

Industrial Asset Performance Management Platform

Industry-first, fully-automated, smart-sensing, cloud-based platform remotely monitors and manages industrial assets 24x7, without the need of domain experts or new IT infrastructure. A Zero Capex, SaaS and PaaS approach makes it cost effective to roll-out a fully cloud resident program for all your assets. This includes assets that are currently not monitored or are part of a hand-held, periodic data collection, route-based program.

Revolutionizing asset performance by delivering,

EASE OF USE

- **No new IT infrastructure**
- **100% self-installed** by non-experts in mins
- **No custom integration or software**
- **Expert & non-expert workflows**

END-TO-END PLATFORM

- **Data acquisition**
Shoreline Sensors + 3rd party sensors +
Historians, CMMS, EAM, SCADA
- **Analytics** Highly accuracy predictions without historical data
- **Results** Eliminate downtime, Improve efficiency,
Reduce cost, Extend asset life

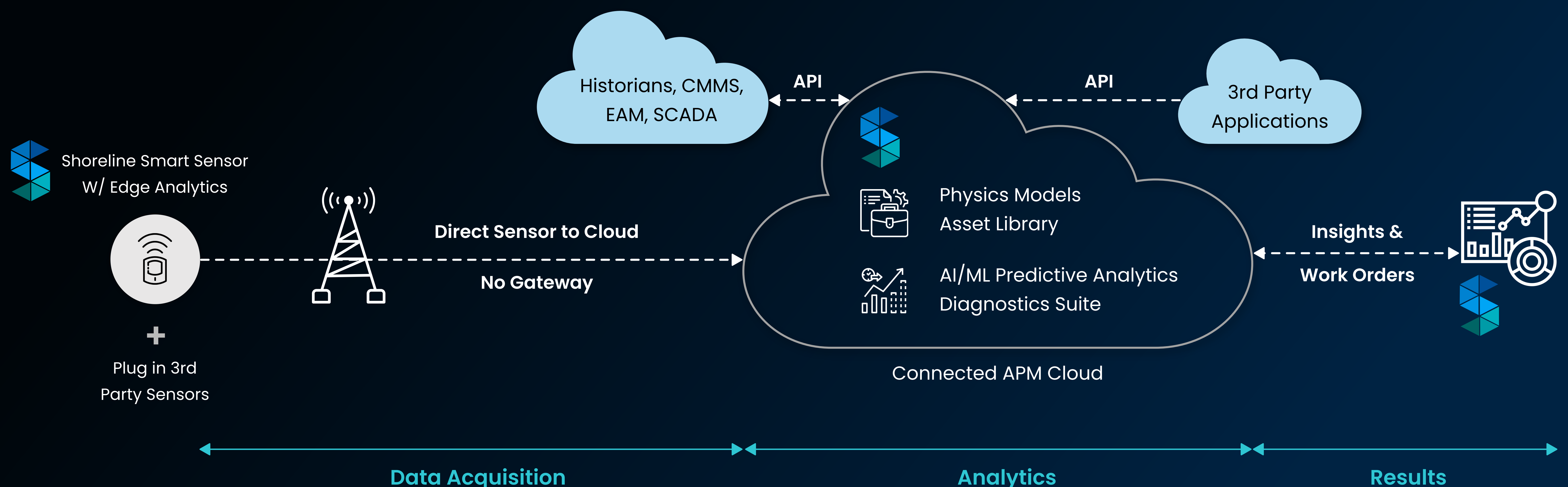
DEEP INSIGHT

- **Physics based asset models in cloud**
Pre-built & ready for immediate use
- **Predictive analytics diagnostic suite**
Evaluates thousands of machine variables. Provides real-time actionable knowledge & recommended actions

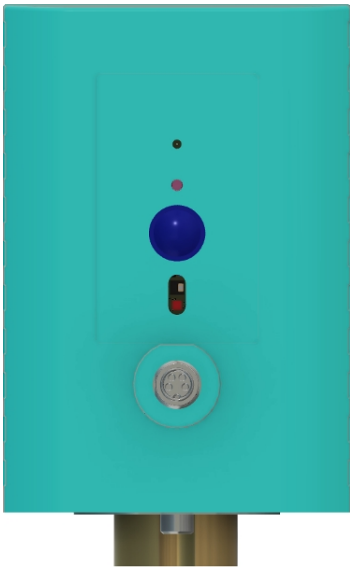
FAST TIME TO VALUE

- **Highly scalable**
- **Affordable for all assets**
- **POC in eight weeks**
- **100% inclusive SaaS subscription**

