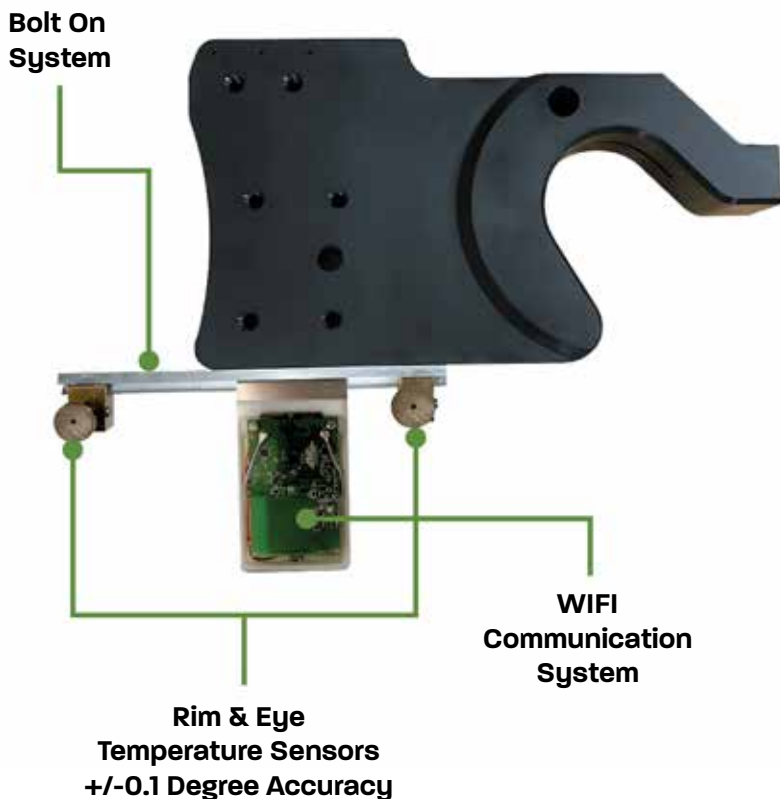


# SawSense Temperature Monitoring System



*Williams and White has partnered with the innovative scientific solutions provider, FPIinnovations, to offer a new technology to the sawmill industry.*

*This PATENTED technology accurately measures, in real time, the performance of the saw when in the cut for both circular and band saws, using two contacted temperature sensors.*

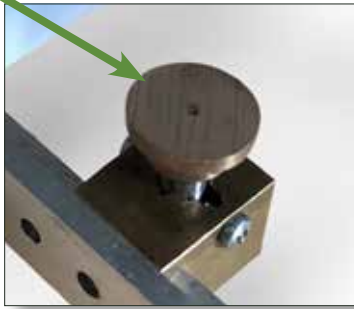
*The SMARTGuide technology harnesses The Industrial Internet of Things (IIOT) to drive mill operations and efficiency to the forefront of the industry.*

## Highlights:

- ✓ **Reduces oil consumption up to 40%** → Reduces corrosion and pooling; less moisture in sawdust
- ✓ **Rechargeable batteries** → Up to 40 hours of life between charges
- ✓ **0-80°C temperature range** → +/- 0.1°C Accuracy
- ✓ **For both circle and band saw systems** → Can be mounted on any saw guide
- ✓ **Two sensors on the eye & rim of a saw** → Ensures optimal saw performance
- ✓ **Contact Sensors** → Non-contact systems are proven to be inaccurate in wet environments. Moisture absorbs IR radiation, affecting the signal

### Bearing Bronze Contact sensor system

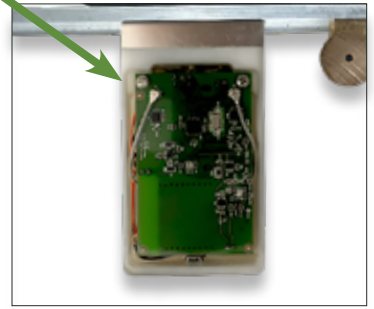
- + Monitoring rim and eye temperatures with 2 sensors
- + Moves to comply with the saw body, ensuring 100% contact/ increased accuracy
- + Accurate measurement +/- 0.1 degrees
- + Excellent wear resistance



### WIFI Wireless communication

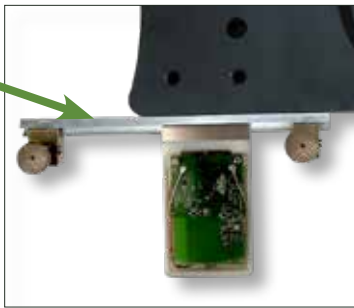
- + Continuous monitoring
- + Access data from nearly any convenient location within the primary networking environment

**Proven in mill applications**



### Bolt on system

- + Modify existing saw guides to mount measurement system



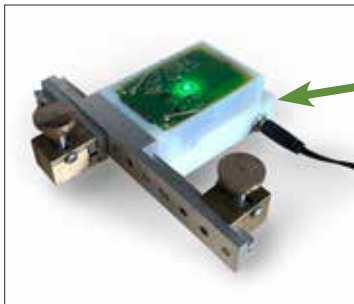
### SawSense Monitoring

- + Measure and log temperature performance
- + Real time analytics



### Wireless charging

- + Convenient charging by dropping the unit on the charging pad.
- + No charging port to break!

