



xTAG and xGATEWAY Industrial IoT Solutions

Cost-effective, modular solutions for all of your Industrial wired and wireless IoT needs. Monitor air quality, animal health and equipment health with xTAG Sensors. Securely connect xTAG Sensors and legacy equipment to the cloud or local repositories through xGATEWAYS. Report and alarm on data within local repositories and the cloud to gain valuable insights into operations and protect your business assets and ensure efficient business operations.

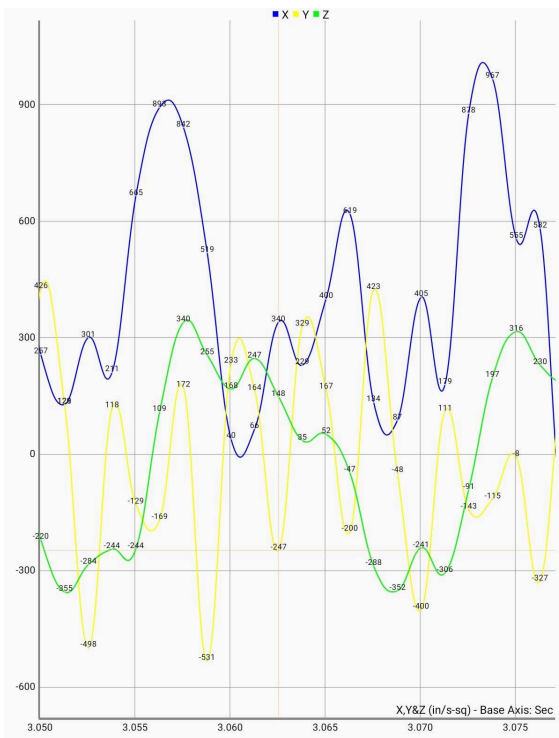
- **Sense physical parameters (e.g. vibration, temperature, pressure, humidity, gas concentration, current, light, etc.) within harsh industrial environments. Use physical data within Materials Requirements Planning or Energy Resource Planning (MRP or ERP) solutions to allocate resources and improve operational efficiency. Use machinery health data such as vibration characteristic changes, temperature changes or differential pressure across air filters to forecast machine failures before they happen to limit downtime and increase efficiency.**
- **Sense parameters affecting crop growth rate and quality within harsh agricultural environments (e.g. temperature, humidity, spoilage off-gases, moisture, etc.). Remotely track crop conditions to make decisions affecting production in real-time to maximize the effectiveness of fertilizer and irrigation.**
- **Trace produce health (color) and environmental conditions (temperature, humidity, shock) during transportation and storage. Improve storage and transportation processes to avoid future damage. Recover financial damages by**
proving to shippers that damage occurred during shipping.
- **Connect legacy systems to local networks or the cloud to support remote monitoring and control. Connectable legacy devices include PLCs, SCADA RTUs, panel controllers and many others. “Retrofit” IoT functionality to older systems and give them the advantages of newer connected systems and avoid the very costly alternative of their replacement. Retrofit IoT to legacy hardware to gain operational insight for efficiency gains or obtain remote system control to free up operators who would otherwise continually monitor these systems.**
- **Synchronize sensed data and legacy system data to all popular IoT cloud services like Amazon AWS IoT, Microsoft Azure IoT Hub, & Google Cloud Platform (GCP). Couple the data with existing data sources.**
- **Select device connections that match your priorities: industrial-grade 300m wireless for simplicity or fast plug-and-play wired connections for bullet-proof comms.**

xTAG Sensor Options



Often the first step in the acquisition of Industrial IoT data is the hardest - sensing physical data and converting it to bytes that can be processed on the edge or transferred up to the cloud. Deviceworx has developed a rugged, all-weather sensor design that supports reading a variety of physical attributes including vibration, angle, temperature, pressure, humidity, and a variety of gases. The design can be extended (top membrane replacement) to support sensing ventilation (CO2), color, machine current draw... The wireless xTAG Sensors and wired xTAG USB Sensors both "plug-n-play" with our xGATEWAY platforms to support Industrial IoT local repository or cloud connectivity setup in minutes.

xTAG Vibration Sensors



Our Vibrations Sensors:

- Sense g-force and angle in 3D at 16-bit resolution and rates between 50 and 1600 samples/s
- Enable machine diagnostics to forecast failures before they occur through processing of raw, RMS and frequency-domain data
- Support machine on/off status updates to MRP/ERP systems to optimize operations
- Can sleep at very low battery draw and awaken at machine start to collect data.
- Leverage the cloud for alarming and reporting or a locally connected app for opportunistic reporting including charting (i.e. cloud-connection optional)

xTAG Environmental Sensors



The xTAG Environmental Sensor can be used in a wide variety of applications:

- Monitor machine health by sensing when parts become overheated, when air filters become fouled (high pressure drop across the filter) or when any other abnormal temperature or pressure is observed. Avoid costly breakdowns and production interruptions.
- Monitor produce exposure to high temperature and humidity and trigger alarms or log events that can be used to explain spoilage. Keep produce fresh and hold shippers and storage operators to account for spoiled produce.
- Keep pets and livestock safe by sensing exposure to high temperature and humidity. Alarm when an animal's safety is at stake.
- Ensure workplaces are at optimum temperature and humidity levels to discourage mold growth. Keep workers comfortable and productive.
- Product quality can be affected by its production environment. Ensure that production lines are kept at optimum temperature and humidity.



xTAG Gas Sensors



The xTAG Gas Sensor supports Artificial Intelligence (AI) and can be trained to measure very low concentrations of Volatile Organic Compounds (VOCs) or Volatile Sulphur Compounds (VSCs). This includes many of annoying and dangerous gases:

- Hydrogen Sulphide (H₂S) or Sewage Gas.
- Gases released from a fire.
- Off-gases from spoiled produce.
- Off-gases from construction materials including glue, paint, etc.
- Gasoline.
- Propane and Natural Gas.
- ... and many others

xTAG Ventilation Sensors



Deviceworx has completed the preliminary design work required for a new xTAG Ventilation Sensor. This new sensor will directly measure Carbon Dioxide (CO₂) with an accuracy of +/- 40 ppm. It will be very useful in measuring the effectiveness of ventilation in public spaces - critical in reducing the opportunity for Covid-19 to spread within those spaces. The xTAG Ventilation Sensor will be unique in its ability to measure both exterior and interior CO₂ as ventilation effectiveness can only be determined when comparing these CO₂ levels. Other sensors can only measure indoor CO₂ levels, compromising their accuracy and the safety of the space that they protect.

Additional Sense Options



The xTAG design has been created to support additional sensing options (hall effect, sound, color, e.t.c.) through simple substitution of its membrane. A variety of sensor chips can be added to this membrane that also includes a pushbutton and LED.

More Information

Please reach out to us if you have any questions regarding our products or services. Please call 1-888-409-2688 or email us at sales@deviceworx.com