



GAS NETWORKS



Gas Product Brochure

2024



MONITORING ASSETS, DELIVERING DATA, BRINGING CONTROL

About HWM



We are experienced and respected manufacturers of monitoring and telemetry equipment for water, wastewater and gas networks, together with telemetry AMR and facilities optimisation products.

Having serviced the clean water industry for nearly 40 years, we have combined advanced cellular communications technology with rugged, purpose-designed hardware to deliver a wide variety of robust and efficient network monitoring solutions.

We are dedicated to achieving our aim of **helping customers to save natural resources and reduce CO₂ emissions.**

Based out of our Head Office in South Wales, which incorporates a 400 year old, Grade II listed farmhouse, we design, test and manufacture all of our network monitoring solutions in-house.

We boast an innovative research, development and manufacturing facility and dedicated engineering and production teams, allowing us to deliver our industry-leading products to customers quickly.

Our unique Head Office also houses our advanced testing and development equipment. This includes our complex new test rig and our industry-renowned external leak site.

The test rig, which was developed to meet our own specifications, is built in three parts and allows the replication of a variety of network conditions.

Our team of engineers and technical specialists use the test rig to support development of new technologies and to test upgrades of current products.

Our leak site is an underground network of pipes and valves designed to simulate leaks and generate authentic leak noise. While our technical teams use the leak site for product development, it is also a great facility to help train customers.



Why monitor Gas Networks?

Within the gas industry there is a requirement to reliably monitor the gas pressure in the medium and low-pressure distribution networks. It ensures that customers are receiving the correct supply pressures whilst guarding against over pressurisation, associated leakage and public reported escapes.

In the UK, the installation of pressure monitoring devices is a critical component of the gas networks obligation to meet the Uniform Network Code (UNC).

Failure to do so could mean that OFGEM removes their license to operate. In addition to the general network monitoring sites there are also network validation points. The data collected from these sites is used to model the demand on the network.

The data is particularly useful during the winter period when demand is at its greatest. In the past the networks have used manually downloaded data loggers and cycled them around the various monitoring points on an annual basis.

How do we monitor Gas Networks?

We have designed a range of advanced data loggers specifically for use in a variety of gas network logging applications.

The intrinsically safe and low powered **COMlog 2 IS** is a flexible, battery powered logger and is particularly effective for smart metering, providing businesses with an efficient way of managing gas and energy consumption and reducing costs.

Additionally, our **Intelligens** range of data loggers is designed to provide dependable data logging at network pressure points and other hazardous environments.

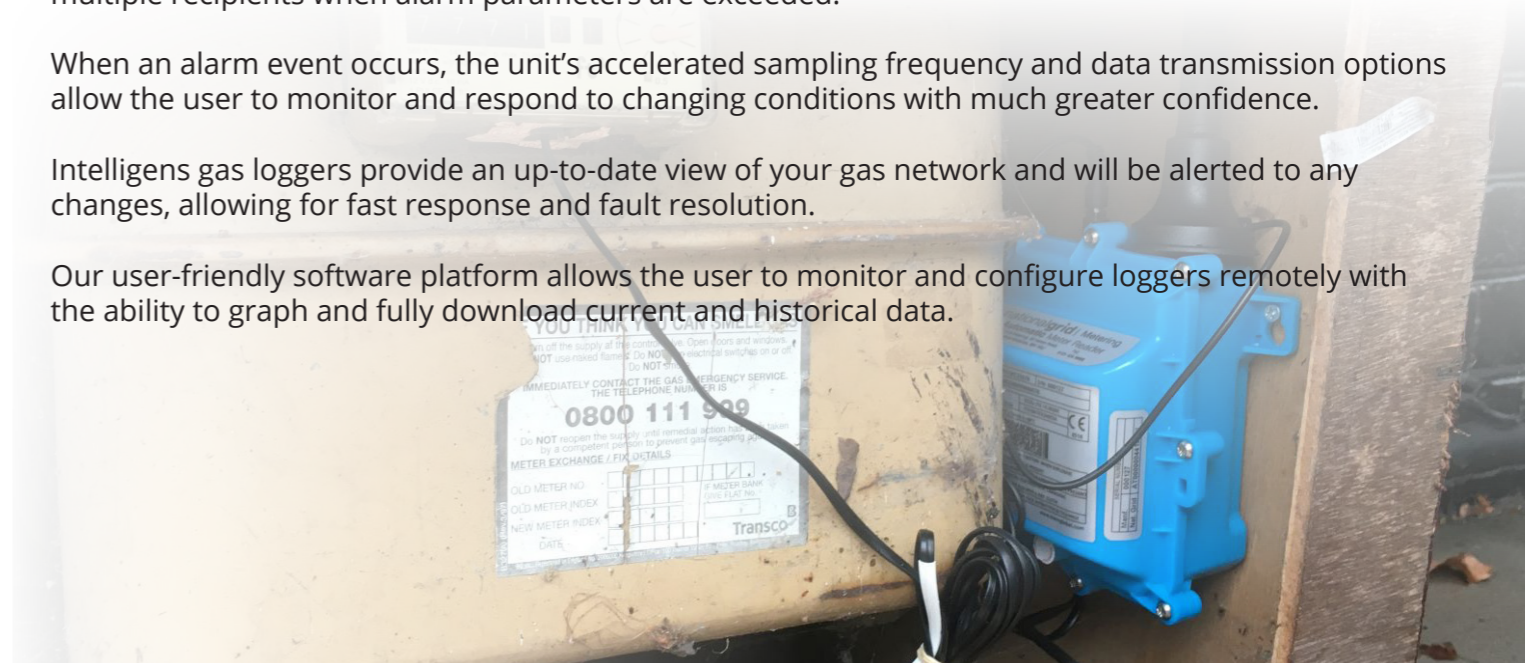
Thanks to multi-input functionality, Intelligens can be supplied with multiple digital pressure inputs, in addition to temperature, flow and state recording. Intelligens has been designed to reliably and securely transmit continuous data via NBLoT or LTE-M with a 2G backup (additional modem variants are available).