Quick Starter Offers



Package Includes		Starter Kit -100
Contract Type		Commercial
# of Smart wireless sensors		100
Platform Subscription period (months)		12
Cloud portal access		
Global connectivity - Mobile App for provisioning and live view		
Onboarding includes (First 4 weeks)		
Sensor provisioning & virtual support to end-customer		✓
Anomaly Detection using Physics and ML Models		✓
End-customer training for Cloud Platform usage		✓
On-going fine-tuning of power-train models, user dashboards etc.		✓
Customer training & support on alerts/alarms/diagnosis questions		✓
Virtual support to customer's questions / calls for help		✓
Weekly data-review calls with end-customer		✓



Smart Wireless Sensor

- 6 sensors built into one Smart Sensor
- IO ports to ingest data from external sensors
- Anomaly detection with deep edge analytics
- Two wireless radios & 2 SIM cards built-in
- IP67, Class 1 Div 2 certifications
- 5 year battery life, replaceable battery



Asset Library Physics Models in Cloud

- Compressors, blowers, pumps, fans
- Conveyors, casters, grinders, mixers
- Gearboxes, belts, chains, couplings
- Motors, engines, heat exchangers



APM Cloud Portal & Mobile App

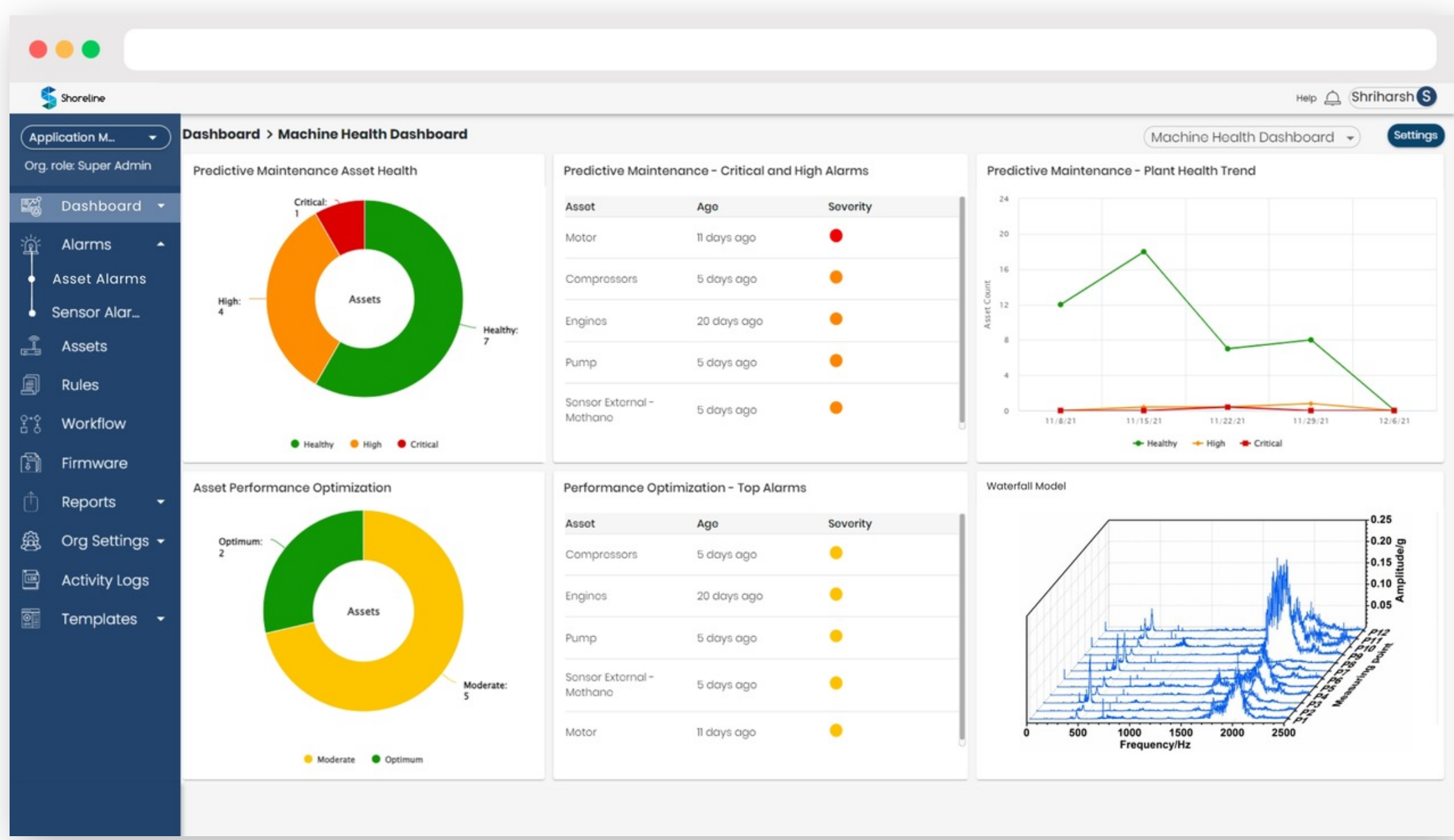
- Machine powertrain builder
- Machine health dashboards
- Predictive analytics & diagnostic suite
- Alarms, Alerts, Rules engine
- Device & user management
- Enterprise grade security
- Mobile App - iOS & Android



