

TELEOP SYSTEM

HARD-LINE's TeleOp allows the tele-remote operation of heavy machinery from a control station on surface or safe area, regardless of distance.

HARD-LINE has over twenty years of remote experience, with the first TeleOp sold in 1997. The system is easy to upgrade, keeping operators ahead of cutting-edge technology to operate any machine, regardless of type, make, age, or model.

PRODUCTIVITY

- Increase profitability and production
- Enhance work efficiency
- Operate during shift changes

SAFETY

- Remove operators from dangerous environments
- Maintain visibility and real-time communication
- Eliminate exposure to dust, shrapnel, fumes, noise, and other hazards

WORK/LIFE BALANCE

- Attract qualified talent
- Minimize travel time
- Enable guick, easy shift change



TeleAi is HARD-LINE's user-friendly software developed in-house by a team of specialists to operate the TeleOp system.

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• The base system. One machine that needs an operator to be able to control from a remote location increasing tonnage through a camera lens.

UPGRADES



- Equip the base system with intelligent steering assistance & collision avoidance to keep machines off walls on straightaways and in turns.
- Minimize inherent operator error by keeping assets safe, saving thousands on costs for maintenance.
- Semi-autonomous driving without preliminary drift scans.



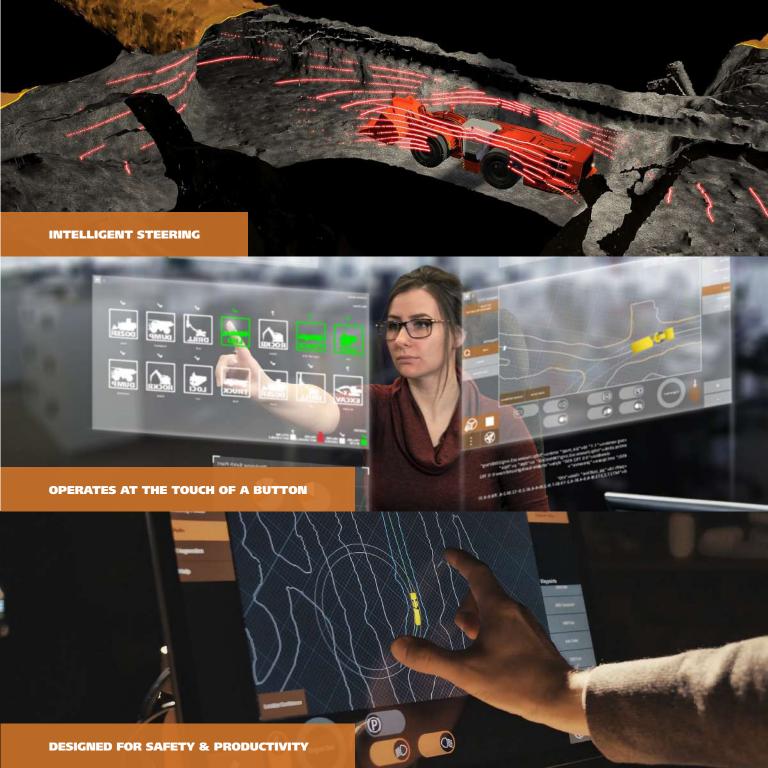
- Add several machines and/or chairs and allow operators to choose whatever machine they need without moving to another chair.
- Multiple machine makes, models, and types operated from a safe ergonomic environment on surface.



- Complete autonomous control of a machine at the touch of a button.
- Automate your machine's repetitive process, while feeding your mine's resource planning tool.
- It can be installed on any machine (LHD or haul truck only) that is part of a "TeleOp" or "TeleOp Multi" system.



- A refined network of autonomous machines driving around each other with traffic control, upgraded from "TeleOp Auto".
- Collision avoidance capability, allowing many machines to operate alongside each other in Auto from one control station.
- The ultimate producer of the TeleOp system.





HARD-LINE is a global leader in mine automation and remote-control technology. We create innovative products placing the highest priority on safety while increasing efficiency for mining operations. No matter what type, make, age, or model of machinery, we configure any equipment to operate remotely for surface and underground mining. HARD-LINE embraces change as we continue to enhance mining innovation.

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