

HELIX



OVERVIEW

MST Global's HELIX enterprise software platform is an innovative solution for modern mining operations. HELIX offers 3D visualisation, real-time data capture, integrated automation, and extensive customisation options via a geospatial digital twin of your mine's surface and underground operations. Enhance safety, increase productivity, and reduce costs with HELIX's modules, empowering informed decision-making and optimising your operations. Join the forefront of mining digitalisation technology and revolutionise your operations.



3D CONNECT

INTERACTIVE SPATIAL INSIGHTS

HELIX 3D Connect is a real-time RTLS (Real-Time Location System) solution enabling communication with personnel and assets within the mine environment.



AUTOMATION

ADVANCED PROCESS CONTROL

HELIX Automation enables the "intelligent mine", enhancing efficiency and safety using personnel and asset location intelligence for controlling fans, pumps, doors, traffic lights etc.



SENTINEL

ENHANCED SAFETY MONITORING

HELIX Sentinel, integrated into the HELIX platform, is an electronic tag-board system that visualises the location of underground personnel.



DISPATCH

OPTIMISE FLEET MANAGEMENT

HELIX Dispatch delivers unparalleled fleet management from the production face to surface and all points in between.



IOT

SMART SENSOR NETWORK

HELIX IoT enables large-scale deployments for remote monitoring and automation use-cases across vast areas.



TELEMETRY

TRACK EQUIPMENT HEALTH

HELIX Telemetry reduces machine downtime and maintenance costs through real-time tracking and analysis, enabling informed decision-making and optimised performance.

SUPPORTED TRACKING TECHNOLOGIES



WI-FI POSITIONING

HELIX uses Wi-Fi to track personnel and equipment in real time, enhancing safety and efficiency by calculating location from signal strength at access points.



ULTRA-WIDEBAND (UWB) POSITIONING

HELIX UWB Positioning delivers precise tracking by measuring signal travel times between tags and anchors, ideal for complex underground environments.



GLOBAL NAVIGATION SATELLITE SYSTEM (GNSS) POSITIONING

HELIX GNSS Positioning provides precise tracking for surface operations, ideal for vehicles and fleet management over large areas.



BLUETOOTH LOW ENERGY (BLE) POSITIONING

HELIX BLE Positioning uses energy-efficient beacons for scalable, cost-effective tracking of personnel and assets, ideal for continuous use in mining environments.



A Komatsu technology brand

mstglobal.com

AXON



OVERVIEW

AXON is MST Global's cutting-edge, modular network engineered to excel in the demanding environments of mining and tunneling. Designed with flexibility and future-proofing in mind, AXON integrates both hardware and software to support a wide range of current and emerging technologies. Whether it's wireless communication, tracking, or automation, AXON's high-bandwidth fiber infrastructure ensures that all critical systems operate seamlessly, enhancing operational efficiency and safety. The platform's modular design allows for easy expansion and customization, making it adaptable to the evolving needs of modern mining operations.



AXON CORE

POWERING PRECISION IN MINING OPERATIONS

MST's AXON Core is one of the highest performing network platforms with speeds of up to 1Gbps enabling simultaneous voice, video, and data transmissions; and IoT, Cloud and Edge Computing applications to operate at maximum functionality at any scale.



AXON AXON AIR SERIES 2

ELEVATING CONNECTIVITY UNDERGROUND

The AXON Air Series 2 is a versatile Wi-Fi access point with BLE and UWB beaconing for enhanced geolocation. Supporting daisy-chaining via PoE+ ports, it enables easy installation and reliable wireless coverage while detecting personnel and equipment with MST's RANGE tags.



AXON MESH

CONNECT. EXTEND. OPTIMISE

MST Global's AXON mesh portable wireless access point is an industry leading intrinsically safe, mobile, self-meshing, network extender and access point. Intended for the adhoc extension of a mine or tunnel's existing Wi-Fi network, the AXON mesh is fit for purpose for VoIP, tracking and data transport.

AXON EXPANSION MODULES

MST Global's AXON modules are designed to enhance and expand the capabilities of the AXON Core digital platform, offering a versatile and scalable solution for various underground mining operations. Each module, whether it's AXON Control, AXON Power, AXON Gateway, or AXON Dock, serves a specific purpose, from extending power distribution and enabling process automation to connecting wireless sensors and expanding deployment options. These plug-and-play modules are built for harsh environments, ensuring reliable performance and quick deployment in even the most challenging conditions. By integrating seamlessly with the AXON Core, these modules allow mining operations to scale and adapt to changing needs without significant investment or disruption.



AXON EXPANSION MODULES

SEAMLESS CONTROL AND AUTOMATION

AXON expansion modules boost the flexibility of the AXON platform, allowing seamless integration of additional capabilities to meet evolving operational needs. They enhance data processing and connectivity, ensuring efficient and scalable underground operations.

HELIX AUTOMATION & AXON CONTROL

HELIX Automation integrates with AXON Control to automate mining operations using complex logic and geospatial rules. AXON Control processes these rules for real-time adjustments, while flexible dashboards monitor variables and control outputs. Together, they enhance efficiency, precision, and safety in mining activities.



A Komatsu technology brand

mstglobal.com