



cominfo[®]
Security First

VLIT Mine
TRACKING SOLUTION

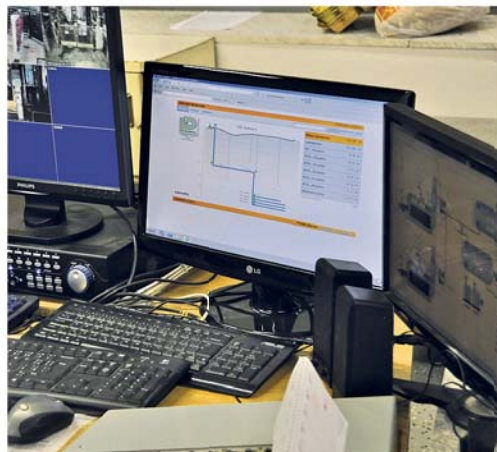


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■ ABOUT US

Cominfo, one of the leading European manufacturers of turnstiles and gates, RFID devices and access control systems, has been active in the global market for more than two decades. We are currently marketed in over 50 countries offering a wide range of solutions involving public transport, energy industry, financial institutions, smart buildings, leisure facilities and industrial tracking, among others.

Our cutting-edge technology and refined solutions are built in-house, allowing us to control every step of the production process. Later on, through our sales network and international partners, we ensure an excellent quality of service capable of responding to the needs of customers in a timely and efficient manner. Constructive feedback from the other side is always gathered in real time, motivating more valuable and reliable cooperation.

Since the beginning of our foundation, we have always stood for innovation and reliability, holding a strong dynamic entrepreneurial spirit. You will benefit from a customer-oriented R&D team who explores front-line technologies that become a part of your everyday life.





TRACKING EVERY MOVE

Safety has long been a major concern for the MINING AND TUNNELING INDUSTRY. As a result, modern practices and technologies have improved, allowing personnel to operate without any hitches under the harsh conditions encountered in all types of underground facilities.

The solution involves implementing a simple to use and highly reliable tracking system. It tracks and acquires the location of personnel, vehicles and other assets throughout the mining operations, compliant with all underground safety standards. This industry thus will gain a powerful safety solution to prevent accidents, and minimize risks in all interactions and activities within underground shafts.

Safeguarding the physical integrity of each individual is however not the sole concern of decision-makers since increased productivity benefits are also seen as important and challenging. How does our solution address this? The answer lies in tracking the precise location of each asset position, allowing it to be more efficiently managed.



WHAT IS VLIT MINE?

VLIT Mine, a long-range identification and tracking system, is specifically designed for intelligent safety management and effective productivity control in the mining industry. The entire communication infrastructure can be made using our Atex certified components. All personnel, vehicles and other assets are equipped with a uniquely coded **VLIT Active Tag** that transmits data in UHF band to a **VLIT Access Point**, usually installed in strategic spots throughout the shafts. This location data, in turn, will be sent over the network to a central server along with other relevant information, keeping our centralized database always updated. As a result, Zone Monitoring, Traffic Control, Asset Management and Accident Handling can be successfully achieved by the control room via our **VLIT Software Application**.