Dial in and sample regimes are user defined and give the user the ability to finely analyse and monitor their gas network. Users can set alarm limits which can be uploaded to enable an alert to be sent to multiple recipients when alarm parameters are exceeded.

When an alarm event occurs, the unit's accelerated sampling frequency and data transmission options allow the user to monitor and respond to changing conditions with much greater confidence.

Intelligens gas loggers provide an up-to-date view of your gas network and will be alerted to any changes, allowing for fast response and fault resolution.

Our user-friendly software platform allows the user to monitor and configure loggers remotely with the ability to graph and fully download current and historical data.



COMlog 2 IS

The intrinsically-safe and low powered solution for cost-effective management of gas and energy consumption

Developed for **flexibility**, COMlog 2 IS is compatible with any sensor or meter that has a volt-free pulsed output, using **accumulative pulse counting technology** to calculate index readings against a known volume.

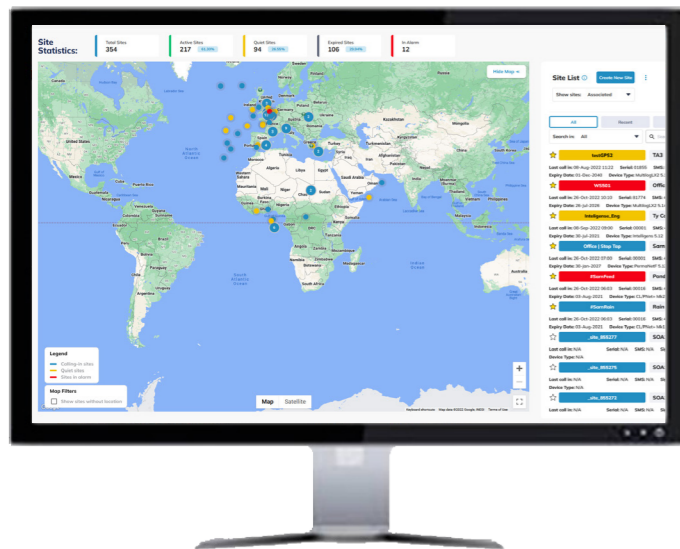
Particularly effective for **smart metering**, COMlog 2 IS provides businesses with an efficient way of managing **gas** and **energy consumption** and reducing costs.

An energy efficient logger, COMlog 2 IS houses a replaceable internal battery that will typically power the device for **five years** when data is transmitted every eight hours. Additionally, benefitting from the **latest cellular telemetry**, COMlog 2 IS delivers rapid data transmission at low cost.



Key Features and Benefits

- intrinsically safe; ATEX-certified for use in Zone 0 hazardous areas
- conforms to requirements set out in IECEx/IEC 60079-0
- designed for easy integration into third-party software applications
- quick and easy to install, and can be configured wirelessly
- 24 hour consumption alarms, High Flow, Low Flow and tamper alarms



DataGate is our recently updated cloud-based data management system that provides our customers with secure access to their network monitoring data.

Developed with the user experience in mind, DataGate follows our 'one click away' concept, meaning the most important tools and most used applications are quick and simple to access.

Investment in COMlog 2 IS sees 10-fold reduction in site visits for Southern Energy Connections

As a provider of meter asset management (MAM) services, quick and reliable access to meter readings is crucial, so when attempting to solve issues regarding power to loggers, Southern Energy Connections (SEC) turned to HWM for help.

It can be problematic to use loggers that are powered through the mains supply, especially as metering kiosks require an ATEX connection to be compliant. This method of power supply often added significant complexities to logger installations, as well as additional costs that SEC wanted to avoid.

To resolve these issues, SEC was searching for ATEX-certified, battery powered data loggers and we recommended **COMlog 2 IS**.