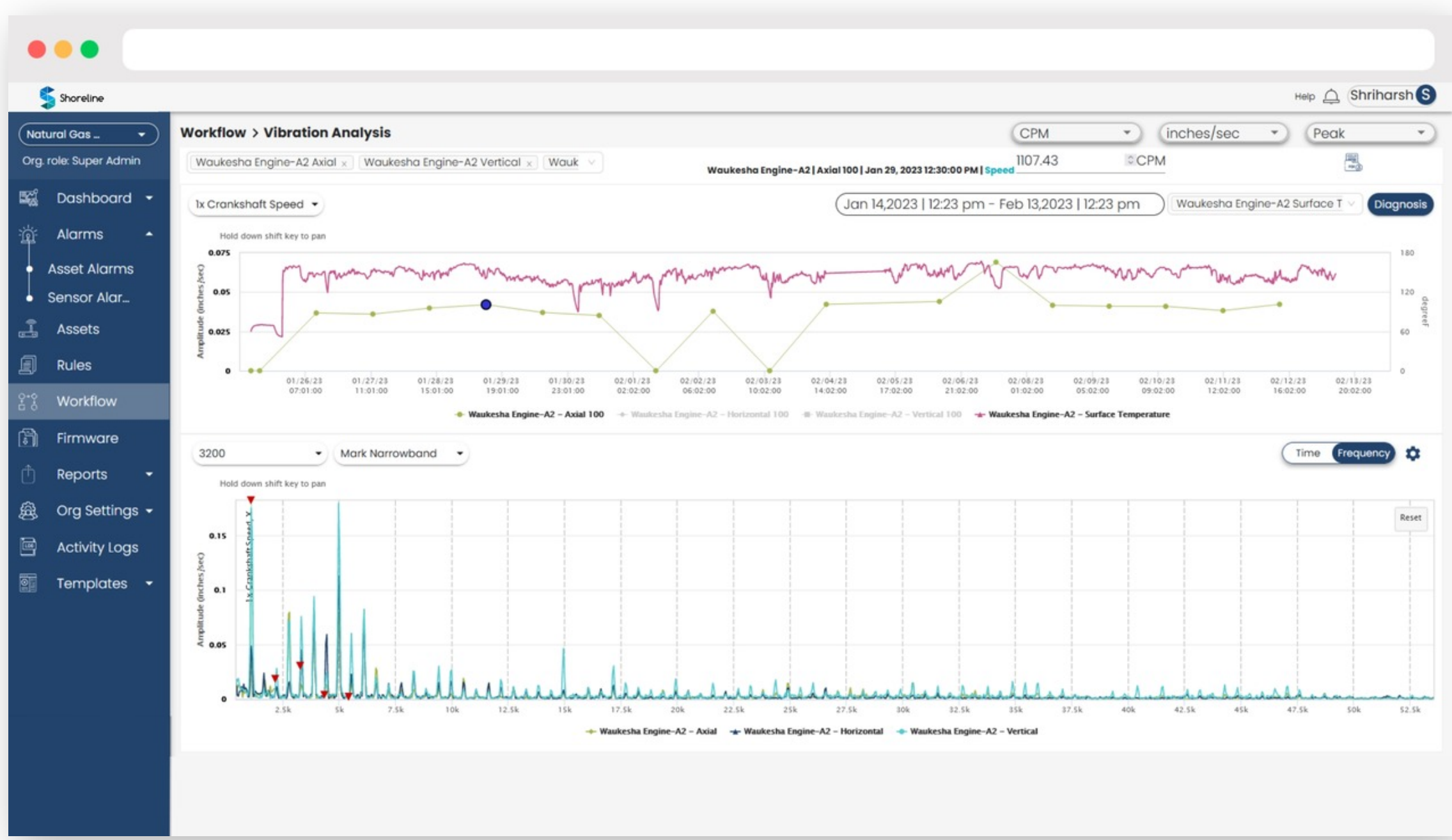
Everything Else You Need to Start

- Prepaid cellular subscription & accessories for pilot
- Quick Start Guide & Documentation
- Online video training

Cloud Portal & Applications



REAL-TIME DASHBOARDS & ALARMS



PREDICTIVE MACHINE ANALYTICS

How To Order: sales@shorelineai.com



Physical Specification

Size	94 mm x 68.6 mm (3.7 in x 2.7 in)
Weight	210g
Protection	IP67
Mount	Stainless Steel Puck & Steel screw

Operational & Storage Environment

	Operations	Storage
Temp. Range	-40°C to 85°C	-45°C to 105°C
Humidity	95% RH (non-Condensing)	100% RH (non-Condensing)
Vibration	(Sustained Vibration force upto ± 50g)	Maximum 100g
RoHs & REACH Complaint		

Power, Connectivity & Security

Battery and Power	
Battery Life	Up to 5 years when using recommended configurations
External Power	Optional 9-26V external industrial power source

Connectivity & Security					
Cellular		Bluetooth		Bluetooth	
Technology	LTE Cat M1, Cat NB2 & EGPRS (fallback) Ultra-Long Range 7x of std LTE and deeper penetration	Technology	Bluetooth® 5.1, IEEE 802.15.4-2006 BLE/BLE LR	Data Transfer Protocol	HTTPS, MQTTS, TCP/UDP
Power class	5	Bands	2.4 GHz	Bands	SSL/TLS, AES

External Connector: M8 screw type			
