# WIRELESS CONDITION MONITORING SOLUTIONS FOR SOFTWARE INTEGRATORS



### WIRELESS DATA COLLECTION DONE DIFFERENTLY

### THE CONNECT ECOSYSTEM



ConnectSens™ Wireless Sensor



ConnectBridge™ **Wireless Gateway** 



Your Network Switch



**ConnectView™** Web App or Your Own **OEM Software** 

### WHAT WE OFFER

CTC Connect is a line of wireless hardware for dynamic vibration signal or overall vibration signal with digital data transmission. CTC Connect products were designed based on inputs from hundreds of wireless hardware users from around the world. The result of our extensive research and collaboration is a wireless ecosystem designed specifically for the needs of software integrators.

The CTC Connect ecosystem offers you the highest quality wireless hardware system on the market, with industry-leading sensor line-of-sight range, and is designed for integration into 3<sup>rd</sup>-party vibration analysis software. Our complimentary ConnectView Web Application comes preloaded on the ConnectBridge Gateway and provides basic vibration monitoring management tools and device management options like sensor configuration, battery level information, and more. When used with 3<sup>rd</sup>-party vibration analysis software, our wireless sensors and gateway can be harnessed for advanced data analysis that meets your specific needs.



**CTC ConnectView Basic Vibration Tools & Device Management Web App** The ConnectView Web App comes preloaded on all ConnectBridge Gateways with no need for additional downloads. All data is stored locally on the gateway and is accessible via your plant's network.



**FREE API Integration** Our API allows users to utilize 3<sup>rd</sup>-party web app or software (such as OEMs or plants requiring customized solutions) to communicate with CTC ConnectSens Wireless Sensors.

# **CTC WIRELESS HARDWARE BENEFITS**

- > Long range line-of-sight: WS100 2,100 ft. (640 m); WS200 & WS300 1,200 ft. (366 m)
- > Up to four years of unattended, autonomous operation
- > User-replaceable 3.6V 1Ah Lithium Thionyl Chloride Primary battery
- > Completely tailor your approach:
  - » User-customizable settings to monitor the most important frequency ranges for your application
  - » Trigger a reading on demand or at preset intervals

# STATE OF THE ART HARDWARE + 1 YEAR WARRANTY

## **SELECTING YOUR CONNECT HARDWARE**

#### **Process Control Monitoring**

Overall vibration sensor with temperature output that advertises periodic overall vibration levels (RMS, Peak, or Pk-Pk) over **Bluetooth**<sup>®</sup> Low Energy 5.2 which can be picked up by a ConnectBridge Gateway:



#### WS100 Series

ConnectSens Wireless Sensor - Triaxial Overall Vibration Signal with Temperature Output



High frequency 2 Hz - 5 kHz only; not reflective of results on other frequency ranges

#### **Dynamic Data Capture**

All-in-one wireless vibration sensors with built-in temperature outputs:



#### WS200 Series

ConnectSens Wireless Sensor - Single Axis Dynamic Vibration Signal Capture with Temperature Output





#### WS300 Series

ConnectSens Wireless Sensor - Triaxial Dynamic Vibration Signal Capture with Temperature Output



25.6 kHz sampling frequency is required to utilize full bandwidth shown

# **SENSOR SPECIFICATION HIGHLIGHTS\***

Specification	WS100 Series	WS200 Series	WS300 Series	
Line-of-Sight Range	2,100 ft. (640 m)	1,200 ft. (366 m)	1,200 ft. (366 m)	
Number of Axes Measured	Triaxial Measurement	Single-Axis Measurement	Triaxial Measurement	
Resonant Frequency	5.5 kHz 5.5 kHz 5.5 kHz		5.5 kHz	
Reading Duration	500 ms	Dependent on Number of Samples & Sensor Configuration Settings		
Reading Interval	Factory-Configurable in Hours From 1 - 24	User-Configurable in Hours From 0 - 24 **	User-Configurable in Hours From 0 - 24 **	
Battery Life	1 - 4 years ***	1 - 4 years ***	1 - 4 years ***	
Output Format	Overall Vibration in Peak, RMS, and Pk-Pk	Dynamic Vibration Waveform Samples	Dynamic Vibration Waveform Samples	
Temperature Range	-40 - 80 °C	-40 - 80 °C	-40 - 80 °C	

\* Specifications are only accurate when used with a CTC ConnectBridge Gateway. If using an alternative method to receive your sensor signal, differences may occur in your actual line of sight range, battery life, and other specifications.

\*\* With a value of 0, the sensor will take a reading triggered through the ConnectBridge Gateway (manual reading or user-configured intervals under 1 hour). If a new hourly rate is desired, this can also be configured through the gateway.

\*\*\* Achievable battery life depends on environmental conditions, configuration options, and sensor use. CTC recommends replacing the battery every four years, regardless of remaining battery life reported by the Web App, due to effects of battery degradation over time. If operating above 50 °C, replace the battery in half that time.



#### ConnectBridge™ Gateway

All Connect-compatible devices can be used with our ConnectBridge Gateway. The gateway serves as the connection between CTC Connect-compatible hardware and CTC ConnectView Web App. The ConnectBridge Gateway can both send and receive data between your CTC Connect-compatible hardware and a TCP/IP network, functioning as both a network controller and a digital gateway. The ConnectBridge can service an unlimited number of any combination of CTC ConnectSens WS100, WS200, and WS300 sensors within range, with 20 concurrent connections.

The gateway is stored in a durable, NEMA 4X (IP66-rated) enclosure and powered over Ethernet\*. Each gateway includes an SD card where readings/data are stored, so in remote applications or if the gateway is not connected to a network, the SD card can be removed and connected to a computer to download data into the CTC ConnectView Web App or 3<sup>rd</sup>-party vibration analysis software.

\*Please note, for remote applications where you cannot run PoE from your primary network, a 3<sup>rd</sup>-party PoE Injector is required.

#### ConnectView<sup>™</sup> Web App

CTC's complimentary ConnectView Web App is a user-friendly platform that comes preloaded on the ConnectBridge Gateway. The web app offers basic vibration tools and device management functionality, including:

- » Configure WS200 and WS300 Series Sensor (Please note, WS100 is factory configurable only)
- » Nickname sensors
- » Set critical and early alert values which can be viewed through the ConnectView Web App
- » Create machine groups
- » View battery life
- » Request readings on demand (WS200 & WS300 only)
- » View basic vibration data:
  - » WS100 View overall vibration amplitude data in RMS,
  - Peak, and Peak to Peak
  - » W200 & WS300 View Time Waveform and FFT data

The web app is designed to be integrated with 3<sup>rd</sup>-party vibration analysis software for advanced analysis functions and is not intended to provide in-depth analysis features.



All CTC Connect products are backed by a one year warranty on materials and workmanship. CTC will repair or replace any CTC Connect products as long as the product was not subjected to misuse, neglect, natural disasters, improper installation, modification, or battery-related failure. Product obsolescence due to technological life cycle advancements is not covered under warranty.

### THE CTC CONNECT DIFFERENCE



Own Your Data





Transparent Specifications



Proudly Made in the USA

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Inc. (CTC) is under license. Other trademarks and trade names are those of their respective owners.

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