An advanced data logger, COMlog 2 IS is ATEX-certified (Zone 0) and is built for compatibility, pairing seamlessly with a wide range of meters and sensors. It is battery powered, meeting SEC's requirement, with a five-year battery life at typical call-in rates.

COMlog 2 IS also benefits from our advanced modem, which is capable of connecting via NB-IoT or LTE-M for low-powered data transmission. Fully roaming, our SIM connects to the strongest network available to deliver data, and can even roam cellular technology generations, so if an NB-IoT signal is not available then the strongest 2G connection is made.

Having data loggers installed that can reliably transmit data has had a significant advantage for SEC. As explained by SEC managing director David Willie, deployment of COMlog 2 IS has meant that SEC **"can provide each of our customers with simple, straightforward access to their meter reads without having to send someone to site. The number of site visits has reduced 10-fold, so for 25 meters, that's 250 site trips that are no longer required"**.

Upgrading meter reading technology to COMlog 2 IS has provided significant benefits to Southern Energy Connections. At HWM, we are pleased to have been able to meet SEC's requirement and look forward to continuing to do so in the future.



ATEX Battery Pack

The ATEX-certified power solution delivering accelerated dial-in for remote data logging applications in challenging environments

With **reliable connectivity** more important than ever, our ATEX Battery Packs (Zone 0) provide the additional power required to ensure dial-in rates are increased.

With additional external power, our data loggers can support dial-in rates as high as **every 30 minutes** consistently over a **five-year period**. This means that data can be available more frequently, but also supports data delivery from problem sites where once or twice a day dial-ins can be sporadic or unsuccessful.

At a time when there is an ever-increasing focus on a many aspects of gas network monitoring, External Battery Packs are valuable tools in ensuring data is consistently available.



Antenna Options

A range of antennas to ensure connectivity with the cellular network and to deliver reliable data

Signal strength within the cellular network can vary dramatically even within the same cell proximity to the transceiver.

The type of antenna, position and angular orientation of the antenna each has a significant effect on the ability of a device to reliably communicate with the cellular network.

To ensure reliable 2G/3G/4G/NB-IoT/LTE-M (Cat-M1) data communications, it is essential that the most suitable antenna is selected and mounted in the most appropriate location.

Part Number	Antenna	Connector	Connection	Length
AER6125/K	Hanging Antenna	FME	2G/3G/4G/NB-IoT/LTE-M (Cat-M1)	2.5m*
AER6100-4	Magmount	FME	2G/3G/4G/NB-IoT/LTE-M (Cat-M1)*	2.5m*
AER8020	I-Bar	FME	2G/3G/4G/NB-IoT/LTE-M (Cat-M1)	1m*
AER8016	T-Bar	FME	2G/3G/4G/NB-IoT/LTE-M (Cat-M1)	1m*
AER9015	1/4 Wave	FME	2G/3G/4G/NB-IoT/LTE-M (Cat-M1)*	n/a
AER9010	Button	FME	2G/3G/4G/NB-IoT/LTE-M (Cat-M1)*	1.5m*
AER8035	Dipole	FME	2G/3G/4G/NB-IoT/LTE-M (Cat-M1)*	2.5m*
RAG A07/FME/02M	Dome	FME	2G/3G/4G/NB-IoT/LTE-M (Cat-M1)*	2m*
CABA8110-7	Magpot	FME	2G/3G/4G/NB-IoT/LTE-M (Cat-M1)*	5m*
CABA8510-2	Extension	FME	2G/3G/4G/NB-IoT/LTE-M (Cat-M1)*	5m*

*Additional cable lengths available on request

+Contact HWM to confirm worldwide coverage of NB-IoT and LTE-M (Cat-M1)



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Clean Water Network Monitoring

With over 30 years in the water industry, HWM is skilled at addressing the challenges of water network monitoring. With increased pressure on water globally, we can solve the problems of effective water network management, providing data on performance and enabling effective network management.

Waste Water Network Monitoring

Control of waste water networks is a key public health challenge. Effective monitoring of waste water networks reduces both frequency and impact of pollution events. Permanent installation of remote monitoring equipment helps to alert network operators to immediate problem sites.

Gas Network Monitoring

Effective monitoring of gas networks has traditionally been a challenge, due to a lack of on-site power and deployment difficulty. Our gas products address these concerns, using our expertise in ATEX and low power design capabilities. This enables users to collect data about this critical infrastructure.

Automated Meter Reading

Accurate and consistent data is the foundation for effectively controlling energy usage and reducing waste. AMR delivers precise and timely consumption data for investigation and analysis of energy usage as well as exact billing.

Facilities Management

HWM has pioneered the development of wireless monitoring solutions for fixed network deployment. These can be combined with a variety of sensors, providing our partners with 'near real-time' data that they need to help their customers to eliminate waste, cut costs and reduce carbon emissions.



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