

FLEET MANAGEMENT SYSTEM



"Advancing the efficiency and safety of the world's surface mining equipment through our fleet management systems."



WHAT IS A FLEET MANAGEMENT SYSTEM?

A Fleet Management System (FMS) for a mine site is a suite of specialized software running on ruggedized hardware. Using GPS and a wireless radio network, the FMS tracks and monitors production, maintenance, and safety in your mine.

Wenco's Fleet Management System, Wencomine, gives dispatchers and operators real-time control over equipment and data through customizable interfaces, while providing managers and supervisors with multiple reporting options so they can quickly get the big picture of their daily operations.

The Wencomine Fleet Management System provides a comprehensive solution for mining activities, allowing mines to spend more time on producing and less time problem solving, getting more out of your mine.

This is where you start. Wenco Fleet Management - The Core Products •



MobileOT hauler view

Wencore is the heart of the Wencomine Fleet Management System (FMS). All you need for dispatcher confidence, operator efficiency, equipment health monitoring, and comprehensive flexible reporting.

Completely scalable to your mine's needs, Wencore contains the essential hardware, communications, and software applications for operations, engineering, maintenance, and management. Wenco provides complete monitoring and reporting so you can take control and improve operating efficiencies

Dispatchers can quickly and intuitively view your mine in multiple formats to direct drivers and maintain consistent ore quality. Equipment information is



FleetControl dispatcher screen

provided to the dispatcher in a user-friendly Windows environment with drag-and-drop functionality.

Operators receive information directly on the Mobile Operator Terminal (MobileOT) to verify status, see load/dump details, and maintain a continuous link with their dispatcher. The MobileOT can be configured to include startup checklists, fueling data, speed limits, and more.

Wenco's SQL server database provides easy solutions for storing, sharing, and analyzing data. Wenco's web-based reporting tool, Dashboard, allows you to view real-time information on multiple devices from anywhere in your mine.



FleetControl

MineVision

MobileOT

WencoDB

Reporting

Onboard Insight

Eventing System

Safety

Fleet Awareness, HITACHI SkyAngle

With safety being a primary focus of all mining operations, Wencover provides operators in the field with the tools they need for enhanced situational awareness.

Fleet Awareness provides full visibility of other Wenco-equipped vehicles, giving operators the "big picture" so they can make safe and informed navigation decisions. Visual and audible alerts provide real-time feedback so potential hazards can be identified quickly and effectively.

The Hitachi SkyAngle advanced camera system enhances safety checks by providing operators with a comprehensive bird's-eye view of their surroundings.

Benefits

- Provide a safer working environment with awareness and notification of proximate equipment.
- Real-time alerts from 3rd party fatigue management and slope monitoring systems.
- Speed monitoring on haul routes with alerts for vehicles over or under set limits.



ReadyLine, TireMax, Maintenance Monitor

In addition to the health benefits provided in Wencore with alarms, polling, and automated collection of health data, the Wencondition suite of products adds an extra laver of control.

Track the work-rate of individual tires, manage pieces of equipment in their down state to get them back into production, and analyze trends of health data to prevent failure in the first place.

Health data available in real-time and historical formats is captured at the vehicle level for download by the dispatcher, supervisors in the field, or maintenance teams in the shop.

Benefits

- Prevention of catastrophic machine failure and unscheduled downtime through real-time alarms.
- Detailed and proactive analysis of machine health with situational data collection.
- Increase availability with in-depth analysis of historical information on recurring vehicle health issues.



















Connectivity

3rd Party Connectivity, Data Exchange Services

Wenco designs its system on an open architecture philosophy. The onboard COTS hardware promotes OEM system connectivity and operates over any IP-based radio system.

Web-based reporting promotes the use of the system information throughout the organization, and the open database with standard API access and export facilities allows for ease of data transfer between departments and systems.

Integrate 3rd party products into Wenco's system to take full advantage of existing data streams and reporting.

Benefits

- Enable informed decision making with accurate, timely, and reliable data.
- Accessibility of information when you need it and in the format desired increases management efficiency.
- Unite departments through system integration and consistency of data exchange.

Consulting

Training, Applied System Analysis

Our team of professionals delivers a wide range of services to ensure your investment in Wenco's Fleet Management System is utilized to its full potential. From project management to implementation, training, needs analysis, and business process, our team has extensive experience in both technical and service industry backgrounds.

Training is available on site at your convenience based around your schedule, or attend a customized workshop at our headquarters. Maximize your investment as we help empower you and your mine to increase productivity and reduce costs.

Benefits

- Bolster operator and dispatcher performance through certified training.
- Professional project management ensures coordinated and efficient system implementations.
- Implement industry and equipment management best practices with the help of our FMS experts and mining specialists.



















Dispatching

Dynamic Dispatch, Fuel Dispatch, MobileST, PitNav

Wencommand introduces dispatching intelligence to the FMS for increased productivity, ore quality control, and efficient refueling. Wenco's proven and demonstrated dispatching algorithms operate within your targets, constraints, and resources to meet your goals. Select a dispatching functionality to optimize production, blend, fueling, tasks, and schedules.

Give supervisors in the field control of operations from within their vehicle with the Mobile Supervisor Terminal (MobileST).

Enhance operator efficiency with turn-by-turn onboard navigation and vehicle-specific data such as speed, status, direction, and destination.

Benefits

- Achieve production targets while meeting plant processing needs with dynamic dispatching algorithms.
- Increase equipment utilization by minimizing operational delays with delay management and fuel dispatching.
- Immediate site performance feedback for operators, dispatchers, and management.

High-Precision

BenchManager, Arm Geometry System (AGS)

Wencompass is our suite of high-precision GNSS BenchManager applications for increased accuracy and control. BenchManager provides elevation control, ramp building, drill navigation, selective ore mining by dig block, plus optional Arm Geometry System (AGS) for face shovel and backhoe configurations.

Advanced AGS tracks bucket movement at the centimetre level, giving operators maximum control of any size shovel.

Seamlessly integrating with fleet management, Wencompass gives machine operators the precision required to operate according to plan.

Benefits

- Precision control to meet elevation targets and reduce surveying requirements.
- High accuracy machine heading and bucket positioning to meet plant quality requirements.
- Detailed integration with Wencore and Wencommand for site-wide cohesion.

















ABOUT WENCO

With over 25 years in the industry and offices on six continents, Wenco provides a comprehensive fleet management system for surface mining operations of all sizes worldwide.

Wenco delivers world class software and hardware to accurately record equipment activity, location, time, production, and maintenance information. Wenco products are supported by an in-house staff of engineers, mining industry experts, software developers, and training specialists.

Wenco is dedicated to ensuring your mine is as safe, efficient, and profitable as possible.

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CORE SYSTEM





FleetControl MineVision Onboard Insight MobileOT WencoDB Eventing System Reporting

VALUE-ADDED COMPONENTS



WENCOMMAND

Dynamic Dispatch Fuel Dispatch MobileST PitNav



WENCOMPASS

BenchManager Arm Geometry System



WENCOVER

Fleet Awareness Hitachi SkyAngle



WENCONDITION

ReadyLine TireMax Maintenance Monitor



WENCONNECT

3rd Party Connectivity Data Exchange Service



WENCONSULT Training Applied System Analysis