



Empower your Operations with WatchNET IoT's **MINING SOLUTION**.  
Optimizing Safety and Boosting Operational efficiency.



GPS

### **Asset Tracking**

Protect & Manage Critical Assets Anytime Anywhere. An outstanding outdoor tracker utilizes both GNSS and Wi-Fi AP MAC Address Scanning technologies to provide precise positioning data. Additionally, it features tilt and temperature sensors for enhanced functionality.



### **Worker Safety & Vitals Monitoring**

With enhanced location tracking features, our smart watches ensure the safety of the worker in remote locations. Supports Tracking, SOS, vitals such as Blood Oxygen Saturation & Heart Rate report to the platform through LoRaWAN Gateway.



### **Air Quality & Water Turbidity Monitoring**

Monitor water levels in pits, reservoirs, and tailings dams to prevent flooding and manage water resources effectively. Also, measure CO<sub>2</sub>, VOCs, detect air pollutants to maintain the standards in environments & to ensure optimal working conditions.



### **Vibration Sensor Monitoring**

Detect vibration activity such as excessive ground vibrations to assess geological risks and ensure the safety of mining operations. When the rolling ball sensor reaches a 10 degrees angle tilt, then it gives alarm.

Energy, Equipment monitoring & MORE...



## Measurable Key Metrics

Choose the following sensors that suits for mining applications.

### ASSET TRACKING SENSORS (WLRC-AT1-L):

Protect and Manage Critical Assets Anytime & Anywhere. An outstanding outdoor tracker utilizes both GNSS and Wi-Fi AP MAC Address Scanning technologies to provide precise positioning data. Additionally, it features tilt and temperature sensors for enhanced functionality.

- Triggering the alarm when enter/exit the specific area.
- Support Geofencing for Asset Protection
- Highly-Accurate GNSS Positioning
- Anti-tampering alarm featured if the product is dismantled.
- Triggers the alarm when tilt angle exceeds 20°.



## Worker Safety & Vitals Monitoring (WLRC-SW1-L)

With enhanced location tracking features, our smart watches ensure the safety of the worker in remote locations. Supports Tracking, SOS, vitals such as Blood Oxygen Saturation & Heart Rate report to the platform through LoRaWAN Gateway.

- Vital signs monitoring, including Heart Rate, Blood Oxygen, Body Temperature.
- HRV(RRI) helps to ensure the well-being of workers in physically demanding environments.



## Vibration Sensor Monitoring (WLRC-S19R2)

Pick up small vibrations or movements with this rolling ball type vibration detector. Detect excessive ground vibrations to assess geological risks and ensure the safety of mining operations.

- Sudden impact off a force
- Vibration count per day
- Excessive vibrations
- Sudden impact off a forces



## Air Quality / CO<sub>2</sub>, Temperature & Humidity Sensor (WLRC-S35)

The WLRC-S35 is equipped with a temperature and humidity sensor that detects and transmits ambient temperature and humidity data to ensure optimal working conditions and equipment performance.

- Detects the concentration of CO<sub>2</sub>
- Temperature & Humidity of the environment
- Solar powered panel



## Water quality Turbidity Sensor (WLRI-S42)

Measure parameters such as pH, conductivity, and turbidity to monitor water quality in mining sites and prevent contamination of local water sources. The wireless LoRaWAN sensor links to an external turbidity sensor for detecting water turbidity and temperature.

- Detects water Turbidity & Temperature
- Turbidity Measurement Range: 0 ~ 1000 ntu
- Turbidity Measurement Accuracy:  $\pm 5\%$  F.S, 0.5°C



## Outdoor LoRaWAN Gateway (WLRI-GPS-M)

The robust 8-channel outdoor LoRaWAN® gateway. Adopting SX1302 LoRa chip and high-performance quad-core CPU, WLRI-GPS-M supports connection with more than 2000 nodes. IP67 waterproof case, which is ideally suited to Mining, smart agriculture, smart metering and many other outdoor applications.

- Supports connection with more than 2,000 nodes
- 8 Half/Full-duplex channels
- Multi backhaul backups with Ethernet, WiFi & Cellular
- 2 x External LoRa Antennas & Built-in Network Server



## WatchNET IoT Cloud Software & Mobile App

WatchNET's IoT Cloud Platform offers a streamlined and low-maintenance solution for effortless deployment of WatchNET IoT devices across multiple locations, simplifying operations and boosting productivity.

**Software installation is not required:** Say goodbye to slow & unreliable manufacturer software. WatchNET IoT runs from web browser, making it faster, more secure & easy to use.

**No need to manage licenses:** No need to worry about forgetting a license key again! WatchNET IoT Software as a Service (SaaS) cloud infrastructure means that you won't have to worry about software license keys.

**Any Device, Any Time & Any Where:** As it is cloud based, you will always have access to your environmental sensors data. As long as you have access to an internet enabled device with a web browser, WatchNET IoT will always be by your side.

The ability to share & automate notifications to the facility managers has significantly reduced the workload and eliminated the risk of missing out on notifications.

- 1) Round the clock monitoring
- 2) Compatible with 1000s of sensors & devices
- 3) Real-time status update
- 4) Instant alert & notification
- 5) Manage data in one place
- 6) Intuitive report with accurate historical records
- 7) Powerful eMAP
- 8) Enhanced data logging
- 9) Powerful web-based interface and mobile app



\*Actual signal range may vary depending on the environment.

\*Battery life is determined by sensor reporting frequency and other variables

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\*All product specifications on this brochure are subject to change without notice.

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