

CAT® MINESTAR™ SYSTEM

DETECT



IMPROVING AWARENESS FOR ENHANCED MINE SITE SAFETY





DETECT

DETECT INCREASES AWARENESS OF THE ENVIRONMENT AROUND MACHINES AND EQUIPMENT, RESULTING IN ENHANCED MINE SITE SAFETY AND GREATER OPERATOR CONFIDENCE.

Operators in the cabs of large mining equipment often cannot see if another machine or vehicle is too close for safe operation. Detect helps alleviate this potential safety hazard and can also be configured to provide valuable information about site conditions and other equipment or assets working in the area.

At the most basic level, Detect enhances your operators' awareness of the immediate environment around their equipment. A simple touch screen display alerts operators when radars indicate that objects have entered critical areas near the machine. The system allows a quick visual check of these areas whenever the operator wants one.

Additional capability packages enable Detect to alert the operator to pre-programmed avoidance zones, known site hazards and assets with Global Navigation Satellite Systems (GNSS) tags. Positional information from Detect can also provide valuable feedback to central office systems and mine site managers.

Note: Using this system does not replace the basic safety precautions and procedures that you must follow every day. For limitations, please consult your Operations and Maintenance Manual.



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HEALTH



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DETECT CAPABILITY PACKAGES

**WITHIN DETECT, YOU CAN CHOOSE FROM
A NUMBER OF CAPABILITY PACKAGES TO
CONFIGURE A SYSTEM FOR THE UNIQUE
NEEDS OF YOUR SITE. COMPLETELY SCALABLE
AND FULLY INTEGRATED WITH OTHER CAT®
MINESTAR™ SYSTEM CAPABILITY SETS,
DETECT CAN GROW WITH YOU WHILE
HELPING ENHANCE OVERALL SITE SAFETY.**

VISION

Vision offers multiple camera capabilities, allowing operators to manually select the view or views they need on the in-cab display to see what is happening close to their machines.

OBJECT DETECTION

Object Detection adds radar capabilities that automatically detect hazards such as other equipment or vehicles within critical zones around the machine—in front, at the rear or within the turning radius on each side, depending on machine type. Zones can be automatically displayed depending on the gear selection of the vehicle. For example, a forward view may be displayed when the machine is in drive or a rear view when it is in reverse.

The system will also highlight specific views to show the operator where potential hazards may be. For example, if the radars detect a light vehicle approaching from the right side, the system will switch to a right-side camera view and the proximity bar on the in-cab display will flash yellow or red depending on the distance of the detected object.



PROXIMITY AWARENESS

Proximity Awareness adds GNSS capabilities that allow Detect to display the locations of other equipment and assets beyond the reach of its radars. It also allows pre-programmed information—such as avoidance zones, fixed plant infrastructure and more—to be displayed in the cab.

The system can then be set to provide the operator with visual and audible alerts when approaching an avoidance zone or moving too close to an oncoming machine. Plus, if a site hazard is identified, such as large rocks or a troublesome soft spot in a haul road, the system can instantly share that information with other equipment via the office application.

PERSONNEL

Personnel adds capabilities for tracking individual GNSS tags that can be worn, placed in light vehicles or attached to portable equipment. The system gives these tags an electronic presence within the digital mine site environment, allowing equipment operators to see exactly where assets or people are in proximity to their machines and enabling managers to track their locations from a central office.





ENHANCING SITE SAFETY

The idea behind Detect is simple: The more equipment operators know about the working environment around them, the more safely they will be able to operate their equipment. Detect works to reduce the chances for operator errors and can help to improve overall mine site safety wherever it is implemented.

IMPROVING OPERATIONAL EFFICIENCY

With better site awareness, operators are able to run their mobile equipment with greater confidence. Detect has the potential not only to reduce accidents, but also to help boost haul truck cycle times by assuring operators that loading and dump areas are clear as they get ready to pull away, allowing them to work more smoothly and efficiently.

CAT® MINESTAR™ SYSTEM

Detect is one of a range of capability sets within Cat MineStar System, the industry's broadest, most thoroughly integrated mine operations and mobile equipment management system.

The Detect capability set shares data seamlessly with other Cat MineStar System technologies as part of a comprehensive, next-generation mining management system. Cat MineStar System capability sets can be used individually or in combination to create an integrated technology system, scalable and configurable to the needs of mining operations of any size, type or complexity.

With the ability to track, monitor and manage all types of assets, from fleet-level overviews down to individual machine details, Cat MineStar System gives you the in-depth information you need to manage all mining operations more safely, efficiently and productively.

For more information visit cat.com/miningtechnology



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