

SPOTLIGHT

MONITORING SYSTEM



The new **Spotlight Monitoring System** is an automated, real-time analyzer that leverages IIoT principles to deliver insights into the health and performance of critical and essential equipment.



Machine Protection



Performance Analysis



Condition Monitoring



Economic Evaluation

WINDROCK AND ITS NEW SPOTLIGHT MONITORING SYSTEM LEAD THE IIOT REVOLUTION

What we generally regard as the Industrial Revolution began in the 1760s and culminated in the 1840s, but in actuality, it has never really ended. While many of the innovations attributed to the Industrial Revolution were strictly physical in nature, today's innovations link the physical with the abstract. Driving this so-called "fourth phase" of the Industrial Revolution is a phenomenon known as the Industrial Internet of Things, or IIoT.

IIoT combines machine learning and data technology to harness sensor data and machine-to-machine communication technologies. This enables the identification of operational inefficiencies sooner and more reliably, resulting in streamlined operations and notable cost savings for the operator.

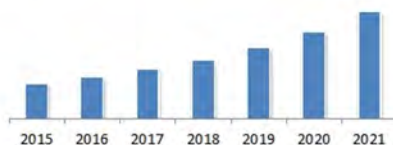
Complete Visibility of Your Entire Asset Fleet Just Became Practical and Affordable!

Windrock has painstakingly addressed the needs of the growing IIoT revolution with its new Spotlight Monitoring System. Spotlight is an automated, real-time tool that uses magnet-mounted sensors that record an asset's operational information which can then be transmitted via cellular (4G LTE) technology to efficiently and reliably monitor the health and performance of essential mechanized equipment.

This creates the ability to gather data that will provide alerts, alarms and operational information on Key Performance Indicators (KPI) for the reciprocating machine on a 24/7 basis – all without requiring costly equipment and systems, or time-consuming installation and site visits by analysts. In fact, a complete Spotlight system can cost as little as 1/10th the cost of legacy analyzing systems.



Industrial Internet of Things Market Revenue, 2015-2021 (\$Million)



Source- IndustryARC Analysis and Expert Insights

[IndustryARC Analysis and Expert Insights](#)

IIoT to Reshape Industries, Companies and Even Countries

A recent research report by industrial market analyst firm IndustryARC indicates that the IIoT market will reach an annual value of \$123.89 billion by 2021. The sector that will generate the most revenue, according to the report, is manufacturing/advanced manufacturing, though the highest year-over-year growth will occur in the healthcare and medical-device market.

SPOTLIGHT

TECHNOLOGY OVERVIEW



Spotlight is a true plug-and-play solution to asset-performance monitoring.

The Spotlight Monitoring System consists of four magnet-mounted PUCs (Peripheral Universal Connection) that are quickly and easily attached to the machine. Just one cable connects from the PUCs to the Spotlight Controller and on to the Gateway where performance data is collected and sent to a cloud-based database, and then transmitted to the analyst's computer, smartphone or other handheld device.

HOW SPOTLIGHT DOES WHAT IT DOES

Spotlight's plug-and-play capabilities mean that the system can be installed and begin operating in as little as four hours, while traditional analyzing systems can take weeks to install.