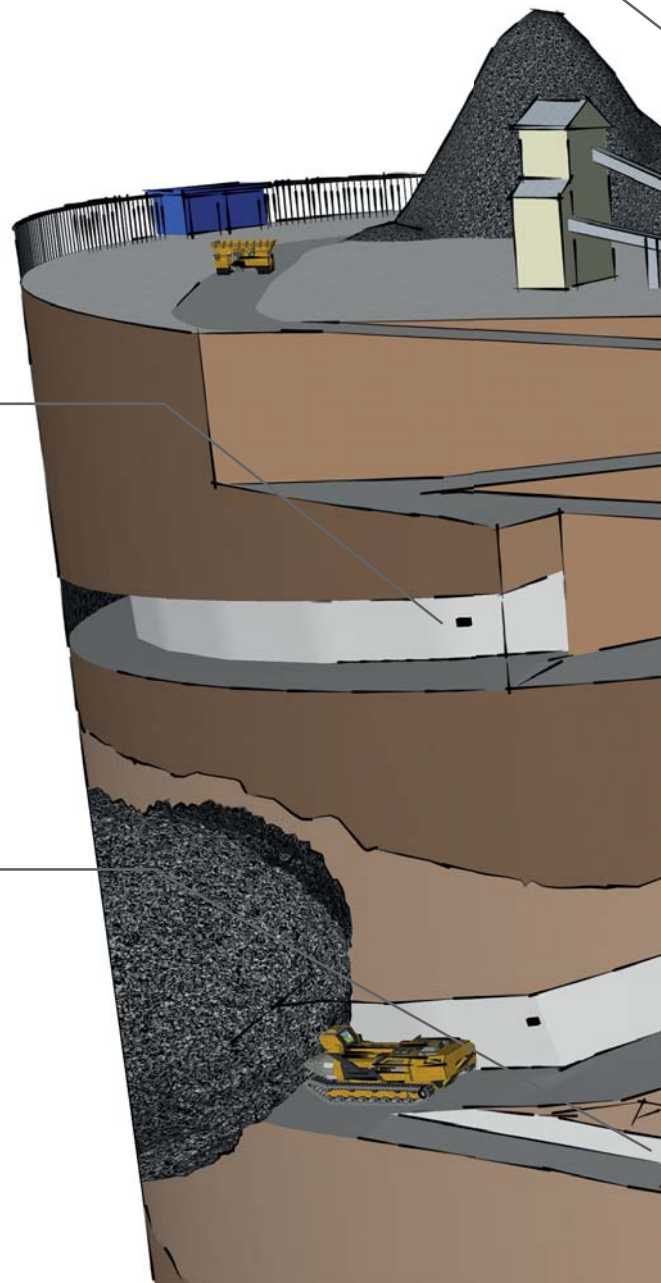
VLIT SOFTWARE APPLICATION




VLIT ACCESS POINT

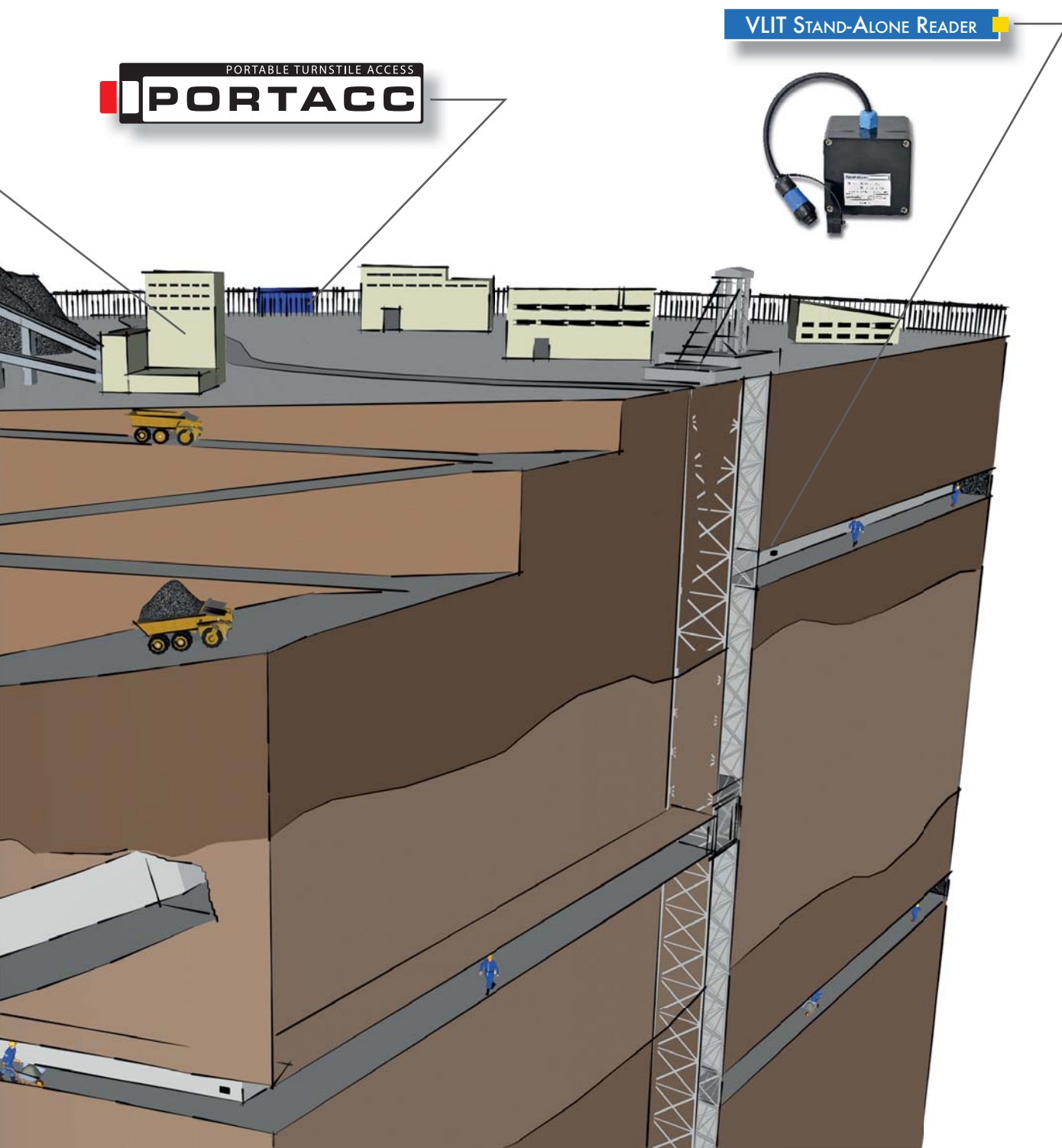


VLIT ACTIVE TAG



* Both **VLIT Active Tag** and **VLIT Access Point** are certificated by EC- Type Examination Certificate (ATEX)  according to Directive 94/9/EC for equipment, protective systems or components intended for use in potentially explosive atmospheres.

