

FIREFLY for Mining Operations

FIREFLY is a location accountability system designed to assist miners operating within subterranean, hazardous, GPS and cell-service denied, areas. FIREFLY supports mining operations in achieving MINER Act standards.



FIREFLY handles situational awareness and accountability challenges encountered during, and after, mining operations.

Situational Awareness Enhancements

- Navigate subterranean spaces
- Maintain location awareness in GPS/ cell-service denied areas
- Communicate real-time, on-scene information
- Adapt to continually-changing conditions
- Respond quickly and accurately to emergency scenarios

Accountability Enhancements

- Operational accountability on the scene
- Real-time locations of all personnel within a mine
- Equipment & vehicle accountability
- Record of data for post-operational assessment and analysis
- Monitoring and accountability of hazardous environmental factors (with CANAIRY)



All of our products are designed and manufactured in the USA.

About FIREFLY for Mining Operations

FIREFLY is an operational accountability system, designed to accurately track mining personnel, equipment, and vehicles during mining operations. FIREFLY enables unprecedented visibility into personnel locations within hazardous, subterranean environments for safety and accountability, all without relying on GPS or cellular service. We provide an intuitive, easy-to-use visual display to see where all personnel are located, as well as evolving conditions across the mine. This enables a common operating picture, accessible through the Namatad, Inc. iOS visualization app or the Namatad, Inc. Android Team Awareness Kit (ATAK) geospatial visualization plugin—the situational awareness visualization app of choice for U.S. Special Forces.

FIREFLY is easy-to-use and integrates into existing protocols and communications networks. To utilize the system, miners simply activate their lightweight yet durable wearable devices. Moreover, we have proven experience in seamless integration of FIREFLY with existing subterranean communication networks. All devices can be further equipped with additional CANAIRY sensors to detect gases, pressure, temperature, CO, humidity, VOCs, and carcinogens. This sensor data is rendered by the FIREFLY App, providing an unprecedented real-time view of the rapidly changing on-scene conditions and enhancing operational accountability by providing a record of exposure. Integrated analytics and alerts enable Foremen, Managers and Safety Officers to respond to any emergencies quickly and accurately, using real-time information.

FIREFLY employs advanced machine learning and analytics, which drastically reduces information overload during critical situations. FIREFLY analytics can be specified and customized to accommodate various operational needs. These advanced analytic pipelines are integrated into simple visualizations to enable informed decision making both below and above ground. Furthermore, while real-time location data is imperative in the moment, this data can also be automatically stored for post-emergency event analysis and operational training, to help keep personnel safe and adhere to critical Miner Act standards.

FIREFLY is the accountability system of choice for U.S. Special forces. Over the past three years, we have been actively working with Special Forces teams to optimize FIREFLY for use within subterranean environments, buildings, dense urban areas, and across complex terrain where access to satellite-transmitted positioning signals is limited, unavailable, or intentionally blocked. As a result, we have seamlessly integrated FIREFLY with the existing Special Forces MPU-5 radio communications network, achieving an all-encompassing, easy to integrate, operational accountability system, which helps keep personnel, vehicles, and equipment safe throughout any and all subterranean operations.

FIREFLY Kits

The full FIREFLY Kit includes:

- FIREFLY Wearable Devices
- FIREFLY Mounted Devices
- Mining Accountability & Analytics Hub
- FIREFLY iOS or ATAK-Based Visualization App

About Us

Namatad Inc. creates easy-to-use technology that connects people, promotes safety, and enables data-driven decision making. Founded out of the IPA research lab at the University of Washington, Namatad, Inc. is agile, forward-thinking, and dedicated to its mission to inform, connect, and protect those who protect us all.