polycarbonate
Size	~XX long x XX diameter
Temperature range	0 – 100°C (32 – 212°F)

*Based on acquiring one time series with 1024 block size and transmission once per week.

Software Functionality (User Configurable)

Item	Value	Comments
Measurement Bandwidth	0.5 – 2000Hz	
Signal processing	RMS, Average, Conversion to Engineering units, i.e. g	Any one of these can be selected and transmitted. The simplest form is transmitting the time series.
Filtering		Programmable in the converter

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