Cyble 5

Multi-connectivity RF Module for fast AMR (drive-by) and AMI reading (IoT LoRaWAN/Sigfox/OMSv4).

The Cyble 5 is a unique solution helping utilities engage in the ongoing digitalization of their water and gas distribution networks. Designed to transform mechanical meters into communication data points, Cyble 5 enables fast drive-by (AMR) and IoT data collection allowing for better billing efficiency. Conceived for agility with its embedded multi-connectivity options, Cyble 5 adapts to complex deployments and evolves with the needs from the field, making it a safe and long-term investment.

FEATURES AND BENEFITS

Designed for the field

Easy to connect through a clip-on design with no wiring or wall mounting required, Cyble 5 is compact with an integrated antenna allowing for use in a wide range of existing meter box installations.

Robust under severe conditions

Conceived to resist water, contaminants, corrosion, rough handling, and temperature cycling for a preserved reliability over time. Adaptable to water and gas environment, Cyble 5 comes standard with IP68 certification and is also available in an ATEX variant.

Fine-tuned by decades of industry expertise

Cyble's patented technology ensures a perfect correlation between the mechanical meter register and the digital index for sustained accuracy. Compatible with Itron's Cyble-ready range of mechanical water meters & c-Series gas meters.

INTEROPERABLE WITH OPEN-STANDARDS

With out-of-the-box connectivity options, Cyble 5 modules operate with open standard protocols in mobile data collection systems using wM-Bus or multi-purpose IoT networks (LoRaWAN/Sigfox/OMSv4 technologies).

Agility with AMR/IoT data collection capabilities

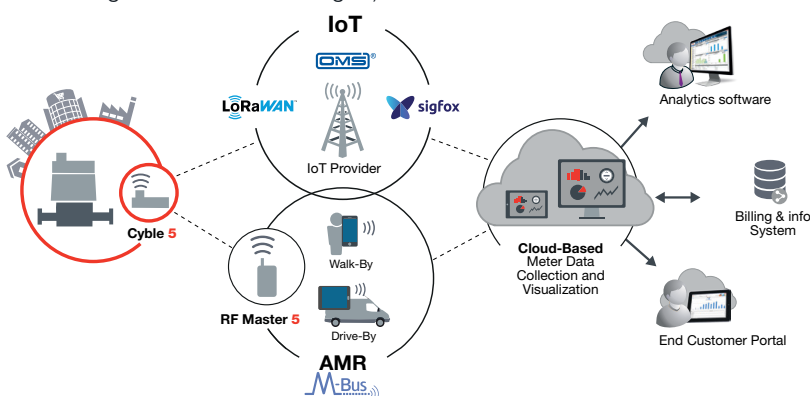Interoperable with open standards (SigFox/LoRaWan/wM-Bus/OMSv4)

Automated Meter Reading (AMR)
Wirelessly collect data from meters either in walk-by or drive-by mode using Itron's RF Master 5. Eliminates the need for physical access to the meter.

IoT Networks (Sigfox® or LoRaWAN™ or OMSv4)
Connect smart water meters to networks dedicated to the Internet of Things (IoT) using LoRaWAN™ or Sigfox® or OMSv4 technologies.

EXTENDED DATA SET FOR WATER AND GAS UTILITIES

Supporting digital transformation, Cyble 5 helps utilities engage in their key operational challenges by transforming data collection through AMR and/or IoT. Delivering timely, relevant, and extensive sets of data in gas and water, Cyble 5 allows for a better understanding of resource use and improved customer relationships.

Billing Index & Consumption Data Logging

Daily billing and custom billing functions along with precise consumption data logging up to 15min resolution

Flow Distribution

Precise monitoring of the distribution flow including periodic minimum and maximum values

Backflow / Reverse Flow

Detection and quantification of backflow to help assess water quality and/or sanitary risk

Alerts

Alarms are generated when important events are detected, such as:

- » Leakage at customer side (continuous flow)
- » Tamper attempt (dismantling)
- » Blocked meter (zero consumption)
- » Oversize/undersize
- » Freeze risk

Diagnostics

Good system performance is ensured via monitoring of:

- » Battery level
- » Configuration settings
- » Clock synchronization in LoRaWAN and wM-Bus

Technical Specifications

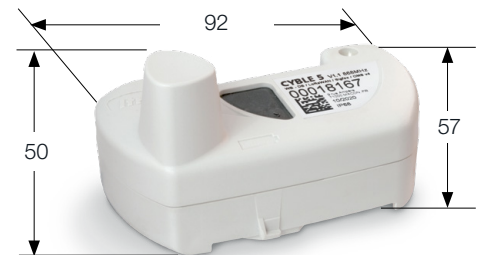| Radio Frequency Features	
Protocol	wM-Bus T2/C2, LoRaWAN™, Sigfox®, OMS v4
Modulation	FSK, BPSK (Sigfox®), CSS (LoRa®)
Frequency carrier	868 MHz ISM Band
Radiated power	< 25 mW
Battery lifetime	Up to 15 years*

Functional Specifications	
Power source	Lithium batteries
Protection	IP 68
Relative humidity	0 to 100% - submersible
Operating temperature**	-10°C / +55C***
Accidental temperature	-20°C / +70°C

Dimensions (mm)

* in standard conditions of use and temperature, theoretical lifetime without guarantee, depends on connectivity mode and reporting interval.
** Under normal applications with the specified reference operating conditions.
*** Operation: +5°C to +35°C / Storage: +5°C to +35°C / Transport: Min -20°C (<24 hours continuous), Max. +70°C (<24 hours continuous), / Min. operational temperature: -10°C (< 15 days/years) / Max operational temperature: +55°C (<15 days/years).

COMPLIANCE

- » IP68 certified according to EN 60529
- » Compliant with 2002/95/EC on non usage of hazardous substances in electrical and electronic equipment
- » RoHs, WEEE2, CE, ATEX
- » Compliant with Directive 2014/53/EU on RF Spectrum usage

Connectivity Certifications

- » LoRaWAN R1.0.4
- » Sigfox V2.6.0
- » OMS V4.1.2

Aquadis+ equipped with the Cyble 5 module