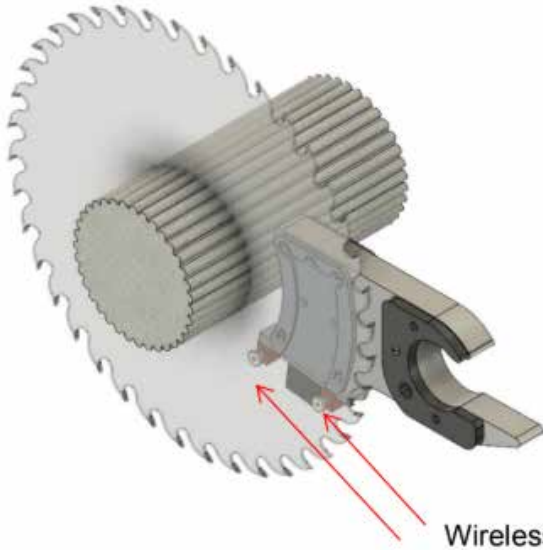


## Benefits to the sawmill

- ✓ **Decreases sawing deviation** → Prevents wrecks/unscheduled saw change
- ✓ **Rim & eye real time measurement** → Ensures optimal saw performance
- ✓ **Higher chip quality** → Higher value
- ✓ **Increases mill speed** → Higher profits
- ✓ **Alarm notification system** → Reduces saw and guide damage and downtime
- ✓ **Identifies performance issues in real time** → Determine or eliminate potential problem areas

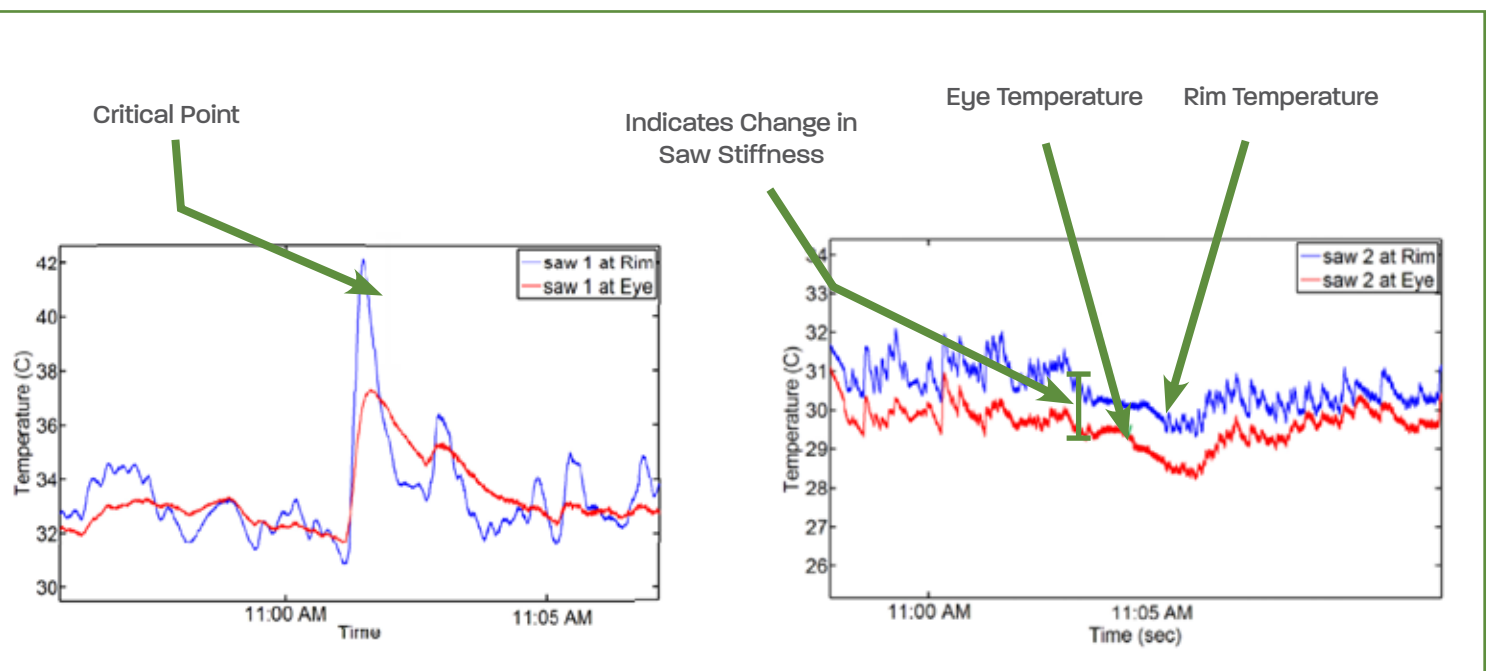
Williams and White reserves the right to alter or amend specifications without prior notice