PIN	Signal	Wire	Description
1 (L+, or +24V)	V+	Brown	9-26V DC Input
3 (L-, or GND)	GND	Blue	Ground
2 (NC, DI, or DO)	AI	White	4-20mA / 0-10V DC Analog Input
4 (Switching)	DI or TX/RX	Black	Digital input or Serial 1-Wire UART
Note: No pin has any power at open state.			



6 Built-in Sensors

Environmental Temperature/Humidity Sensor/Surface Temperature Sensor	
Environmental Temperature Range	-40°C ~ 85 °C
Humidity Range	0 ~ 100% RH (on condensing)
Surface Temperature Range	-40°C ~ 105°C
Tri-Axial Vibration Sensor	
Technology	MEMS Triaxial accelerometer
Axis	X,Y, Z
Measurement	G force, Acceleration, Velocity
Range	G force: ±64g
Frequency	1Hz ~ 25KHz
Structure Borne Microphone	
Technology	MEMS digital microphone
Frequency	100Hz to 40KHz
Ambient Microphone	
Technology	MEMS digital microphone
Frequency	100Hz to 20KHz

Compliance

Telecommunication Compliance*	
FCC	Part 15 Subpart B, Part 15 Subpart C
Hazardous Location Safety*	
Safety Regulations	UL 121201, Nonincendive Electrical Equipment for Use in Class I and II, Division 2 and Class III, Divisions 1 and 2 Hazardous (Classified) Locations, Edition 9, Revision Date 04/01/2021

* Planned. Ask your representative for certification status.

iCastSense Physical Drawings