Cominfo is certified with Quality Assurance Notification and has a quality system for manufacturing electrical devices with type of protection intrinsic safety "i".





■ VLIT ACTIVE TAG

As a rule in this type of industry, it is mandatory that all personnel, vehicles and other assets involved in mining operations carry an active tag. Thanks to our VLIT Active Tag, the whereabouts of mine workers can be easily and instantly located with superior positioning accuracy, thus helping supervise them more effectively, as well as better handling of emergency situations.

Based on UHF technology each tag transmits a unique ID code at 868 MHz to the access points instantaneously over a range of up to 100 meters, thereby avoiding collisions with other tags during communication. It contains an internal memory of 1024 bytes for saving user data, and also integrates an accelerometer to reveal motionless personnel in real time.





WRISTBAND TAG :

An autonomous device intended to be attached to personnel, containing a button for emergency response, as well as a vibrating feature that will be activated once the alert is triggered from the control room. Its internal battery ensures a life service of up to 2 years, depending on the working cycle.



KEY CASING TAG :

A flexible tag to be placed into the worker's safety cap or mining vehicle, powered by a small and replaceable internal battery with a life expectancy of up to 2 years, which depends on the workload.



(no ATEX certification)

CAP-LAMP TAG :

An encapsulated tag sealed in a hardened housing that comes in very handy for most industrial cap-lamps. It is commonly nested inside our cap-lamp battery container, which simultaneously helps to protect the tag against loss or damage, turning it into an even more sustainable solution. This tag is a feather-light device in every sense: it drains an insignificant load on the battery, and allows miners to carry the entire kit without being weighed down during their long shifts.



** If you decide to opt for another cap-lamp manufacturer, we can supply an available PCB tag (printed circuit board). Uninterrupted operation of this DC-powered tag is ensured by using energy directly from the cap-lamp's electrical system.*





VLIT ACCESS POINT

An easily wall-mounted device, with an integrated 868MHz antenna to provide signal coverage of approximately 100 meters. Multiple units are scattered along the shafts, creating a network of purpose-built access points for continuous and effective monitoring of personnel, vehicles and other nearby assets. Each and every time an active tag passes an access point the tag's data will be read and logged to the database. Our VLIT Access Points can either be part of a system created from the ground up or integrated with any network already in place. In case of communication breakdown or power failure, a backup battery will ensure the continuous operation of this equipment.





VLIT STAND-ALONE READER

Built to further enhance system reliability and add value to mining industry. It integrates an 868MHz antenna, just like our VLIT Access Point. By operating offline 24 hours a day, 7 days a week, real-time data always remains safe and stored in its 32kb internal memory. The battery typically lasts about 14 days depending on how often the tag's data is collected, which can be adjusted according to the needs. Additionally, a docking station is made available for energy charging and data downloading from the stand-alone reader via USB interface.





■ VLIT SOFTWARE APPLICATION

WEB VLIT

A web-based application that provides the control room with a single tool screen, easy to use and accessible from any computer in real time. It was designed to allow mine operators to have full control over the shafts by undertaking multiple tasks such as:

- assign tagged equipment to specific workers
- locate personnel, equipment and other assets instantly
- count the number of workers in each zone at any time
- monitor the personnel time limit in certain zones
- create work groups
- check tags' battery level
- identify motionless tags for safety reasons
- provide immediate rescue in case of accident
- allocate resources to achieve optimal system efficiency
- assess system performance through detailed statistics
- look up historical information
- detect tags out of signal range for a certain time

In order to restrict access to certain functionalities, as well as to avert unintended changes of data, different access privileges are given to operators.

**Web VLIT can be fully customized to meet the needs of customers.*



L I C E N S E - F R E E S Q L D A T A B A S E

Used to store VLIT Mines system's data in the form of records. Where necessary, data can be exported and processed according to customer's preference by easily interacting with third party software applications, making our solution more convenient and flexible.

C O M M U N I C A T I O N C L I E N T

Runs on our VLIT server to ensure more reliable communication between devices and software. This application collects data from VLIT Mine system, processes and then stores it in the SQL database, and is also responsible for the configuration of several parameters, among which include:

- Alarm events
- Communication settings
- Access points' sensibility
- Tag's power transmission
- Database's IP address
- System topology





ACCESSORIES



DESKTOP TAG ENCODER

Placed in the control room for desktop operation

Tag configuration and identification

ACOUSTIC ALARM

Installed at crucial locations

Easily integrated into the existing system

Triggered by the control room when necessary

LED DISPLAY

Presents vital information

Managed by the control room

PORTACC (PORTABLE ACCESS CONTROL)

Bonds mobility and security to guard the perimeter

Tailor-made in accordance with project diversity

Free of installation, maintenance and dismantlement





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