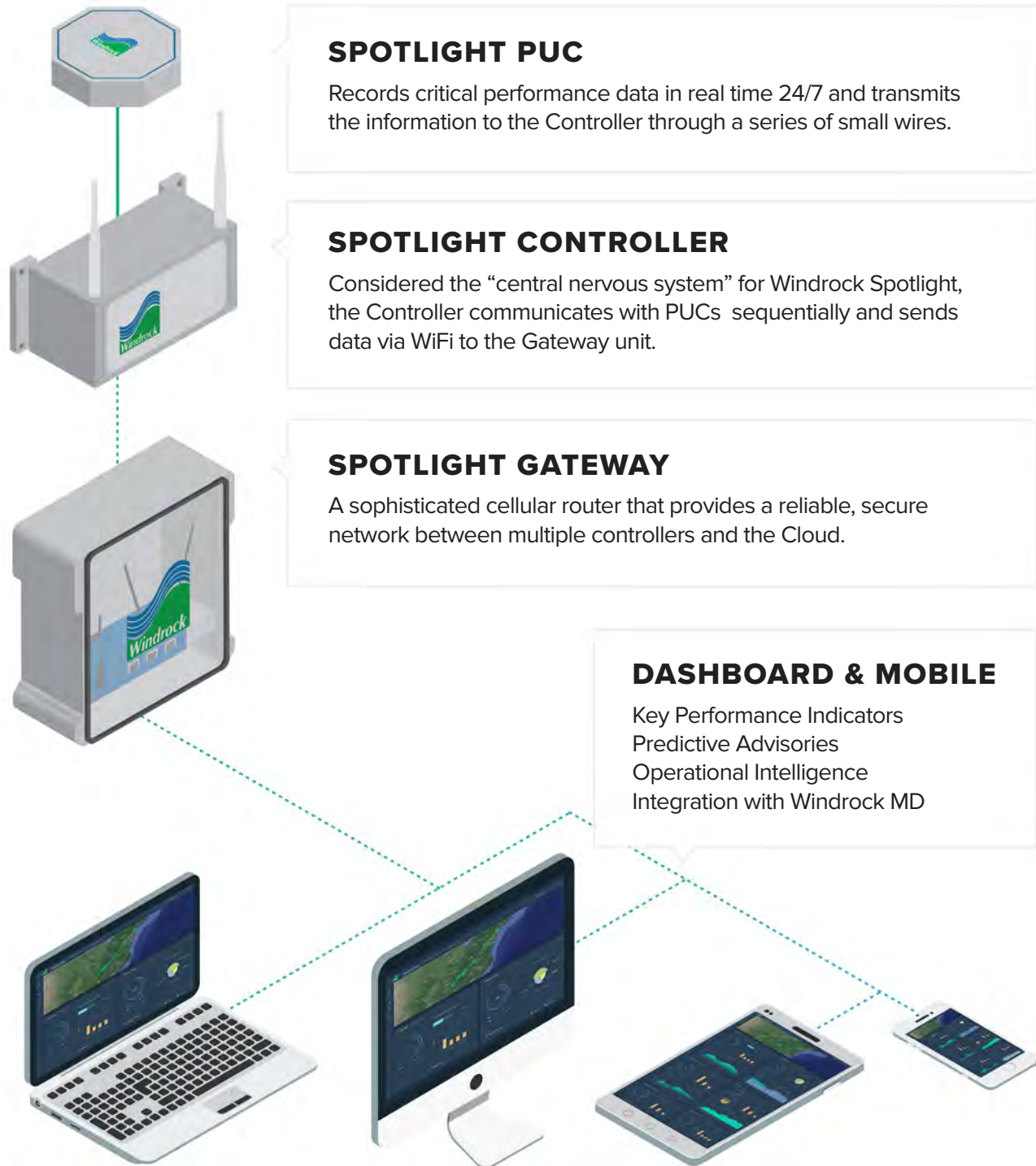
- Install and power on Gateway
- Install and power on Controller and PUCs
- Software configuration starts automatically
- Verify WiFi strength from Gateway to Controller
- Verify cell strength is strong

Once the Spotlight system is operational, the PUC Sensors, Controller and Gateway send critical data to specialized cloud-based interpretive software, where performance and condition-based algorithms perform real-time calculations. Reports on KPI's and performance alerts can be relayed to the user's smartphone or other mobile device, anywhere in the world, usually in a matter of minutes.



SPOTLIGHT

MONITORING SYSTEM



SPOTLIGHT

A SYSTEMIC APPROACH TO AVOIDING CATASTROPHIC EQUIPMENT BREAKDOWNS

Windrock, a leader in the latest IIoT Technologies to keep equipment optimized at peak performance, has designed all of its various asset-monitoring technologies and systems to be compatible with its Windrock Enterprise intelligence-gathering platform.



Spotlight

An easy and affordable tool to gather and transmit critical performance data to the cloud with no need for a local network interface, with the use of the Microsoft® Azure Cloud security software guaranteeing that all sensitive information is protected. Remote monitoring creates a seamless transition from old to new technology, while also helping analysts keep up with the data-analysis demands of larger fleets.



Model 6400 Portable Analyzers

Windrock's next-generation portable analyzer, the Model 6400, has been designed to increase the efficiency and speed of on-site monitoring. This capability also improves safety for the analyst by minimizing time on hot machine decks. The 6400 has the ability to communicate through a virtual environment to Windrock Enterprise.



Platinum Online Monitoring System

Capable of interfacing with Spotlight and Windrock's portable analyzer technology, Platinum is the industry's best platform for the protection and health assessment of reciprocating and rotating machinery. Platinum offers limitless combinations of data-acquisition channels for pressure, vibration, temperature and proximity. In addition to real-time data feedback, Platinum has smart features like self-monitoring of diagnostics and redundancy of critical components.



Windrock Enterprise

An intelligent, customer-centric ecosystem that provides actionable insights and predictive advisories on rotating and reciprocating equipment, as well as most other industrial assets at the operating site. Gathers operational information from Spotlight, Model 6400 Portable Analyzers and Platinum asset-monitoring systems and uses Key Performance Indicator metrics to analyze the data to create a clear, concise and near real-time performance picture for one piece of equipment or a complete fleet of assets.