# Contact Sensors

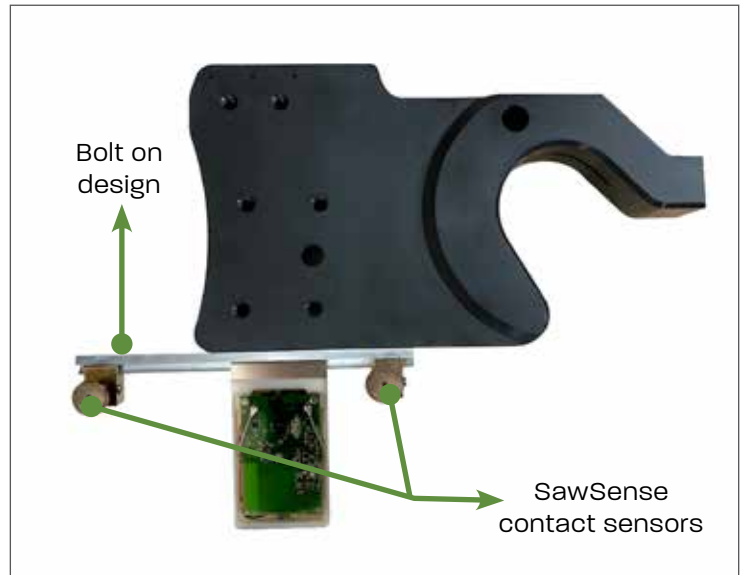
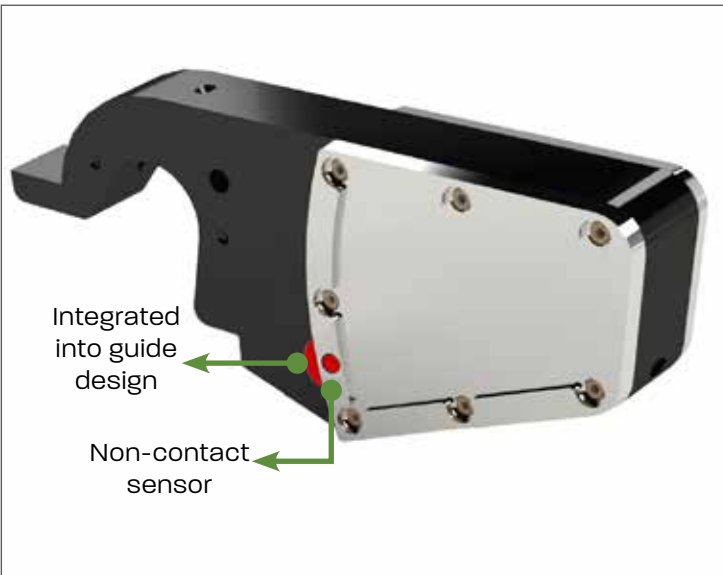


*Rim and eye real time temperature measurement ensures optimal saw performance. By temperature monitoring at the rim and the eye of a saw blade, saw and guide damage can be prevented and deviation can be minimized.*

## Eye & Rim Temperatures



# Contact Vs. Non-contact Temperature Sensors



## Why to choose Williams and White SawSense Temperature Sensor?

Non-contact Sensors	Contact SawSense Temperature Sensor
<p><input checked="" type="checkbox"/> <b>Inaccurate;</b></p> <p>Saw dust, water, coolant and any external factors can block IR beam</p>	<p><input checked="" type="checkbox"/> <b>Accurate within 0.1°C</b></p>
<p><input checked="" type="checkbox"/> <b>Single sensor;</b></p> <p>Does not indicate temperature difference between eye and rim</p>	<p><input checked="" type="checkbox"/> <b>Rim and eye sensors;</b></p> <p>Indicates saw blade stiffness. Difference in temperature at the eye and rim of a saw blade causes twisting and dishing. Resulting in saw plate damage and cut deviation.</p>
<p><input checked="" type="checkbox"/> <b>Integrated in saw guide;</b></p> <p>Requires re-machining into new saw guide in case of guide damage</p>	<p><input checked="" type="checkbox"/> <b>Modular bolt on attachment;</b></p> <p>Easy mounting and dismounting from different saw guides, enabling change over for target size or damaged guides.</p>
<p><input checked="" type="checkbox"/> <b>High modification cost;</b></p> <p>Guides and babbitt molds require modification/redesign to accommodate sensors</p>	<p><input checked="" type="checkbox"/> <b>Minimal modification cost;</b></p> <p>Minimal saw guide modification and adjustments is needed due to bolt on design</p>