Windrock MD

All Windrock analyzers utilize the revolutionary Windrock MD software for trending, reporting and analysis. This single data repository for all reciprocating and rotating information allows data to be easily shared between analysts for collaboration and consultation with industry experts. Windrock MD software is also the analysis application used with Windrock's Platinum and On-Guard online systems.

SPOTLIGHT

A FASTER, EASIER SOLUTION



Quick and Easy Installation

- Installs in as little as four hours vs. traditional analyzing systems can take weeks to install



Affordable

- Complete system runs about 1/10th the cost of a comparable “old school” monitoring network



Secure

- Cellular (LTE) communications technology
- Transmits data directly to the cloud with no need to access network gateways
- Utilizes the Microsoft® Azure security platform to protect sensitive data



Workforce Optimization

- Collect and analyze more data, FASTER compared to current limited resources
- Mitigates analyst attrition by expanding data collection footprint across more assets



Control and Compatibility

- **Compatible with Windrock MD™ analytical software, the industry standard for more than 25 years**
- **Compatible with all data from other Windrock platforms such as Windrock Platinum and 6400 Portable Analyzers**
- Turnkey integration with **Windrock Enterprise** platform for easy operational analysis
- Integrates with other control networks and historians
- Creates a seamless transition between old and new technology

WHO BENEFITS FROM SPOTLIGHT MONITORING?



Executives / Operations Management: Operators at the executive level want to look at a schematic of their assets and see a green light on every machine. Only then will they know the network is operating at its highest level of performance, efficiency and reliability. Spotlight lets them know asset status instantly, and when a service interruption may have occurred.



CFO's / Finance Analysts: The bottom line IS the bottom line for CFOs and financial analysts. Assets that are idled are costing the company money. Spotlight lets them know that each asset is performing as required, which helps identify potential problem points before they happen, which provides a boost to the bottom line



Analysts: The job of the analyst is to ensure that each machine's individual components are working up to standards. When they are, the analyst knows the machine will work as expected. Spotlight puts this performance data in the palm of the analyst's hand with no need for a site visit.

DIGITAL SERVICES PROGRAM

SERVICE OFFERING	MONITOR	ANALYZE	OPTIMIZE
Asset Visibility	✓	✓	✓
Preferred CARE	✓	✓	✓
Standard Integration	✓	✓	✓
Daily Status Updates	✓	✓	✓
Standard KPI's	✓	✓	✓
Windrock MD	✓	✓	✓
User's Group Discount (1 Seat)	None	50%	Free
Remote Analysis		✓	✓
Fleet-wide Benchmarking		✓	✓
Daily Status Reports		✓	✓
Asset AI Model		✓	✓
Enterprise AI Model			✓
Access to Windrock SME			✓
Discounted On-site Analysis Services			✓

MONITOR

Monitor is our basic plan. With the monitor option, you will have visibility to your assets and their trending data including data analysis through Windrock MD. Our Preferred CARE plan is included as well (excluding pressure sensors). We want to make sure your Spotlight system is up and operational. This plan ensures that your coverage for Spotlight goes on as long as you are subscribed. If you have a mature analysis program the monitor option might be suitable for you.

ANALYZE

Analyze is the next step up. At this level Windrock will augment your program through remote analysis. Windrock analysts will remotely monitor your machine data in Windrock MD and create a report every week. We will also apply fleet-wide benchmarking so you can actively track your top performing assets and understand how they compare to other assets in your fleet. Daily status reports are also delivered as a part of this service. These status reports ensure you have the latest analytics should you need to do a deeper dive into your data.

OPTIMIZE

Optimize is our premium option. At this level Windrock is fully engaged in your program working to ensure success pro-actively. We will apply AI models to your individual assets and observe behavior based on internal asset data, We will also apply learning algorithms that keep you informed of any changes in your asset health. You will be empowered to compare your fleet performance to our Enterprise AI model which will benchmark your program against world class performance. At this level of engagement our expert analysts have their fingers on the pulse of your assets and your fleet. If you are looking for the expected productivity and profit increases that the digital revolution promises they will arrive at this level of program maturity.



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**THE POWER OF IIOT INTELLIGENCE
IS NOW SCALEABLE AND AFFORDABLE**

The ultimate benefit of the Spotlight Monitoring System is that it cost-effectively collects and analyzes performance data from assets in the field and transfers it to the palm of your hand in real time. Simply put, no other product available today can provide the measurable advantages that are personified by Windrock's new Spotlight Monitoring System.

iot.windrock.com/spotlight
windrock.com



Machine
Protection



Performance
Analysis



Condition
Monitoring



Economic
Evaluation



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